

## Course Overview

### *Aim of Course*

The aim of this course is to provide an understanding of the CANDU fuel design, performance and operation, and how the fuel interacts with the interfacing systems. The course will be of great interest to the fuel designers, manufacturers, station operations, fuel channel and fuel handling system designers, safety analysts, performance and inspection staff.

### *Course Outline*

This course will provide an overview of the CANDU fuel design, performance and operation, with a special emphasis on the systems that interface with it. Fuel, more than any other reactor component, interfaces with many different systems. This course is designed to enlighten those involved in fuel design and performance of the interfaces; and vice versa. The course will describe the design of the bundle, the detailed nuclear physics of its operation, the thermal-hydraulic performance, the fuel handling, fuel and physics of the reactor, the discharge and storage of the fuel.

### Registration

Please register on-line via the link on the CANDU Fuel Technology Course web page, which you can reach directly at

[http://www.cns-snc.ca/events/2014\\_fuel\\_technology\\_course](http://www.cns-snc.ca/events/2014_fuel_technology_course) or via the CNS web site (<http://www.cns-snc.ca>).

The registration fees are shown below, and include HST (HST # 870488889RT)

- **CNS Member: \$720 [Must be a CNS member in good standing]**
- **Non-CNS Member: \$820**
- **Full-time student (CNS member) or CNS Retiree member: \$300.**

For registration information, please communicate with:

CNS Office

4<sup>th</sup> Floor, 700 University Ave.

Toronto, ON, Canada, M5G 1X6

Tel: 416-977-7620; Fax: 416-977-8131

e-mail: [cns-snc@on.aibn.com](mailto:cns-snc@on.aibn.com)

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### HOTEL ACCOMMODATION

Best Western Plus Durham Hotel  
559 Bloor St. West, Oshawa

Please make accommodation arrangements, if required, directly with the hotel at 905-723-5271 or 1-888-247-2201. A special group rate of \$109.99 + tax per night is available on the nights of October 5 & 6 if booked before 2014 September 6. Refer to "Canadian Nuclear Society Course" at time of booking. There is also a Comfort Inn next door, at a special rate of \$99.99 +tax per night, if booked before September 6 at 905-434-5000. .

## CANDU FUEL TECHNOLOGY COURSE

Canadian Nuclear Society  
Fuel Technologies Division



**2014 October 6-7**

**Best Western Plus Durham Hotel  
559 Bloor St. West, Oshawa  
(at Stevenson Road)**

### Course contacts (not for registration):

Steve Palleck

Consultant, Advanced Engineering Group  
GE-H Canada

Tel: (705) 748-8259

E-mail: [stephen.palleck@ge.com](mailto:stephen.palleck@ge.com)

Erl Kohn

Consultant, Fuel Design

AMEC-NSS

Tel: (416) 592-4603

E-mail: [erlkohn@acanac.net](mailto:erlkohn@acanac.net)

**CANDU Fuel Technology Course  
October 6-7, 2014  
Oshawa**

**Objectives of the Course**

- To provide the understanding of CANDU fuel design, performance and operation
- To foster the understanding of the systems that interface with fuel and the effects on performance
- To promote knowledge of fuel within the CANDU industry

**Day 1**

8:00	<b>Registration</b>
8:30	<b>Opening Remarks</b> <i>Steve Palleck, GE Hitachi</i> <i>Erl Kohn, AMEC-NSS</i>
8:45	<b>Fuel Design Requirements</b> <i>Al Manzer, Cantech</i>
9:30	<b>Design Overview</b> <i>Erl Kohn, Consultant, Fuel Design, AMEC-NSS</i>
10:15	<b>Coffee Break</b>
10:30	<b>Specifying the Design</b> <i>Paul Chan, Royal Military College</i>

11:15	<b>Chemical and Material Environment</b> <i>John Roberts, Bruce Power-Retired</i>
12:00	<b>Lunch</b>
1:00	<b>Fuel Performance Assessment</b> <i>Joe St. Pierre, AMEC-NSS</i>
1:45	<b>Fuel Design Codes and Predictions</b> <i>Mukesh Tayal, AECL-Retired</i>
2:30	<b>Coffee Break</b>
3:15	<b>Fuel Physics Within the Bundle</b> <i>Ben Rouben, 12 &amp; 1 Consulting</i>
4:00	<b>Reactor Fuel and Physics Operation</b> <i>Charles Olive, AMEC-NSS</i>
4:45	<b>Advanced Bundle Design</b> <i>Krishna Chakraborty, Candu Energy</i>
6:00	<b>Dinner</b>
<b><u>Day 2</u></b>	
8:30	<b>Conversion Facility - Ceramic UO<sub>2</sub></b> <i>Mathieu Gouin, Cameco</i>
9:15	<b>Fuel Manufacturing</b> <i>Min Lee, GEC</i>

10:00	<b>Coffee Break</b>
10:15	<b>Fuel CHF/CCP</b> <i>Glen Harvel, UOIT</i>
11:00	<b>Fuel Safety</b> <i>Samir Girgis, AECL- Retired</i>
11:45	<b>Lunch</b>
12:30	<b>Fuel Defect Detection</b> <i>Eugene Suk, Candu Energy</i>
1:15	<b>Post Irradiation Fuel Examination</b> <i>John Montin, AECL</i>
2:00	<b>Coffee Break</b>
2:45	<b>Fuel Handling</b> Michael Leaker, Candu Energy
3:00	<b>Long Term Management of Canada's Used Nuclear Fuel</b> <i>Jorge Villagran, NWMO</i>
4:00	<b>Closing Remarks</b> <i>Steve Palleck, GE Hitachi</i> <i>Erl Kohn, AMEC-NSS</i>