



PowerSched0

The system that supports *your* decisions

A historical map of Europe and the Mediterranean region, showing various countries and cities. The map is in a vintage style with muted colors. The text 'PowerSched0 for PCR' is overlaid in large white letters across the center of the map.

PowerSched0 for PCR

## Price Coupling of Regions is here

This means that there is a single day-ahead energy market linking European countries

Many opportunities are open for both traders and producers

Euphemia is the name of the algorithm that solves the market coupling problem

*It maximizes the welfare of the accepted bids. The welfare is calculated over twenty four hours in a day simultaneously.*

The relevant aspects of each regional market are considered

*Hourly orders (step wise and linear piecewise), block orders (regular, profile, exclusive, linked, flexible hourly, minimum income, load gradient), Italian PUN, networks (balance, flow based, limits, ramping, ...)*

**PowerSchedO for PCR**  
is a replica of Euphemia  
algorithm

Allows you to forecast  
prices and volumes, verify  
the impacts of your  
current bidding strategy  
and test new ones and

Within the rules and  
constraints of PCR

**PowerSchedO** is a  
decision support  
system at the state  
of the art

*Math Modeling,  
Optimization, Simulation,  
Forecast, Risk Management*

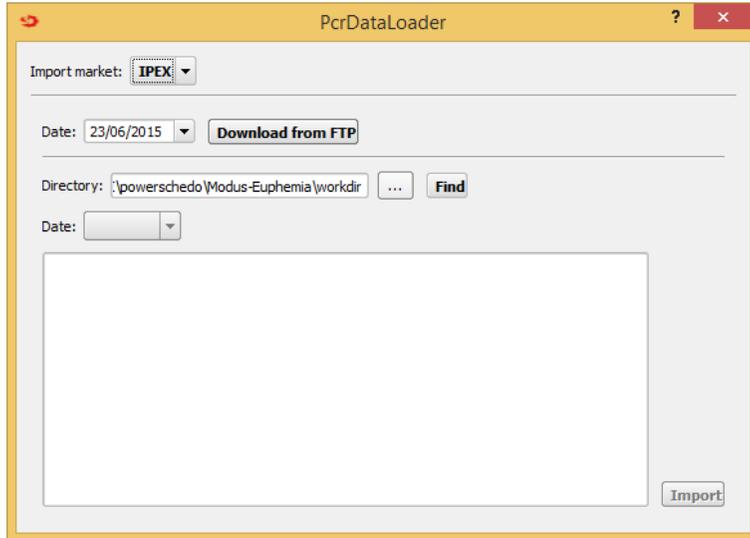
*Multi Commodity,  
Effective Time To Market,  
Robust*

*Telecommunications, Gas,  
Power, Mobility*

**PowerSchedO**  
allows to manage  
the risk of a new  
business with  
flexible tools and  
effective results

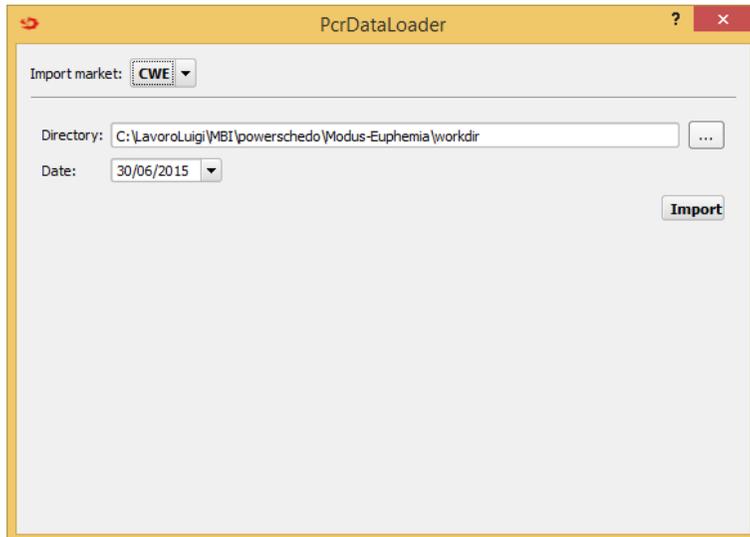
*Applied in a broad range of  
business contexts*

*Changing or creating real-  
world problem models in  
very short time, allowing a  
real mathematics  
engineering*



The screenshot shows the PcrDataLoader application window with the following settings:

- Import market: IPEX
- Date: 23/06/2015
- Download from FTP: [button]
- Directory: \\powerschedo\Modus-Euphemia\workdir
- Find: [button]
- Date: [dropdown]
- Import: [button]



The screenshot shows the PcrDataLoader application window with the following settings:

- Import market: CWE
- Directory: C:\LavoroLuigi\MBI\powerschedo\Modus-Euphemia\workdir
- Date: 30/06/2015
- Import: [button]

