14th COG/IAEA Technical Committee Meeting (TCM) on the Exchange of Operational Safety Experience of Pressurized Heavy Water Reactors (PHWR)

PROGRAM

NOVEMBER 21 - 24

Hosted by Nucleoeléctrica, Argentina in CORDOBA, ARGENTINA

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Canadian Nuclear Laboratories

Laboratoires Nucléaires Canadiens

IAEA

International Atomic Energy Agency
14th COG/IAEA TECHNICAL COMMITTEE MEETING

DAY 1: November 21, 2017

8 to 9 a.m. - REGISTRATION/BREAKFAST
9 to 9:30 a.m. - INTRODUCTION / WELCOME BY COG AND NA-SA
9:30 to 10:30 a.m. - SESSION 1 - PLANT LIFE MANAGEMENT: AGING / ASSET MANAGEMENT

ASSET MANAGEMENT PROGRAM AT OPG
Dean Townsend, Ontario Power Generation, Canada

CERNAVODA NPP - LIFE MANAGEMENT PROGRAM FROM LTO OF CANDU 6
Valerian Sorin Ghelbereu, Societatea Nationala Nuclearelectrica, Romania

IAEA SALTO REVIEW MISSION RESULTS FROM AGING NUCLEAR POWER PLANTS
Kari Maekela, International Atomic Energy Agency, Austria

10:45 a.m. to 12:30 p.m. - SESSION 2 - PLANT LIFE MANAGEMENT: AGING/ASSET MANAGEMENT

EMBALSE PRIMARY HEAT TRANSPORT AGING MECHANISMS DURING THE FIRST CYCLE OF OPERATIONS
A.V. Rabiti, Nucleoeléctrica Argentina, Argentina

CABLE AGING MANAGEMENT PROGRAM FOR EMBALSE NUCLEAR POWER PLANT
Jorge Zorrilla and Alejandro Abaca, CNEA - Nucleoeléctrica Argentina, Argentina

INFORMATION SYSTEMS CONDITION ASSESSMENT
Mauro Dionisi, Nucleoeléctrica Argentina, Argentina

QINSHAN PHASE 3 SDC PIPE WAS FOUND WEAR WITH THE PIPE SUPPORT
Yu Guangting, China National Nuclear Power, China

QUALIFIED FIELD-TRAILED NEXT-GENERATION ADVANCED PORTABLE POLYMER TESTER FOR IMPROVED CABLE CONDITION MONITORING IN NPP
Daniel Ho, SNC-Lavalin, Canada

1:15 to 3 p.m. - SESSION 3 - PLANT LIFE MANAGEMENT: EQUIPMENT RELIABILITY

INTEGRATED IMPROVEMENTS IN NUCLEAR EQUIPMENT RELIABILITY
Dean Townsend, Ontario Power Generation, Canada

CERNAVODA NPP - EQUIPMENT RELIABILITY CHALLENGES
Ovidiu Valentin Nae, Societatea Nationala Nuclearelectrica, Romania

USE OF NON-INTRUSIVE ULTRASONIC CROSS-CORRELATION FLOW METER CROSSFLOW TO ADDRESS OPERATIONAL SAFETY ISSUES
Yuri Gurevich, Advanced Measurement & Analysis Group Inc., Canada

STEAM GENERATOR PRIMARY SIDE CLEANING PATH FORWARD
Macit Cobanoglu, CANDU Owners Group, Canada

3:15 to 5 p.m. - SESSION 4 - PLANT LIFE MANAGEMENT: OBSOLESCENCE/NEW BUILD

EXPERIENCE OF IMPLEMENTING A PROACTIVE PROGRAM TO ADDRESS OBSOLESCENCE AT EMBALSE NUCLEAR POWER PLANT
Hernan Mangold, Nucleoeléctrica Argentina, Argentina

CANDU OWNERS GROUP (COG) - OBSOLESCENCE INITIATIVES
Macit Cobanoglu, CANDU Owners Group, Canada

MIGRATION OF THE CONTROL SYSTEM OF THE ARGENTINEAN FOURTH NUCLEAR POWER PLANT (IV CN) TO A DISTRIBUTED DIGITAL CONTROL SYSTEM
Daniel Garzon, Nucleoeléctrica Argentina, Argentina

NEW REACTOR BUILDING CONTAINMENT DESIGN FOR THE 4TH NUCLEAR POWER PLANT AT ATUCHA
Simons Luis, Nucleoeléctrica Argentina, Argentina

ATUCHA 3 ENGINEERING TOOLS USAGE IN A THREE PARTITE ENVIRONMENT
Kamal Verma, SNC-Lavalin, Canada

