

# Intelligent Risk and Portfolio Optimisation for the Energy Markets

Identifying, analysing & simulating of Risk exposure and hedging strategies for best portfolio management

20 - 22 October 2014,

Berlin, Germany

## EXPERT SPEAKERS INCLUDE

### KEY LEARNING POINTS OF THE SUMMIT

- Hedging strategies and increase your competitiveness in the market (Benchmark)
- Structures of Contracts and Successful Project Delivery
- Effective Risk Allocation and Mitigation Effective market and credit risk management tools
- Regulatory processes supporting energy markets and utilities
- Financing Strategies and Opportunities in Energy and Utilities Market
- Portfolio Management: Objectives and Applications
- Political Intervention in Power and Utilities Markets



**Dr. Alain Schmutz,**  
**Axpo Power AG, Switzerland**  
Head of Portfolio Management



**Christian Friesendorf,**  
**Vattenfall, Germany**  
Head of Financial Risk Analysis



**Andreas Collor,**  
**E.ON New Build & Technology**  
Head Of Project Development/  
Managing Director



**Peter Kapstad ,**  
**STATOIL, Norway**  
Head of Risk Management



**Jochem Kanning,**  
**Statkraft, Germany**  
Head of Risk Management



**Paul Edge ,**  
**EDP - Energias de Portugal, S.A**  
Financial Modelling (Risk)



**Filip Strohwasser,**  
**CEZ, Czech Republic**  
Head of Origination



**Jan Kłoczko,**  
**PGNiG TERMIKA SA, Poland**  
Energy Portfolio Manager



**Matteo Gabanelli, BKW**  
**Electra Italia, Italy**  
Risk and Portfolio Manager



**Dr. Lawrence Haar ,**  
**UniCredit Bank AG - UK**  
Director Commodity Risk



**Dr Rafael Emmanuel Macatangay,**  
**Centre for Energy, Petroleum and Mineral Law and Policy (University of Dundee), U.K.**  
Lecturer in Energy Economics



**Matej Kruspan ,**  
**QEX, Slovakia**  
CEO & Former Head of Trading & Portfolio Management of SPP



**Thomas Elgaard Jensen,**  
**Energinet, Denmark**  
Senior Economist



**Jesper Thiesen,**  
**ConWx, Denmark**  
CEO



**Igor Rakovich,**  
**E.ON Norge, Norway**  
Senior Economist



**Alejandro Sanchez Alarcon,**  
**GasNatural, Spain**  
Energy Risk Manager



**Dr. Sven-Olaf Stoll,**  
**EnBW, Germany**  
Market Risk & Valuation Models,  
Financial Services Trading

## Interactive Pre-Conference Workshop 20 October 2014

Stochastic Integrated Gas & Power Portfolio Optimisation and Risk Management with PLEXOS

Led by:



**Dr Christos Papadopoulos,**  
**Energy Exemplar**  
Regional Director Europe

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# Stochastic Integrated Gas & Power Portfolio Optimisation and Risk Management with PLEXOS

20th OF October 2014

## 13.30 Registration and Coffee

## 14:00 Workshop Leader's Introduction and Opening Remarks

### Led by:

**Dr Christos Papadopoulos,**  
**Energy Exemplar**  
Regional Director Europe

## 14:15 ▶ case study **Stochastic Integrated Gas & Power Portfolio Optimisation and Risk Management with PLEXOS**

- Introducing Energy Exemplar and PLEXOS®
- Fundamental v Conventional Modelling of Risk & Portfolio Optimisation
- Integration of the physical and financial market assets in PLEXOS
- Long term co-optimisation of power and gas assets

## 15:15 Afternoon Tea and Networking Break

## 15:45 ▶ case study **Risk Management in Renewables**

- Introduction to renewables forecasting
- Portfolio effects for wind and solar
- Renewables forecast errors for different sized portfolios
- Portfolio mix of PV and Wind
- Site depending predictability

**Jesper Thiesen,**  
**ConWx**  
CEO

## 16:25 Closing Remarks from the workshop leader

## 16:30 Till 17:00 Cocktail Workshop

## WHO WILL ATTEND?

CEOs • CTOs • COOs • Presidents • Senior Vice Presidents • Vice Presidents • Directors • Heads & Managers of: Projects & Business Developments • Portfolio • Risk Management • Origination • Commodity • Modelling • Economist • Consultants • Analysts and Advisors from Associations and Institutes

## JOIN THIS EVENT TO

- Find out about **Risk & Portfolio Management globally**
- Discover the development of the **Power & Gas Market in EMEA**
- Discuss challenges in **Portfolio** and how they could be overcome
- **Access** Best practices and experiences from **practical case studies**

### *And much more...*

Energy companies, and more specifically their stakeholders, are being required to meet the demands of a market where greater scrutiny is being placed on regulatory requirements, of an economy that is unpredictable, and of a market that fluctuates daily while simultaneously meeting the requirements of customers with every increasing demand for energy.

