

Minutes of Meeting

VGB-Technical Committee: Generation and Technology
VGB-Technical Group: PGMON
Power Generation Maintenance Optimisation Network
50th Meeting on 16/17 April 2015 in Riga

Participants:

Andrejkowic	Milan	CEZ
Linkevics	Olegs	Latvenergo
Lundstrom	Henning	Vattenfall
Staes	Tom	Laborelec
Wels	Henk	DNV-GL

VGB Secretariat:

Grimmelt	Heinrich	VGB
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Absent:

van den Bos	Adjan	NUON
Stronge	Martin	ESB
Santos Silva	Joaquim	EDP

Agenda

Welcome (Henk Wels)

- TOP 1: Maintenance challenges during recessions periods
Henning Lundstrom, Hofo

- TOP 2: Implementation 1st line Early Fault detection in de Control Room
Tom Staes, Laborelec GDF Suez

- TOP 3: Riga CHP-1 O&M concept
Ilja Kaminskis, Head of Maintenance Department, Riga CHP-1

- TOP 4: O&M experience of Riga TPP-2 2 x 400 MW CCGT cogeneration power plant
Antons Kotovs, Latvenergo

- TOP 5: Maintenance attitude in current energy market situation
Milan Andrejkovic, CEZ

- TOP 6: Modelling the HILP characteristics of old steam turbines
Henk Wels, Dekra

- TOP 7: Explosion of a boiler circulation pump
Heinrich Grimmelt, VGB

- TOP 8: Biomass CHP plant of Rigas Siltums SC „Ziepniekkalns“

- TOP 9: Place and date of next venue

TOP 1: Maintenance challenges during recessions periods

Henning Lundstrom, Hofor

Power industries are in general challenged due to the recessions. For fossil fired units the situation is furthermore stressed due to the competition with renewable energy production.

To avoid red figures actions must taken:

The presentation and the discussions focused on a number of topics which often are contradictory with each other.

- Priority to renewable energy; especially wind turbines
- Budget reductions has become a standard
- Period wise old base load units might be further stressed due to the demand of more flexible operation patterns
- Deferred maintenance may push conditions beyond good maintenance practice
- Increasing expenditures due to deferred maintenance
- Less spare parts at stock
- Lack of visible H/R politics to avoid losses of critical core competences leading to lack of human supply chain for competences
- Outsourcing contra own competences
- Insurance adapted to the changed situations

Explosion in voltage transformer

Early 2014 an extreme explosion took place in an indoor high voltage substation only 20 meters away from the Amager Power Plant in Copenhagen. The explosion took place at 01 o'clock at a Sunday morning - no personal were present in the area.

The causes to the explosion seem to be identified and the transformer has been modified accordingly.

- The bottom part of the core and the windings has been modified
- The fixations of the coils have been reinforced.
- Oil over pressure protection has been modified.

Electrical Heating Pumps as a part of the future sustainable district heating in Greater Copenhagen

The Copenhagen area has the aim to be CO₂ neutral in 2025.

Wind turbines will produce an increasing part of the future power production. Situations with excess of power from wind turbines have already been seen; then it will be obviously to utilize this renewable power. As a part of the future sustainable program the district heating companies

in the Greater Copenhagen area have started a new program to investigate the use of electrical powered heating pumps.

The first test with an electrical powered heating pump will utilize 70 ° hot water from a geothermal well at Amager Power Plant.

TOP 2: Implementation 1st line Early Fault detection in de Control Room

Tom Staes, Laborelec GDF Suez

To be added later

TOP 3: Riga CHP-1 O&M concept

Iļja Kaminskis, Head of Maintenance Department, Riga CHP-1

To be added later

TOP 4: O&M experience of Riga TPP-2 2 x 400 MW CCGT cogeneration power plant

Antons Kotovs, Latvenergo

To be added later

TOP 5: Maintenance attitude in current energy market situation

Milan Andrejkovic, CEZ

The current situation on the energy market leads us to rethink operational and maintenance strategy of conventional units.

When considering ways of operation and maintenance we have to take in consideration economic evaluation in comparison to availability and fuel prices, energy market legislative constraints (emissions ...), estimated future development.

Content of the presentation:

- CEZ Group introduction
- CEZ Group installed capacity and generation
- Energy market situation in Czech Republic and its main drivers in a European context
- Main changes between 2008 and 2015 in operational strategy of CEZ coal fired fleet
- Portfolio management system: owners strategy > operational strategy > long-term, mid-term and year planning > maintenance and investments policy > feedback. Application of “PDCA” cycle

- Maintenance attitude: the position of units in the portfolio - equipment category according to the criticality (risk based analyses) – follows maintenance activities (preventive, predictive, reactive), rules for maintenance planning
- Feed-back - monitoring system and reporting
- Results – trends in maintenance costs and unavailability of units
- Next steps in the future - increasing of effectivity in maintenance planning, realization (contractors), monitoring

The aim of these activities is to optimized maintenance and investments costs while keeping the required level of safety, reliability and flexibility of the conventional fleet.

TOP 6: Modelling the HILP characteristics of old steam turbines

Henk Wels, Dekra

To be added later

TOP 7: Explosion of a boiler circulation pump

Heinrich Grimmelt, VGB

To be added later

TOP 8: Biomass CHP plant of Rigas Siltums SC „Ziepniekkalns“

To be added later

TOP 9: Place and date of next venue

The next meeting will be held on 13/14 October 2015 in Praha.