



Aristotle University of Thessaloniki

IENE Innovation in Energy

Thursday, 8th May 2025

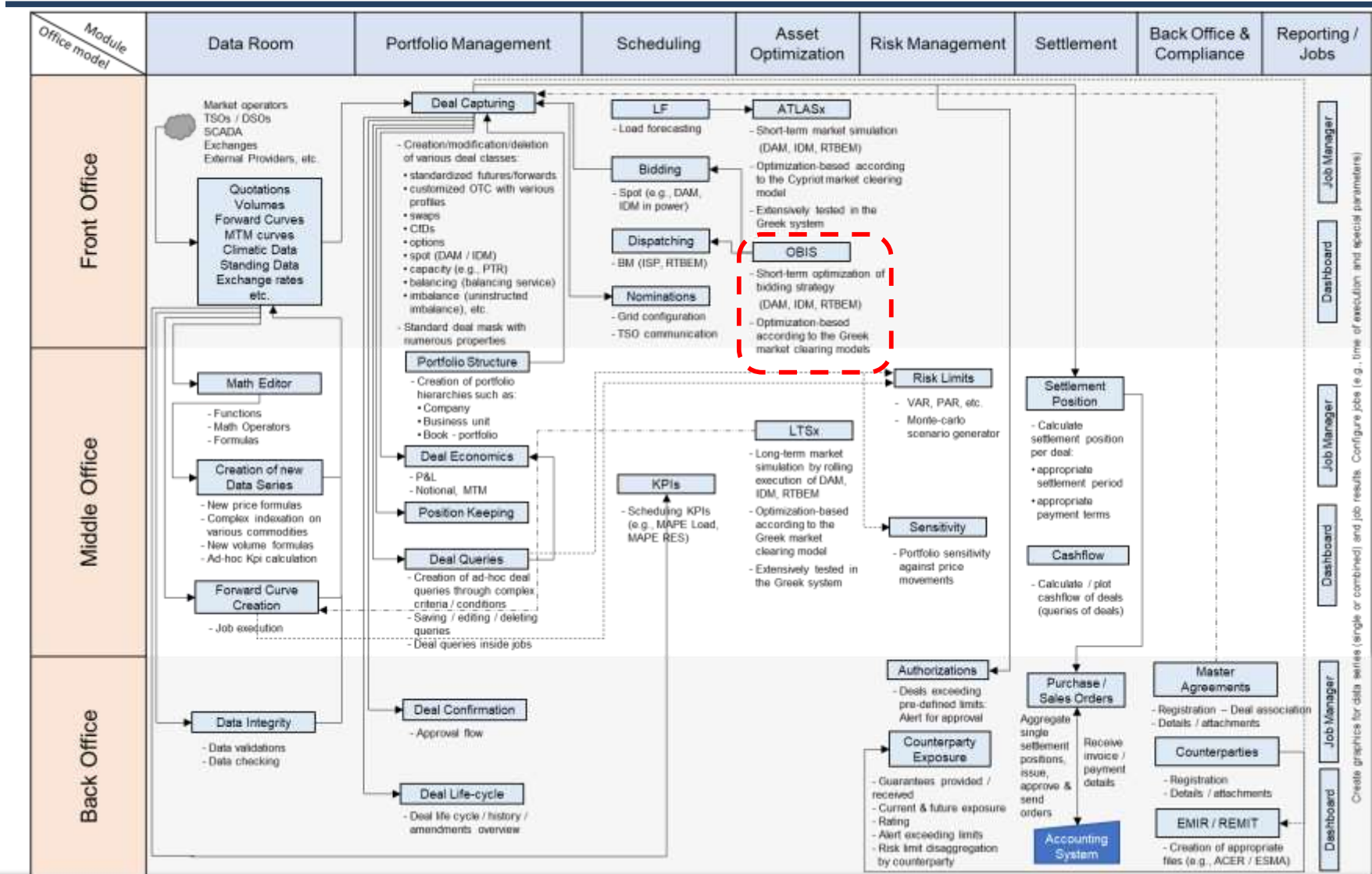
Integrated platform for the participation of assets in the
wholesale electricity market