This required for the Energy companies to remain focused on customer goals and key performance indicators, making sure that they receive the right level of service.

Ideally neither too much service nor too little service are delivered maximizing profit and minimizing cost.

As the complexities of risk evolve with time, companies are challenged more and more to identify high-risk customers using their regular tools.

The \_STATISTICA Risk Management\_ solution for the Energy industries has been proven at some of the largest and most progressive companies in the world.

Our solution provides advanced analytical tools that enable Energy companies to gain more profitable customers and to decrease risks. Risk appropriate solutions are provided for complex problems unique to the Energy industry, all with the latest algorithms and technology allowing for processing of data which grows exponentially on a daily basis with some points to discover :

- Regulatory processes supporting energy markets and utilities
- Identify your risk exposure on the market and enhance portfolio
- Find out about Risk & Portfolio MgT globally (from Europe to Australia)
- Discover the development of the Power & Gas Market in EMEA
- Discuss challenges in Risk Management
- Capitalize from best practice for portfolio optimization and reduce the costs of your investments
- Access Best practices and experiences from practical case studies.

DAY 1, 21th OF October 2014

## 8.30 Registration and Coffee

## 9:00 Opening remarks from the Chair

### 9:05 Special Feature: 'Business Card Meet & Greet'



In order to get to know one another right from the beginning, delegates will have several minutes to introduce themselves and exchange business cards with the person sitting beside them.

## ▶ Key contracting strategies for the power generation industry

### 9:10 ▶ case study **Quantifying the Risk and Value the Portfolio**

- The whole picture. Main sources of Risk. Capturing correlations
- The value of assets and contracts. Long term focus
- Beyond Betas. Complementarity of positions in the portfolio
- Investment decisions and the cost of risk.

**Dr. Sven-Olaf Stoll,**  
**EnBW**  
Market Risk & Valuation Models

### 9:50 ▶ case study **Medium term optimisation of assets portfolio**

- Embedding in organisation
- Management objectives
- Methods and Tools
- Example of results

**Dr. Alain Schmutz,**  
**Axpo Power AG**  
Head of Portfolio Management

## 10:30 Morning Coffee and Networking Break

## ▶ Effective Risk Allocation and Mitigation

### 11:00 ▶ case study **Green margin management in Poland**

- Green certificates system in Poland
- Biomass co-firing vs. pure coal
- Green margin calculation

**Jan Kłoczko,**  
**PGNiG TERMIKA SA**  
EnergyPortfolio Manager

### 11:40 ▶ case study **TBA**



Speaker Name,  
Company  
Position

### 12:20 ▶ case study **Establishing A Robust Enterprise-Wide Risk Culture, from risk control to proactive risk management**

- Risk control versus risk management
- ERM as a tool for avoiding sub optimization
- Risk management in a strategic context

**Peter Kapstad ,**  
**STATOIL**  
Head of Risk Management

## 13:00 Business Lunch

## 14:00 Coffee and Networking Break

### 14:30 ▶ case study **Optimization of Gas Portfolios**

- Typical portfolio of new entrant on gas market
- Comparison of portfolio of conservative supply and spot-based courcing
- Balancing issues of conservative supply model & of spot-based sourcing
- Hedging issues and proposed solutions

**Matej Kruspan ,**  
**QEX**  
CEO & Former Head of Trading &  
Portfolio Management of SPP

## ▶ Effective Hedging and Cashflow Modelling

### 15:10 ▶ case study **Linking financial steering and hedging of a utility**

- Hedge objectives and their identification
- Financial targets that can be supported by hedging
- Integration of top-management's risk appetite
- Organisation of the hedging process

**Christian Friesendorf ,**  
**Vattenfall**  
Head of Financial Risk Analysis

### 15:50 ▶ case study **Coherent company wide cashflow modelling, combining multi-commodity portfolios of financial contracts and physical assets**

- Coherent company wide cashflow modelling
- Combining real world projections with risk neutral pricing
- Managing multi-commodity portfolios of financial contracts and physical assets
- Deciding what and what not to hedge - What matters to the company

