



New IEEE
Milestone
on HVDC,
17/05/15

Brief report from the PE/PEI Chapter

Lina Bertling Tjernberg

Chair IEEE Sweden Chapter PE/PEI



IEEE Sweden Section, Chapter Meeting,
October 5, 2017, KTH, Stockholm.



IEEE Milestone Gotland HVDC 1954

– First Commercial HVDC Link

Gotland – May 15, 2017

Mats Edvinsson, Chair IEEE Sweden Section

Olof Samuelsson, IEEE Sweden PES/PEL Chapter

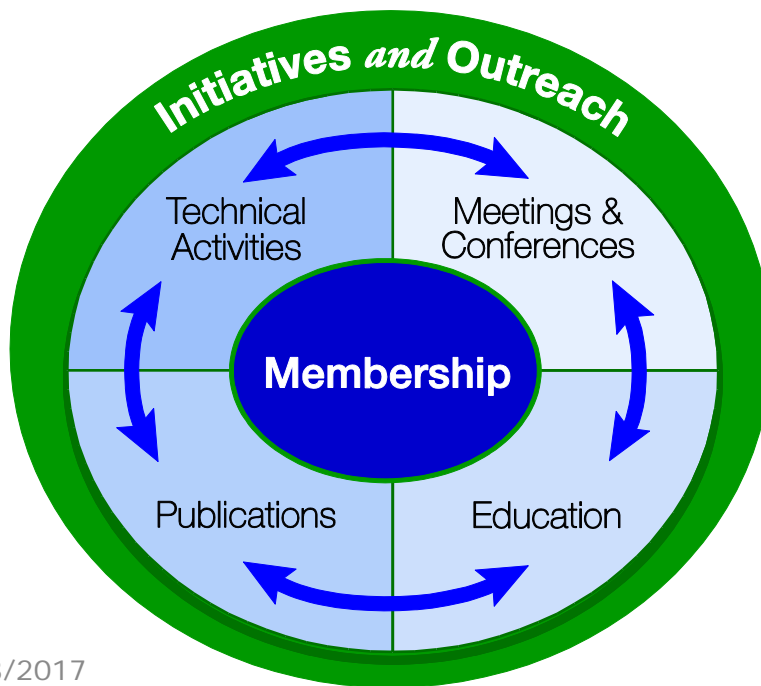
Lina Bertling Tjernberg, IEEE Sweden PES/PEL Chapter

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Upcoming event:

IEEE Sweden PE/PEL Chapter Seminar
Title: "Towards a New Smart Grid System: Challenges in Power Electronics and Power Systems"
Date: April 15th 2011
Place: ABB Corporate Research, Västerås, Sweden.

For more information about the seminar, please contact: hector.zelaya@se.abb.com

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Recent activities, examples

- ▶ Sep 2016;
Prof Math Bollen, Luleå Univ – assessment of uncertainties in power systems,
Dr Fredrik Carlsson, Vattenfall – smart grid activities & e-mobility
- ▶ Nov 2016; Carlos Martins, ESS - Applications & topologies of power electronic systems for large particle accelerators
- ▶ Mar 2017; Section AGM key note speaker
Lina Bertling Tjernberg – Smart grid experience in Europe
- ▶ May 2017; IEEE Milestone Sweden

Agenda

- ▶ IEEE Sweden & PE/PEL
- ▶ Key event 2017
 - IEEE Milestone program
 - Gotland HVDC 1954

IEEE Milestone Program

- ▶ To honor significant technical achievements in all areas associated with IEEE
- ▶ Like UN World Heritage for electrical engineering
- ▶ A plaque makes the milestone visible to the public



Now 178 IEEE Milestones

To be proposed as an IEEE Milestone, an achievement must be at least 25 years old, have benefited humanity and must have had at least regional importance.

- ▶ Volta's electrical battery invention, 1799, Italy
- ▶ Maxwell's equations, 1860-1871, UK and Ireland
- ▶ Poulsen arc-radio transmitter, 1902, Denmark
- ▶ Invention of the transistor, 1947, USA
- ▶ First laser 1960, USA
- ▶ **Gotland HVDC link 1954, Sweden**

IEEE MILESTONE

Gotland High Voltage Direct Current Link, 1954

The Gotland HVDC Link was the world's first commercial HVDC transmission link using the first submarine HVDC cable. It connected the island Gotland to mainland Sweden. The 96 km-long cable used mass-impregnated technology. The Swedish manufacturer ASEA produced the link for Vattenfall, the state-owned utility. The project used mercury-arc valves for the 20 MW/100 kV HVDC converters, developed by an ASEA-Vattenfall team led by Dr. Uno Lamm.

May 2017



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