



NEMESYS

NEM

**Electricity Spot Market
Bidding and Visualisation Software**

December 2011



The NEMESYS Software Solution

NEMESYS is a modular software solution designed for and by electricity spot traders and analysts. NEMESYS offers three modules:

- Spot Bidding Tools
- Market Data Batcher
- Market and Trading Visualisation Screens

Clients are able to acquire the full software suite or select individual modules dependent upon their needs. The full software package delivers a fast *Spot Bidding Tool* with substantial cross checks, audit trails and other compliance mechanisms. Users gain access to powerful bid, rebid and spot market analytical tools complemented by intuitive *Market Visualisation Screens*. The combined system enables traders to observe the live market in trading room display screens and the system facilitates rapid responses to changing market circumstances. The *Market Data Batcher* module allows clients to replicate MMS Info-server with live capture of public and private AEMO data. Importantly the NEMESYS software package facilitates remote trading and market analytics and integrates with each client's own ICT processes to establish three tiers of disaster recovery.

Energy Edge systems that compliment NEMESYS are:

- **Market Alerting System** – this system monitors live market conditions and sends alerts via SMS and email. The user is able to configure fine-grained alerting rules and to define alert targets based on client specific requirements;
- **STTM Data Server** - allows gas *Short Term Trading Market* participants or non-participants to keep an up-to-date set of STTM data locally and drive short term gas market reporting requirements; and
- **Market Edge** – A powerful suite of spot and derivative market tools from trader decision support, derivative pricing, market analysis and portfolio risk management for all energy, carbon and environmental commodities relevant to Australian Market Participants and Energy Users.

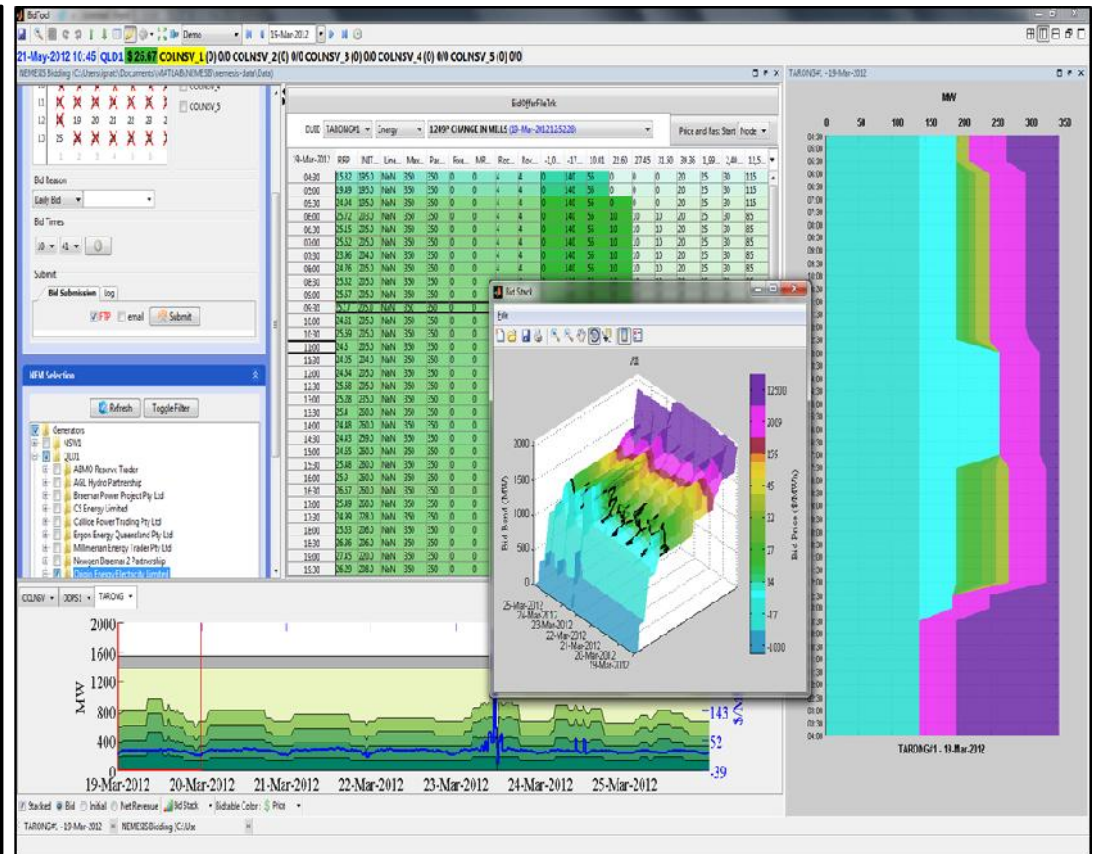
Refer to www.energyedge.com.au for more details on other Energy Edge systems and services.