**Paul Edge ,**  
**EDP - Energias de Portugal, S.A**  
Financial Modelling (Risk)

## 16:20 Afternoon Tea and Networking Break

### 16:50 ▶ case study **The balancing markets in Europe**

- The development of the balancing markets in Europe (defined as the markets that starts after interday)
- Integrating larger volumes of RES gives bigger incentives to be active in the balancing market
- How balancing markets can be used to managed risk for large imbalance prices
- The need to integrate RES and demand in the balancing markets

**Thomas Elgaard Jensen,**  
**Energinet**  
Senior Economist

## 17:30 | PROBLEM SOLVING SUMMIT

- The suggestions for this interactive session will be chosen on the day by delegates.

## 18:00 Chairperson's Closing remarks and End of Day One



## DAY 2, 22th OF October 2014

### 8.30 Registration and Coffee

### 9:00 Opening remarks from the Chair

### 9:05 Special Feature: 'Business Card Meet & Greet'



In order to get to know one another right from the beginning, delegates will have several minutes to introduce themselves and exchange business cards with the person sitting beside them.

### ▶ Structures of Contracts and Successful Project Delivery

### 9:10 ▶ case study Challenges ahead within Structured energy contracts

- Structured power contracts under current market development
- Valuation of structured product
- Risk balance of structured Product

**Filip Strohwasser,**  
**CEZ**

Head of Origination

### 9:50 ▶ case study The technical tools behind any contract or project valuation

- Final Electricity Price Components. Time series models fitting through correlation analysis
- Electricity Pool Price vs. Thermic Gap\*: electricity price fundamental modelling Price prediction and risk analysis.
- Percentage of Total Power generated by thermal units gas/fuel/coal fired plants

**Alejandro Sanchez Alarcon,**  
**GasNatural**

Energy Risk Manager

### 10:30 Morning Coffee and Networking Break

### ▶ Financing Strategies and Opportunities in Energy and Utilities Market

### 11:00 ▶ case study Financing Energy Investment

- New build...what and where; Outlook and new build deficit
- Oil & Gas Infra-structure & Reserves
- Transmission and Distribution
- Power Conventional & Renewables
- Traditional methods and Innovations

**Dr. Lawrence Haar,**  
**UniCredit Bank AG - UK**  
Director Commodity Risk

### 11:40 ▶ case study Economic Modelling to Support Investment Decisions within Energy Markets

- Commodity prices and investment decisions
- Modelling subsurface risk into portfolio decisions
- Political risks and fiscal terms: what is the value of one barrel of oil?

**Igor Rakovich,**  
**E.ON Norge,**  
Senior Economist

### 12:20 ▶ case study Intelligent risk an portfolio optimization for energy markets

- Renewable energy production optimization
- Risk in a general portfolio of assets
- Risk view on long term exposures
- Correlation risk between different spreads

**Jochem Kanning,**  
**Statkraft**

Head of Risk Management

### 13:00 Business Lunch

### 14:00 Coffee and Networking Break

### ▶ Regulatory processes supporting energy markets and utilities

### 14:30 ▶ case study Hedging the cost of natural gas in regulated electric utilities

- Electric utilities heavily dependent on natural gas
- Manage significant risks associated with natural gas costs
- One approach to risk management is to acquire financial instruments hedging the cost of procuring natural gas
- The mix and structure of hedging instruments are optimised in order to minimise the variance of the natural gas cost distribution

**Dr Rafael Emmanuel Macatangay, Centre for Energy, Petroleum and Mineral Law and Policy (University of Dundee)**

Lecturer in Energy Economics

### 15:10 ▶ case study Project Risk Management during Power Plant Development

- Reminder: why are we doing this at all?
- Translating theoretical models into practical reality
- Qualitative and quantitative evaluation
- Making sense of and working with the risk register

**Andreas Collor,**  
**E.ON New Build & Technology**

Head of Project Development / Managing Director

### 15:50 Afternoon Tea and Network Break

### ▶ Green Agenda of Energy & Utility Market

### 16:20 ▶ case study Evolution of the Italian power spot price profile: "Here comes the Sun"

- Evolution of the spot price profile in continental Europe
- Relevance of solar energy in continental Europe
- Evidence of the solar impact on the Italian power market

**Matteo Gabanelli,**  
**BKW Electra,**  
Risk and Portfolio Manager

### 17:00 | PANEL DISCUSSION

- The topics for this interactive session will be chosen on the day by delegates.

### 17:40 Closing remarks and End of Conference