

ENERGY MARKET INTELLIGENT MODELING SYSTEM

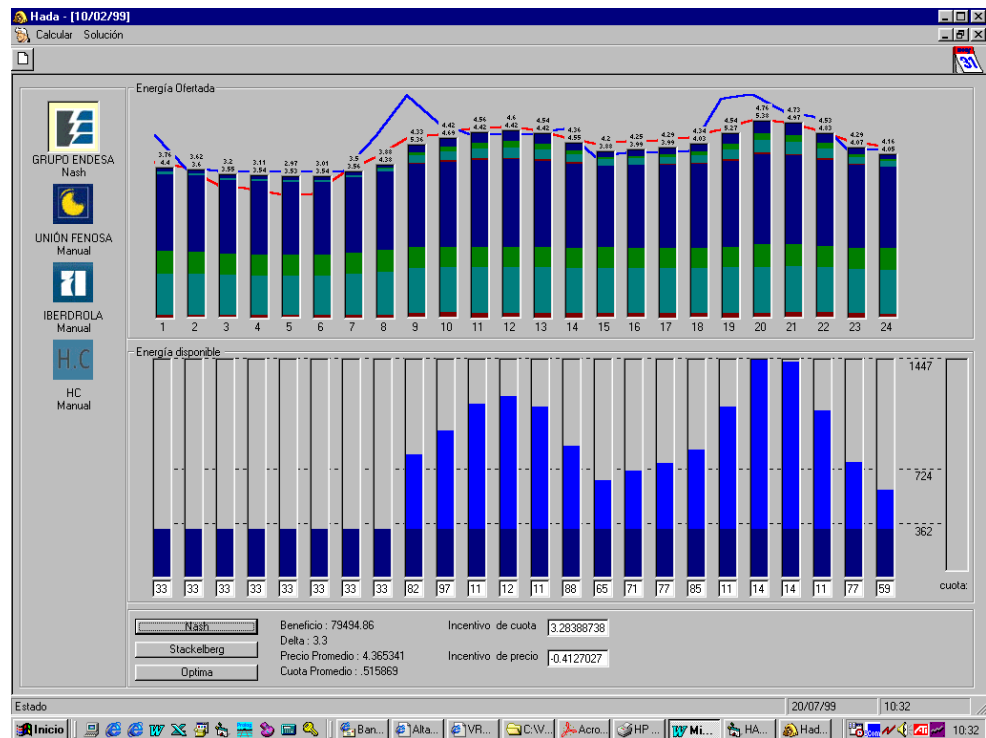
INTRODUCTION

The Energy Market Intelligent Modeling System (EMIMS) has been developed to give Computerized Information Support to the bidding generation in the Electrical Energy Market. The System uses Artificial Intelligence techniques blended with classical mathematics: Forecasting, Symbolic Context Information analysis, Dynamic Programming, Optimization as well as economic theories: Game Theory, etc.

EMIMS observes the strategically relevant market parameters, identifies the different equilibrium status between market agents and gives optimal responses to the competing bids. Thus EMIMS allows a market agent to identify the strategy of its competitors and to optimally respond to it. Furthermore it allows the agent to evaluate the efficiency of its own strategy.

The Observation of the strategic parameters corresponds to an extension of our Energy Market Intelligent Observation System. This extension contemplates the different magnitudes of interest for market-evolution monitoring. The free equilibrium can be calculated by modeling the general market features.

Finally the generation of optimal responses is built around two main modules: the Forecast and the Optimization modules.



MAIN FEATURES

- Intelligent Observation System.
- The forecast module generates the expected competing bids.
- Optimal responses to the competing bids is also generated.
- Relevant strategic parameters are observed.
- Free equilibrium identification.
- Identifies and studies equilibrium under restrictions.
- Management of the energy-price relation in bid generation.

HARDWARE/SOFTWARE PLATFORM

The application runs on any PC under Windows.