Bidding Tool

The bidding tool allows electricity spot traders to bid power plant into the market with extensive internal controls, compliance, AEMO verification and audit capabilities. The bidding tool allows traders to view and analyse all bids and rebids of market participants across the NEM and to visualise clearly the dispatch of all scheduled plant across the market with a powerful set of viewing filters.

Bid Tool Features

- Easy and intuitive interface for submitting bids
- Smart Bidding rules built in to monitor all bid inputs validity
- Multiple units/days and bid types (Energy and FCAS)
- Easy access to all of NEM participants' historical bids and rebids
- Line-pack capability planning for gas fired plants
- Contract position for net generation position display
- Short Term price forecasting engine
- Customizable screens
- Traders log-book database for recording bidding activity
- Portability, use whole system with Wi-Fi connectivity and RSA VPN token
- AEMO production and pre-production capability
- Primary, secondary and local server fallback capability at the flick of a switch
- Data store redundancy, can use database or local binary files
- Interfaces with SMS warning system

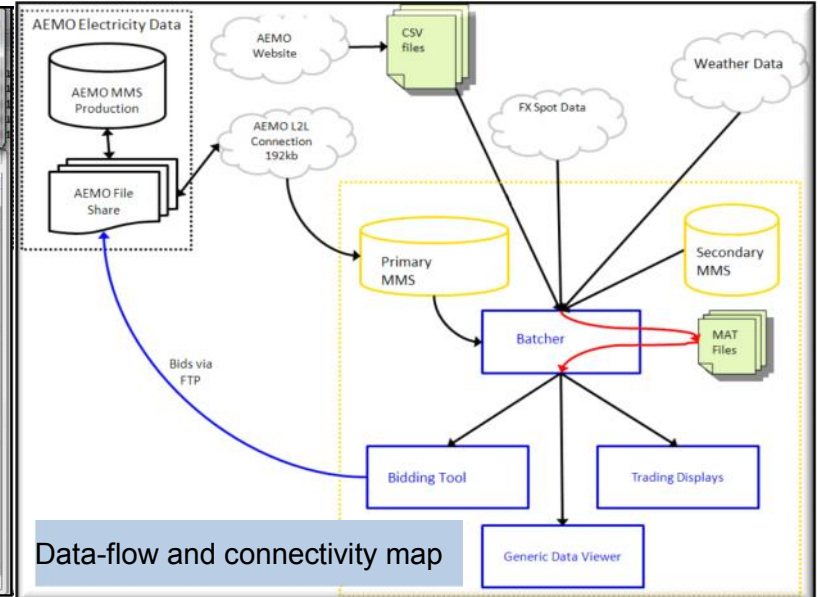
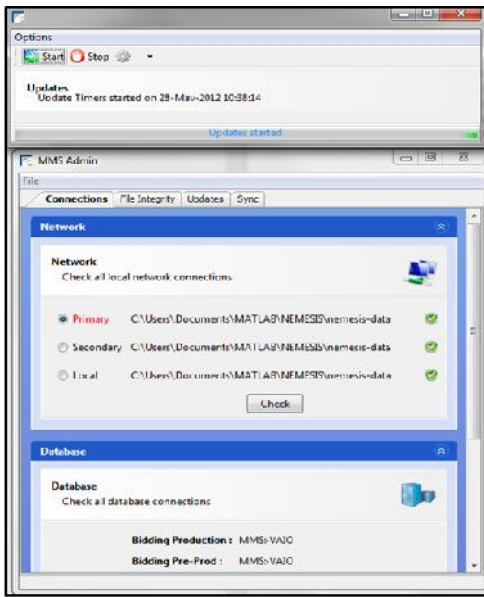


NEMESYS Bidding and Visualisation System

Market Batcher

The Energy Edge Market Batcher processes the incoming private and public AEMO CSV files. The data can be pushed to a database such as SQL Server, or this can be left to the AEMO batcher. It is also saved as binary local files for quick and portable access, across multiple platforms. Line-pack, Weather and Currency data can also be captured by the Market Batcher as required.

- ### Market Batcher Features
- MMS Database from private or public source capable
 - Can use any JDBC compliant database such as SQL Server or Oracle
 - Primary and Secondary database capability for disaster recovery
 - Backup and restore data capability
 - All data saved as binary files enabling one to work without database and for faster performance
 - Live Weather database
 - Live Currency database
 - Line-pack database capability
 - Runs on Windows XP/Win7 32/64 and Mac OSX