*PowerSchedO for PCR makes easy reading data from the markets*

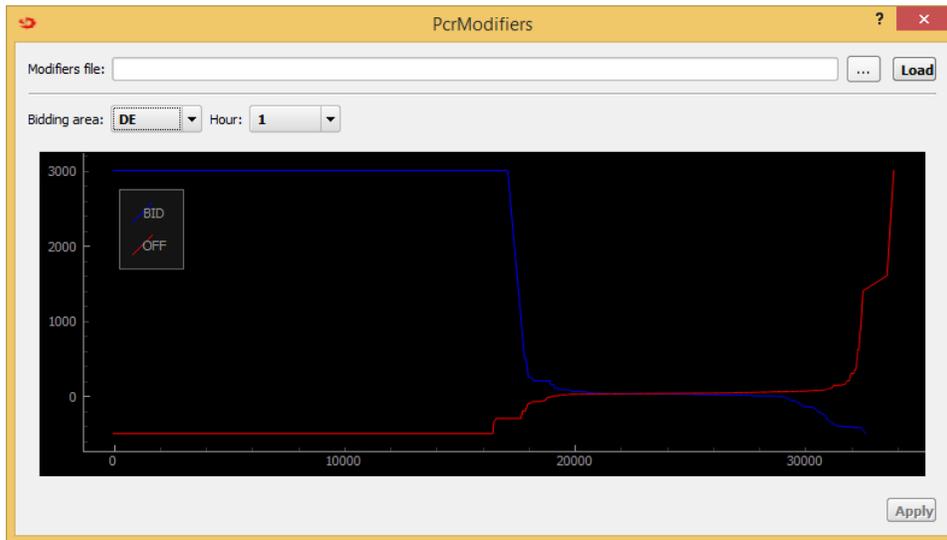
*A specific tool reads data coming by market holders. This makes possible to read all the information needed to replicate the results of a specific day.*

Accurate tests are performed for MGP and CWE region

*MGP - full access to the FTP site, where the xml files are automatically retrieved given a specific date.*

*CWE - some files must be downloaded manually from EPEX Spot, EEX and CASC; the system links the information and rebuild the scenario to the user.*

# Modifying offer curves



*PowerSchedO* for PCR makes easy modifying the offer curves

The user provides modification instructions thru an Excel file



*A preview area makes possible to the user to see how the modifications affect on the offer curves*

*They can test iteratively different modification strategies, checking how they affect in the different market areas and specific hours*

*A modification file provides instructions on how segments of offer curves must be modified*

*Each instruction is represented by a row into the modification file and affects the bidding curves of a given market area in a given hour*



# If you want more information

Email us your contacts at [info@powerschedo.com](mailto:info@powerschedo.com)

An expert will call you

We will be happy to give you any information about products, services, prices and about any other topics you need

Run the market simulations on your desktop computer with the *stand-alone* version

*Direct connection with excel and oracle*

*User friendly and intuitive interface*

*One license One installation*

The *server* version covers the special needs of large organizations

*Easy to integrate in any information system*

*Cluster architecture for high performance computations*

*One license One use*



# Waiting for your demonstration

mOdu

PerAnalysis PoDataLoader Open workdir New scenario Update About Logout

Scenario

Connection type

Load Scenario

Close Scenario

Save this Scenario

Save as New Scenario

Working Area

Run

Statistics

Reports

What If

Logs

PerDataLoader

Date: 12/12/2014 Download from FTP

Directory: verschedo\Modus\Euphema\workdir Find

Date:

Import

User test logged as PSO@PCR

mOdu - Loaded Scenario : of type

PerAnalysis PoDataLoader Open workdir New scenario Update About Logout

Scenario

Working Area

Run

Statistics

Reports

What If

Logs

prezzi "M(20), SA... prezzo

Plot

Series

- prezzi(output) CNOR(8) prezzo
- prezzi(output) CSUD(10) prezzo
- prezzi(output) NORD(2) prezzo
- prezzi(output) PUN(20) prezzo
- prezzi(output) SARD(12) prezzo
- prezzi(output) SIC(18) prezzo

Options

- Trace curves
- Use calendar

User test logged as PSO@PCR

mOdu - Loaded Scenario : of type

PerAnalysis PoDataLoader Open workdir New scenario Update About Logout

Scenario

Working Area

Input Area

- scenario
- calendar
- bidding\_areas
- transiti
- hourly\_orders
- profile\_regular\_block
- exclusive\_block\_order
- linked\_block\_order
- flexible\_block\_order
- mic\_order
- load\_gradient\_order
- hourly\_flow\_ramping\_limit

Run

Statistics

Reports

What If

Logs

Entity

Back Delete Export EntityTemplate Load Modify Change granularity

Filter:

code	description	id_bidding_area_da	id_bidding_area_a	tariffs	losses
1	AUST - NORD	1	2	0	0
2	BRNN - GREC	3	4	0	0
3	BRNN - SUD	3	5	0	0

TimeSeries IndexedSeries Vectors Reports

Series

- capacita\_inv
- capacita\_dir

Options

- Use calendar

User test logged as PSO@PCR

mOdu - Loaded Scenario : of type

PerAnalysis PoDataLoader Open workdir New scenario Update About Logout

Scenario

Working Area

Output Area

- scenario
- transiti
- bidding\_area
- hourly\_orders
- profile\_regular\_block

Run

Statistics

Reports

What If

Logs

Entity

Filter:

code	description	id_bidding_area
1	AUST	1
2	NORD	2
3	BRNN	3
4	GREC	4

TimeSeries IndexedSeries

index prezzo

24	45.31
23	51.19
22	53.53
21	59.99
20	65.71
19	78.71

Bidding area: SUD(5) Hour: 14

Run

User test logged as PSO@PCR



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Una presentazione orale è da ritenersi parte complementare alle pagine precedenti.

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The oral report is complementary to the above pages.