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High-level design



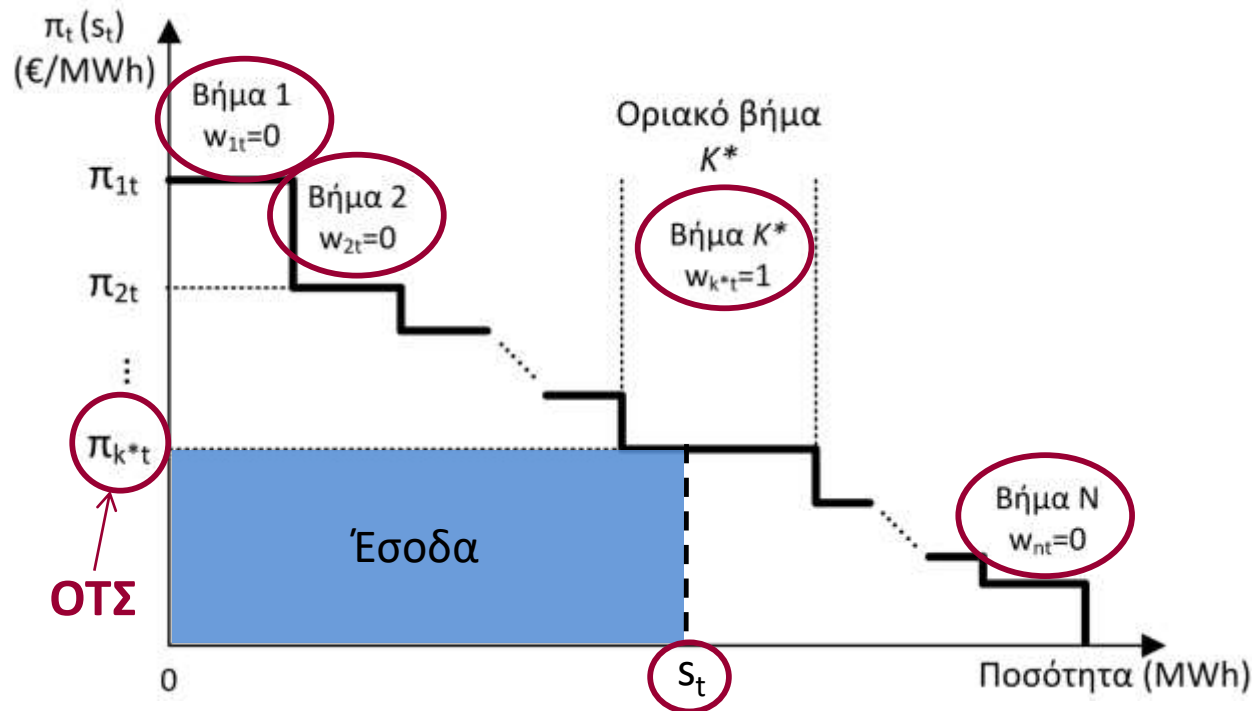


Portfolio bidding strategy

- two-level optimization processes:
 - 1st level: DAM, Intra-Day auctions, ISP
 - Residual Demand Curves
 - XBID, real-time Balancing Energy Market
 - Close to real-time market optimization models