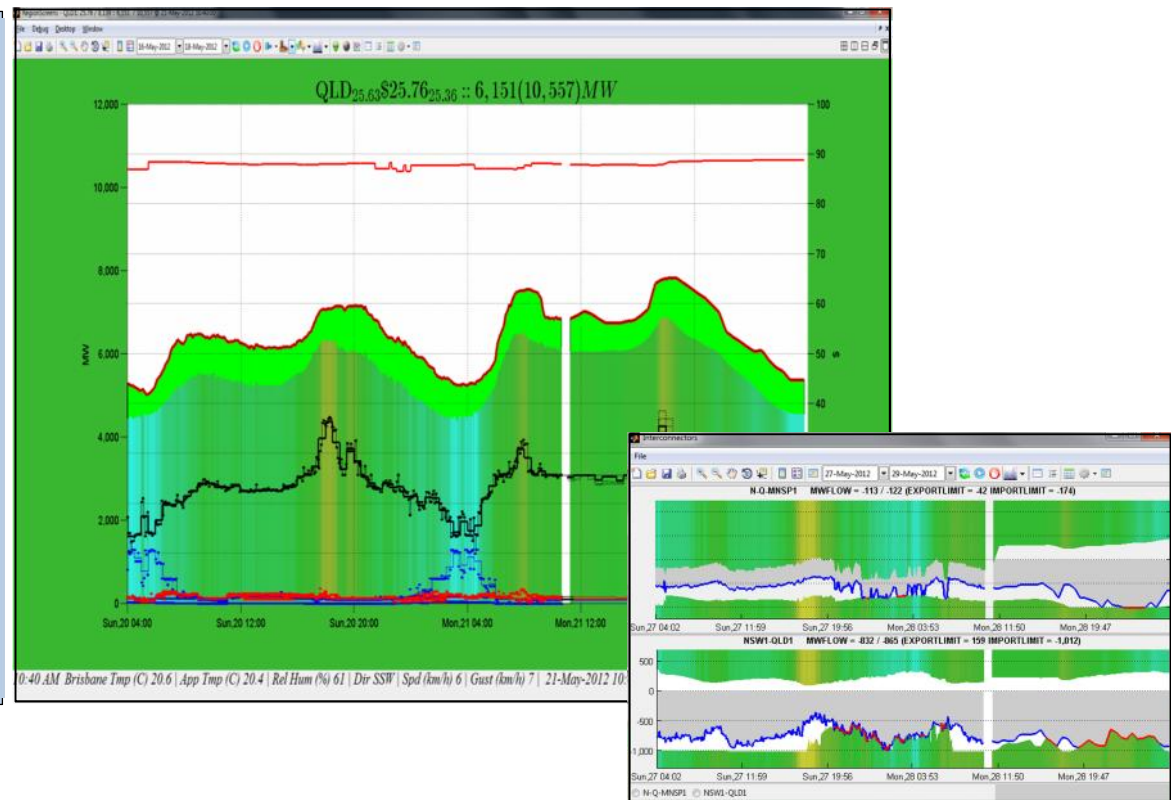
Data-flow and connectivity map

Trading Screens and Visualisation

Live trading screens continuously display the various region market data such as price and demand, interconnector flows and constraints along with station specific data like Line-pack. The visualisation screens have inbuilt features supporting data export to spreadsheets for analysis and reporting.

Trading Screens and Visualisation Features

- Regional Visualisation - Detailed price, demand and supply data by region
- Inter-regional Visualisation – interconnector capacity, flows, constraint and prices
- Line-pack visualization – Screens configurable to allow client specific line-pack tracking
- Colour Mapping - All display screens mapped to live and consistent price/colour palette for trader peripheral vision information flows
- Display generation and availability for all units
- Trading and dispatch data resolution
- Customizable charts
- Export data to Excel/CSV
- Primary, secondary and local server fallback capable at flick of a switch
- Data store redundancy, can use database or local binary files
- Runs on Windows XP/Win7 32/64 and Mac OSX





System-Wide Features

The following features are common to all modules of NEMESYS.

- Customizable screens
- Portability: use whole system with Wi-Fi connectivity and RSA VPN token
- Plug-in architecture allows components to be added as needed to suit client requirements
- Integrates seamlessly within existing IT infrastructure
- Runs on Windows XP/Win7 32/64 and Mac OSX
- Can use any JDBC compliant database such as SQL Server
- Primary, secondary and local server fallback capability at the flick of a switch

More Information

Energy Edge offers consulting and software services for the NEMESIS - Spot Market Bidding and Visualisation System and broader energy, carbon and environmental market trading. Contact us for:

- A demonstration of our proprietary systems such as NEMESYS
- Delivery of Off-the-shelf or customized NEMESYS system solutions
- Bespoke development of in-house spot market system solutions
- Support Arrangements are offered for NEMESYS and other Energy Edge Systems and can be customized to client requirements

For more information on the *NEMESYS – Spot Market Bidding and Visualisation* software or Energy Edge's other services visit www.energyedge.com.au or alternatively phone on 07 3210 2699 or send an email to info@energyedge.com.au Alternatively contact any of our team members directly.