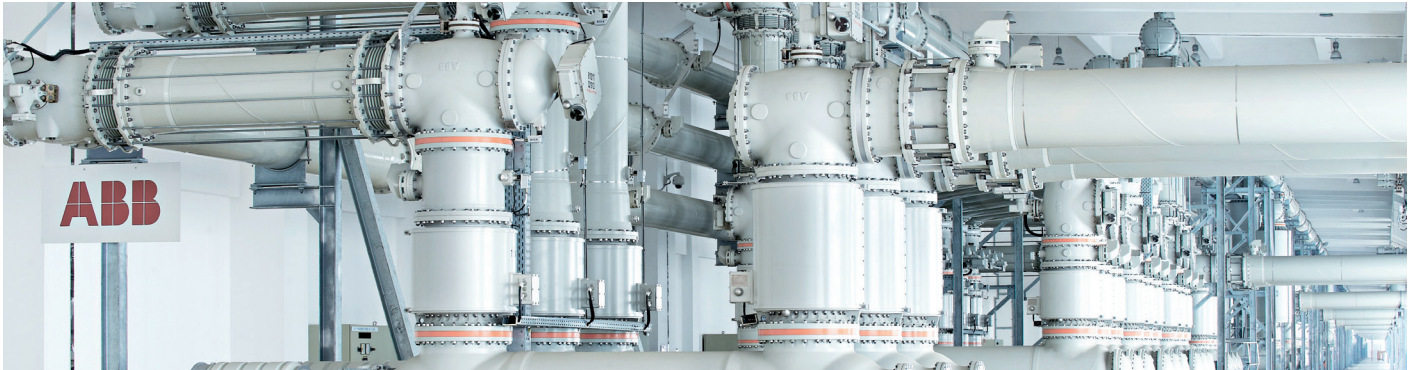


# Become an expert in GIS lifecycle management

## CHS289 – GIS Service Customer Training (4-day Course)



For anyone managing GIS assets, it is essential to understand the maintenance criteria as well as the possibilities to extend the lifetime and reliability of the equipment during its complete lifecycle. This will form the basis of a sound service strategy with the best possible return on investment as a result.

### About us

ABB High Voltage Products, located in Zurich, Switzerland has been manufacturing gas-insulated switchgear since 1967. Thanks to robust designs, high quality right from the start, and a good service strategy, most of the earliest installations are still in operation.

### Purpose of course

**Increase your overall GIS know-how in practice and theory. Meet with ABB high voltage product experts and learn more about suitable maintenance strategies.**

The course will guide you through the most essential parts of the different service strategies needed to give your gas-insulated switchgear a long and healthy life. It will put some perspective on technology developments achieved throughout the years and provide you with insights on how to modernize your existing equipment. Get familiar with the processes and advanced services used today and obtain an outlook of what is to be expected in the future. Overall, the course provides you with the basic know-how and contacts to experts that help you shape your maintenance strategy in the future.

### Training content

The course stretches over 4 days comprising of different modules consisting of theoretical and practical parts:

#### Latest GIS technology

- What is state-of-the-art today?
- What technology is currently under development?

#### GIS Service portfolio and maintenance philosophy

- How do you extend the lifetime of a GIS
- What is the difference between time and condition based maintenance for GIS?

#### Case study on failure mitigation and risk management

- How do you best prepare for the worst case?
- How to mitigate failures through proper risk management

#### Troubleshooting

- What if a failure occurs?
- What are suitable steps to take and which people to contact?

#### Condition monitoring and diagnosis of a GIS

- What are the parameters influencing the condition-based maintenance criteria?
- Monitoring of SF<sub>6</sub> gas and partial discharge

#### SF<sub>6</sub> gas handling

- Environmental background and properties of SF<sub>6</sub> gas
- Rules for handling
- Measurement of SF<sub>6</sub> gas quality (pressure, humidity) using state-of-the-art today analyzer

#### Circuit breaker drive maintenance

- Understand drive design
- Maintenance checks/ intervals
- Hydraulic modules and their function

#### Field trip

- Visit a substation where service on GIS has helped to extend the lifetime and increase reliability

**Note:** for site visit and practical training, safety shoes and practical clothing is compulsory and must be brought by the participants themselves.

### Targeted participants

In general people with a basic knowledge about GIS that want some more detailed know-how on the maintenance possibilities and alternatives for GIS. And anyone interested in the performance, reliability and availability increase of this strategic asset.

Typically this includes:

- Asset managers
- Maintenance managers
- Substation managers
- Operation & maintenance staff

### Training methodology

- Classroom training
- Workshops and case studies
- Training in repair shop
- Field trip

### Course location and facilities

The course will take place in the ABB GIS factory in Zurich, Switzerland. This factory is an impressive example of Swiss manufacturing and hosts some of the world's leading GIS experts.

### Registration fees

CHS289 (4-day training): 2.500 CHF

The registration fee includes:

- Four days of tutored training
- Meet & greet with technical experts
- Field trip to GIS substation
- Training documentation
- Food and drinks during the days
- Dinner for Days 1 to 3

### Accommodation

Each participant is responsible for his own accommodation. Feel free to contact us to get recommendation on hotels.

### Key points

Group size: 6 – 10 Participants  
 Language: English  
 Location: Zurich, Switzerland  
 Registration: gis\_training@ch.abb.com

### Dates

18 – 21 March 2014  
 13 – 16 May 2014  
 16 – 19 September 2014

### last registration

31 January 2014  
 31 March 2014  
 31 July 2014

### Indicative Agenda

Day 1	Day 2	Day 3	Day 4
Welcome & ABB introduction	GIS Basics – Refresher	Condition Assessment & Diagnosis	SF <sub>6</sub> gas background & handling
Latest GIS Technology	<b>Workshop: Risk Management for GIS</b>	GIS Monitoring: PD & SF <sub>6</sub> gas	
<b>Factory visit</b>	Case study: Flashover in GIS	<b>Field trip</b>	<b>Circuit Breaker Drive Mechanism</b>
GIS Service Portfolio & Maintenance Philosophy	Trouble shooting		

■ theory ■ practice

We hope to welcome you soon.

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