Residual Demand Curves



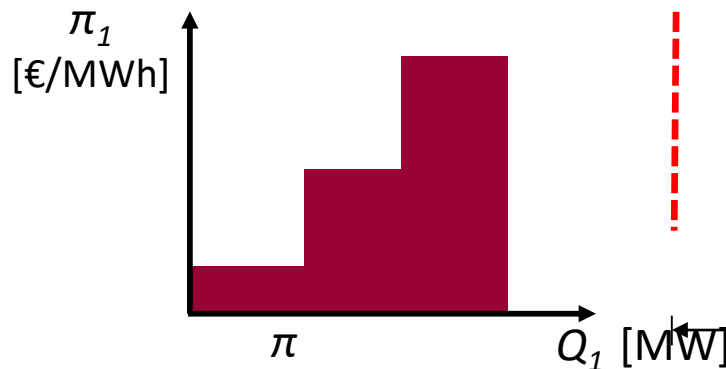
Βηματική
μονοτόνως
φθίνουσα
συνάρτηση



Residual Demand Curves

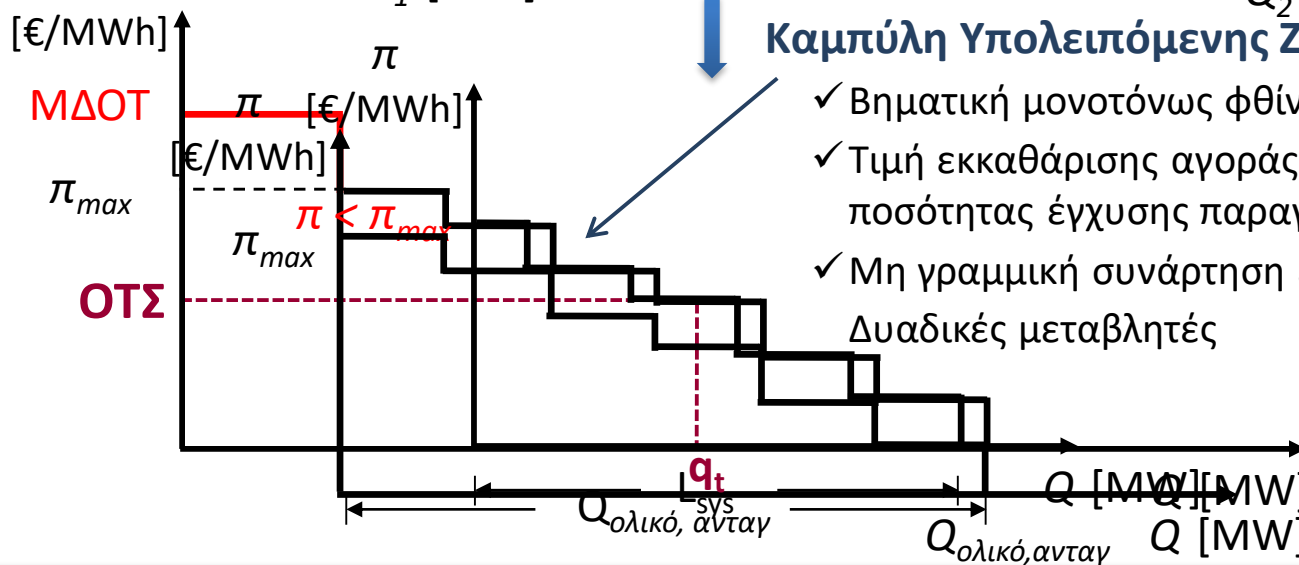
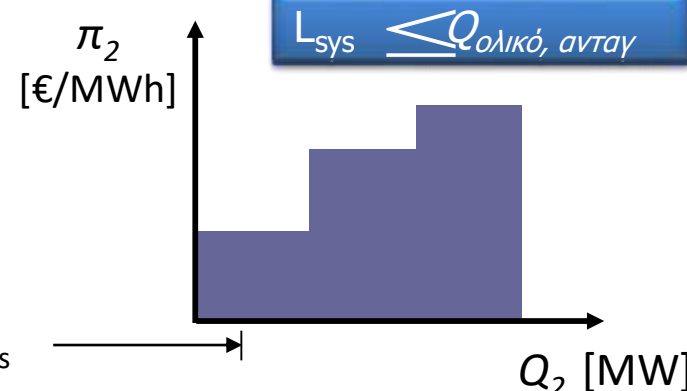
Ανταγωνιστής Παραγωγός 1