POTENTIAL OF THE METALLURGICAL ARGENTINIAN INDUSTRY IN THE ELECTROMECHANICAL SUPPLY OF NATIONAL NUCLEAR PLAN
Ricardo De Dicco, ADIMRA, Argentina

5:15 p.m. - WELCOME COCKTAILS
LA TERRAZA ROOM
SHERATON CORDOBA HOTEL

MEALS AND BREAKS
Breaks: 10:30 to 10:45 a.m. and 3 to 3:15 p.m. daily
Lunch: 12:30 to 1:15 p.m. daily
## 14th COG/IAEA TECHNICAL COMMITTEE MEETING

### DAY 2: November 22, 2017

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<th>Time</th>
<th>Session 1 - Research and Development</th>
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| 8:45 to 10:30 a.m.    | CANDU OWNERS GROUP R&D: SOLUTIONS FOR TODAY - INNOVATION FOR THE FUTURE  
Michael E. Brett, CANDU Owners Group, Canada |
|                       | MATERIALS TESTING LABORATORY: QUALIFICATION OF THE COMPONENTS INTENDED TO EMBALSE NUCLEAR REACTOR LIFE EXTENSION PROGRAMME  
G.L. Vigna, Comision Nacional de Energia Atomica, Argentina |
|                       | ELECTROSLEEVING: A UNIQUE REPAIR TECHNIQUE  
Pascal Zulow, Kinectrics, Canada |
|                       | NEW GAMMA CAMERA CONCEPT TO SUPPORT NPP  
Ruben Mazzi, INVAP, Argentina |
|                       | RATEN ICN - OVERVIEW ON THE ACHIEVEMENTS AND PERSPECTIVES FROM THE CANDU R&D ACTIVITIES  
Vasile Radu, RATEN ICN, Romania |

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<th>Time</th>
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| 10:45 a.m. to 12:30 p.m. | COG PROJECT ACTIVITIES RELATED TO FUEL CHANNEL LIFE MANAGEMENT  
Macit Cobanoglu, CANDU Owners Group, Canada |
|                       | EMBALSE REACTOR FUEL CHANNEL REPLACEMENT UPDATE OF PROGRESS  
G.D. Diaz, Nucleoelectrica Argentina, Argentina |
|                       | CNNO FUEL CHANNEL RECONFIGURATION INDUCTION DURING OT109  
Yu Guangting, China National Nuclear Power, China |
|                       | IN-REACTOR PRESSURE TUBE DEFORMATION UNDER IRRADIATION: A GENERALIZED MODEL  
Juan Eduardo Ramos Nervi, Nucleoelectrica Argentina, Argentina |
|                       | FUEL CHANNEL CANDU LIFE EXTENSION  
Doug Rodgers, Canadian Nuclear Laboratories, Canada |

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<th>Time</th>
<th>Session 3 - Safety Analysis</th>
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| 1:15 to 3 p.m.        | NEUTRONIC UNCERTAINTIES ANALYSIS IN CANDU REACTORS  
Ignacio Ferrari, INVAP, Argentina |
|                       | DETAILED ANALYSIS OF DOPPLER COEFFICIENT IN CANDU REACTORS  
Eduardo Villarino, INVAP, Argentina |
|                       | ANALYSIS OF A COMPLETE LOSS OF FEEDWATER AT EMBALSE NPP WITH FULL CATHENA MODEL  
A. Sablayrolles, Nucleoelectrica Argentina, Argentina |
|                       | SIMULATION OF A TURBINE TRIP TRANSIENT AT EMBALSE NPP WITH FULL-CIRCUIT CATHENA MODEL  
H.D. Damiani, Nucleoelectrica Argentina, Argentina |
|                       | ATUCHA 3 LEVEL 1 AND LEVEL 2 HIGH LEVEL PROBABALISTIC SAFETY ASSESSMENT  
Liliana Comanescu, SNC-Lavalin, Canada |

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<tr>
<th>Time</th>
<th>Session 4 - Safety and Licensing</th>
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| 3:15 to 5 p.m.        | LICENSING ISSUE ON REVALUATION OF REGIONAL OVERPOWER PROTECTION TRIP SETPOINT AND APPLYING MODIFIED CANDU DUEL IN WOLSONG NPP  
Park Donghwon, Korea Hydro & Nuclear Power, Korea |
|                       | CREDIT OF IN-VESSEL RETENTION IN LEVEL 2 PROBABALISTIC SAFETY ASSESSMENT  
Alexander Trifanov, Kinectrics, Canada |
|                       | AXIAL HEAT FLUX DISTRIBUTION (AFD) EFFECT ON CRITICAL HEAT FLUX (CHF) FOR PRESSURIZED HEAVY WATER REACTORS  
Jun Yang, Canadian Nuclear Laboratories, Canada |
|                       | TURBINE AND THERMAL CYCLE UPRATE  
Mariano Sentupery, Central Nuclear Embalse, Argentina |
|                       | IMPACT OF DESIGN CHANGES IN SAFETY ANALYSES AT EMBALSE NPP  
Damian Fornero, Nucleoelectrica Argentina, Argentina |
**DAY 3: November 23, 2017**

