

## Course Registration

**I WOULD LIKE TO REGISTER FOR THE COURSE INDICATED BELOW AT THE INDICATED LOCATION:**

- Development and Evaluation of Stress Scenarios for Emergency and Restoration (Module C)

In-House

Mr.  Miss  Mrs.  Ms.  Dr.  Other (write in):

Family Name: \_\_\_\_\_

First/Middle Name(s): \_\_\_\_\_

Title: \_\_\_\_\_

Organization: \_\_\_\_\_

Street Address: \_\_\_\_\_

State: \_\_\_\_\_ Zip (Postal) Code: \_\_\_\_\_

Country: \_\_\_\_\_

TEL: \_\_\_\_\_

FAX: \_\_\_\_\_

E-mail: \_\_\_\_\_

### COURSE FEES

- Module C  
 Early Bird Discount<sup>(1)</sup> (10%)  
N/A (US)

<sup>(1)</sup> Registration and payment must be received no later than 4 weeks prior to course starting date.

### PAYMENT METHODS

- Credit Cards (US Dollars only)**  
 AmEx  MasterCard  Visa  EuroCard  JCB

Name Shown on Card: \_\_\_\_\_

Card No.: \_\_\_\_\_

Expiration: \_\_\_\_\_

Authorizing Signature: \_\_\_\_\_

Total Due: \_\_\_\_\_

### Wire Transfer

By wire, the information follows:

Account Name: Decision Systems International  
Bank Name: Wachovia Bank, N.A.  
Account No.: 2000-15010-296-6  
ABA Routing No.: 061-000-227  
Swift Code: PNBPUJ33

### Check

Make check payable to: "Decision Systems International."  
Please send by airmail, or courier to DSI.

### Course Fee Coverage

Course fees cover:

- One copy of course notebook in hard copy and/or CD
- One hour of private consultation of groups of two or more (or one half hour for individuals)
- Daily lunch, continental breakfast, & refreshment breaks
- DSI Certificate of Participation and NERC and/or IACET Certificates (when applicable)

### Accommodations

DSI courses are offered at hotels in locations with excellent evening dining, recreation and entertainment. In most cases blocks of rooms are reserved offering special rates for a limited time. Also, we may offer several hotel choices to fit your budget. Check our website for reservation details.

### Cancellation Deadlines

**Deadlines for Participants:** Full refund will be provided if cancellation by participant is received no later than four weeks prior to course offering. No refund will be given otherwise, i.e. if cancellation is received within the four-week period before course start date, there is no refund. However, a substitute participant from same organization is allowed.

**Cancellation by DSI:** Although every attempt is made to offer a course, DSI reserves the right to cancel a course because of low registration. Decision to cancel is made four weeks before the course offering. DSI's liability is limited to full refund of paid registration fees.

### In-House and Customized Training

**In-house training at utility facility using the Generic EPRI-OTS:**

- Maximum number of participants: 16
- Customer provides one PC for every two participants. DSI will load and test software. Alternatively DSI provides the PCs for the duration of the training at additional charge for shipping and handling.
- Cost: \$3,500 per day of training exclusive of travel costs.

**Customized training using utility's power system network and system:**

- Contact DSI OTS for details (info@dsipower.com)

## Challenges to Emergency Operations Under Stress



2008 Hands-on

**Dispatcher Training Series**  
based on the EPRI Generic  
Operator Training Simulator

**New and Revised**  
**Train the Trainer Course**

**Module C:**  
**Evaluation of Stress**  
**Development of Stress**  
**Scenarios for**  
**Emergency and**  
**Restoration**

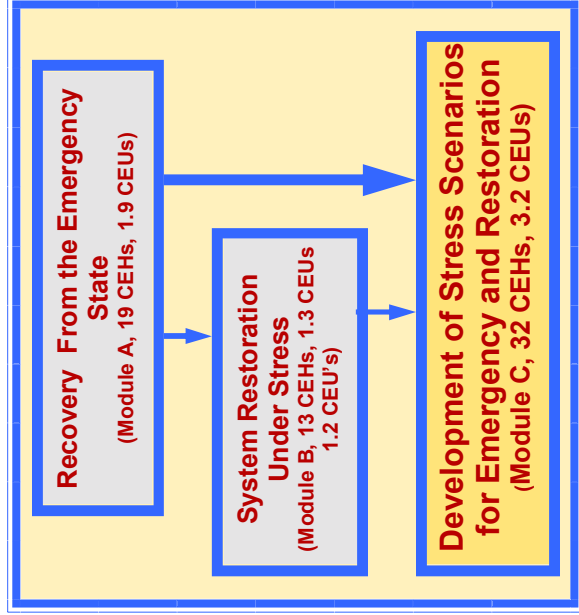


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## Train the Trainer

This special module has emerged as an important follow-up to our five-day program as given in Modules A and B. In these coordinated modules, the participants are challenged to deal with credible emergency and restoration situations. The approach in these two modules is to start with relevant power system principles in frequency and voltage control and stability, gradually get into “system” behavior issues and eventually getting into problem solving. The current Module C, which is a complete revision from a previous version, is a full five-day course with a focus on the following goals:



1. Learning how to work with peers and new hires on identifying critical operational problems for any power system and how then to apply that to their own system
2. Developing the skills of translating such operational problems into simulator “scenarios.”
3. Learning how to document and test sample scenarios
4. Learning how to evaluate trainee performance and to document the evaluation in manners that build confidence and team spirit
5. Learning how to translate the learned experience into for each scenario into tasks that may eventually be used in developing the job/task profiles for the control center personnel
6. Learning required simulator, written and verbal communication skills to achieve the needed goals

## Development of Stress Scenarios (Module C)

### Day 1: Development of Required Skills

- Course Overview
- **Lecture 1** – NERC Standards and Application to Emergency Operations and Restoration
- **Lecture 2**- Introduction to the EPRI Generic OTS and the Power & Light System
- **Exercise 1** – EPRI OTS Introductory Module: Using the OTS Basic Navigation
- **Lecture 3** - Methodology for Scenario Development for Training and Studies
- **Exercise 2** - Advanced OTS Features
- **Discussion 1**, Feedback and Lessons Learned

### Day 2: Identifying Operational Profiles for the Power & Light System

- **Lecture 4** - Reliable Operation of the Power System
- **Lecture 5** - Generation Control Fundamentals
- **Exercise 3** - Identifying the Security Level of the Power & Light System
- **Discussion 2** - Brainstorming on Possible Emergency Scenarios for Line Overloads
- **Exercise 4** - Preliminary Testing of 3 Line Overload Scenarios
- **Discussion 3**: Selecting One Candidate Line Overload Scenario (Scenario C1)

### Day 3: Scenario Development and Documentation

- **Lecture 6** - Methodology for Scenario Documentation
- **Exercise 5** - Documenting Scenario C1
- **Discussion 4**—Brainstorming on Voltage Collapse Scenario
- **Exercise 6** - Preliminary Testing of 3 Voltage Collapse Scenarios
- **Discussion 5**: Selecting One Candidate Voltage Collapse Scenario (Scenario C2)

**Use of Personal Laptops:** DSI will provide a limited number of laptops for use by participants. However, it is preferable that each participant would bring his/her own laptop. The use of laptops is a required aspect of this course series and all participants will receive copies of the Generic EPRI OTS for use during the class and later on for continued use in professional development.

## Development of Stress Scenarios (Module C)

### Day 4: Scenario Development and Evaluation

- **Exercise 7**- Documenting Scenario C2
- **Discussion 6**—Brainstorming on System Islanding
- **Exercise 6** - Preliminary Testing of 3 System Islanding Scenarios
- **Discussion 7**: Selecting One Candidate Islanding Scenario (Scenario C3)
- **Exercise 7**: Documenting Scenario C3

### Day 5: Trainee Evaluation

- Debrief and Review of Lessons Learned
- **Exercise 8:** — Breakouts for Instructor/Trainee Teams for Testing all Three Scenarios
- **Lecture 7** — Methodology for Trainee Evaluation Debrief and Review of Lessons Learned
- **Discussion 8** — Breakout Group Reports and Trainee Evaluation Samples
- **Lecture 8** — Associating tasks with specific jobs in reliability, transmission and generation operations

### NERC Emergency Operations Recommendation No. 6

*“All reliability coordinators, control areas, and transmission operators shall provide at least five days per year of training and drills in emergencies, using realistic simulations, for each staff person with responsibility for the real-time operation or reliability monitoring of the bulk electric system. This system emergency training is in addition to other training requirements.”*

### About DECISION SYSTEMS INTERNATIONAL

- DSI has combined its expertise in the OTS with its training program for the power industry since 1988
- DSI is certified by NERC to provide continuing education training and to issue CEH credits and by the International Association for Continuing Education & Training (IACET) to issue CEU credits

## Speakers

### Dr. A. S. Debs: Control center expert, educator, researcher and business leader

Dr. Debs is President and founder of DSI, designer and developer of DSI’s training, consulting and software programs for the power industry and has spent many professional years in industry, academia and research organizations. He was the key initial developer of the renowned Georgia Tech electric power program and the author of the renowned text, *Modern Power Systems Control and Operation: A Study of Realtime Control of Power Systems*. His intimate involvement with dispatchers and system operators gives him the right credentials to teach the Challenge series.

**Course Assignments:** Participants are strongly encouraged to go over all reading assignments before coming to the courses. This would allow for more hands-on training and maximize the benefits of participation.

### Comments from past participants of Modules A & B:

- “This was the best 5 days of training I ever had. Although the first two days were intense, the end-result was all worth it.”
- “Upon returning home, I faced a major problem in the control room. Thanks to the emergency training I received from you, I managed to avert a potential col-

### Course Dates and Locations

For full details, visit [www.dsipower.com](http://www.dsipower.com)

**This course is offered currently for in-house customers only. For details, contact**

[info@dsipower.com](mailto:info@dsipower.com)