Ζεύγη ποσότητας-τιμής



Ανταγωνιστής Παραγωγός 2

Ζεύγη ποσότητας-τιμής



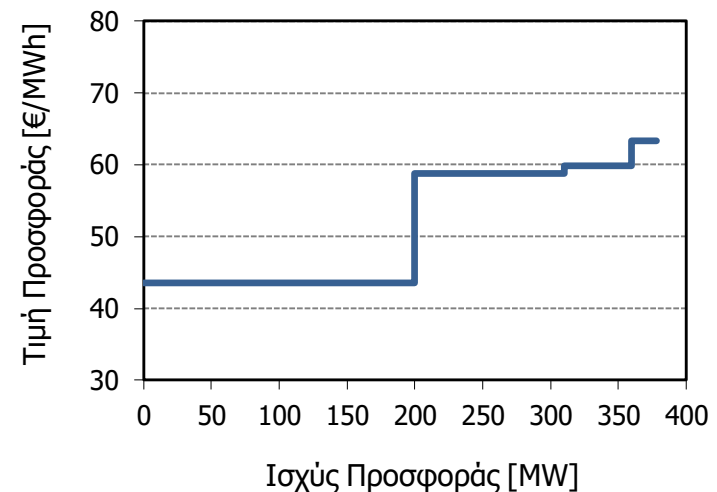
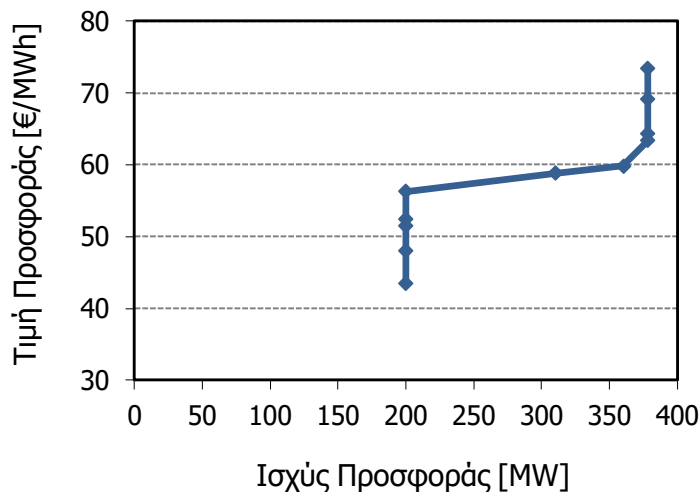
Καμπύλη Υπολειπόμενης Ζήτησης

- ✓ Βηματική μονοτόνως φθίνουσα συνάρτηση
- ✓ Τιμή εκκαθάρισης αγοράς → Συνάρτηση ποσότητας έγχυσης παραγωγού
- ✓ Μη γραμμική συνάρτηση εσόδων → Δυναμικές μεταβλητές

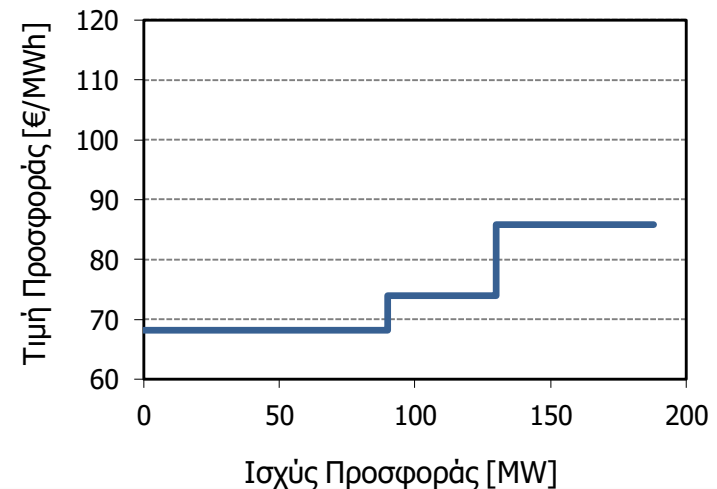
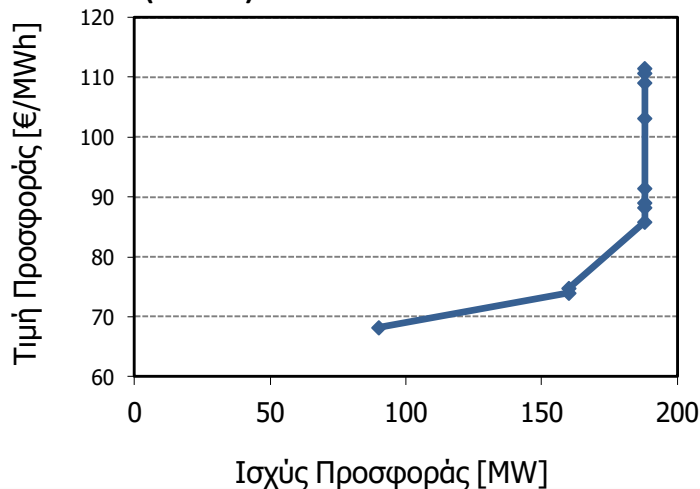


OBIS objective function

- Μονάδα #1 (t=2)



- Μονάδα #2 (t=18)





Thank you for your attention !

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