### 8 to 8:45 a.m. - REGISTRATION/BREAKFAST

### 8:45 to 10:30 a.m. - SESSION 1 - LIFE EXTENSION/REFURBISHMENT

**A HEALTHY LAYUP - RECIPE FOR SUCCESS (REFURBISHMENT)**  
Ali Keshavarz, Ontario Power Generation, Canada

**RP OPERATING EXPERIENCE & LESSONS LEARNED DURING LIFE EXTENSION OUTAGE**  
Osvaldo Romero, Nucleoeléctrica Argentina, Argentina

**NUCLEAR SAFETY MONITORING DURING THE EMBARSE NUCLEAR POWER PLANT REFURBISHMENT PROJECT**  
Alejandro D. Mariotti Cardozo, Nucleoeléctrica Argentina, Argentina

**OVERVIEW OF THE EMBARSE NPP CORE DEFUELLING**  
J. Villar, Nucleoeléctrica Argentina, Argentina

**RP INNOVATIONS FOR THE DARLINGTON REFURBISHMENT PROJECT**  
Liette Lemieux, Ontario Power Generation, Canada

**KANUPP OPERATIONAL SAFETY EXPERIENCE OF BEYOND DESIGN LIFE**  
Muhammad K. Ayuh, KANUPP, Pakistan

### 10:45 a.m. to 12:30 p.m. - SESSION 2 - LIFE EXTENSION/REFURBISHMENT

**STORAGE OF HEAVY WATER FROM PHT DURING THE LEP**  
R.J. Vissio, Nucleoeléctrica Argentina, Argentina

**FILM FORMING AMINE APPLICATION AT EMBARSE NUCLEAR POWER PLANT REFURBISHMENT OUTAGE**  
M.J. Mendizahal, Central Nuclear Embalse, Argentina

**EMBALSE NPP SAFETY DESIGN CHANGES DURING LIFE EXTENSION PROJECT**  
Ignacio Isaia Brasca, Nucleoeléctrica Argentina, Argentina

**ALTERNATIVE SPENT FUEL BAY COOLING SYSTEM**  
A.M. Margaritini, Central Nuclear Embalse, Argentina

**EMBALSE STEAM GENERATOR REPLACEMENT PROJECT: MAIN CHALLENGES AND PROGRESS UPDATE OF THE IMPLEMENTATION PHASE**  
P.J. Luna, Nucleoeléctrica Argentina, Argentina

### 1:15 to 3 p.m. - SESSION 3 - LIFE EXTENSION/REFURBISHMENT

**REPLACEMENT OF MAIN MODERATOR VALVES AT EMBARSE NPP**  
H.A. Arganaraz, Nucleoeléctrica Argentina SA, Argentina

**SEISMIC REQUALIFICATION OF EMBARSE NPP**  
Miguel Tempestini, Nucleoeléctrica Argentina SA, Argentina

**SUPPORT PROVIDED BY THE NATIONAL ATOMIC ENERGY COMMISSION TO THE EMBARSE NPP REFURBISHMENT PROJECT**  
Mauricio Chocron, CNEA, Argentina

**RETURN TO SERVICE FROM REFURBISHMENT**  
Steven Goodchild, Ontario Power Generation, Canada

**PROCESS IMPROVEMENT OF THE EMERGENCY OPERATING PROCEDURES FOR EMBARSE NPP**  
Alejandro D. Mariotti Cardozo, Nucleoeléctrica Argentina, Argentina

### 3:15 to 5 p.m. - SESSION 4 - TRAINING/KNOWLEDGE MANAGEMENT

**STRATEGIES FOR THE TEACHING OF REACTOR PHYSICS AT EMBARSE NPP**  
Carlos A. Murua, Centro Universitario de Tecnología Nuclear, Universidad Nacional de Córdoba - CNEA, Argentina

**SUPPLIER PARTICIPANT PROGRAM AT CANDU OWNERS GROUP (COG)**  
Macit Cobanoglu, CANDU Owners Group, Canada

**SAFETY CULTURE**  
G.K. Sunil, Nuclear Power Corporation of India Ltd., India

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**DAY 4: November 24, 2017**

**EMBARSE PLANT TOUR**

Departure from Sheraton Cordoba Hotel: 7:30 a.m.  
Return from Embalse Nuclear Power Plant: 2:30 p.m.  
(Expected time of arrival in Cordoba: 4 p.m.)

**Lunch provided.**