

Competence Building – Capacity Shortage

Research Project with Focus on
Generation-Demand Balance in
Deregulated Power Markets

Gerard Doorman
SINTEF Energy Research

Background

- Power market restructuring
- Empirical evidence of diminishing reserve margins
- Theoretical evidence of reduced willingness to invest in new (peaking) generation
 - Infrequent occurrence of peaks
 - Short duration of peaks
 - Very high prices necessary to make investment profitable
 - Fear for intervention
 - Risk aversion

Shortage in power market

- No market cross
- Insufficient reserves
- No reserves available when needed for activation
 - Load shedding
- Blackout

Objective

- "Increase knowledge about central approaches aimed at solving the peaking capacity problem in restructured power systems"

Sub projects

- Market based solutions to provide reserve capacity
 - Ivar Wangensteen
- Reserve requirements
 - Bjørn Bakken
- Capacity balance simulations
 - Model to assess the severity, frequency and duration of capacity shortage situations
 - Not on seminar
- Capacity subscription
 - Gerard Doorman

Today's seminar

- Results from research projects
- Experience from "real life"
- Information from international organizations
- Discussion