



PHAROS ASSET MANAGEMENT SYSTEM

PERFECTING COMMERCIAL OPERATIONS

Pharos Enterprise Intelligence

Pharos Enterprise Intelligence provide asset management software and operations consulting services to power plant owners, operators and traders. Currently we support energy operations in the NYISO and ISO-NE energy markets and will be expanding into PJM, SPP, MISO and ERCOT.

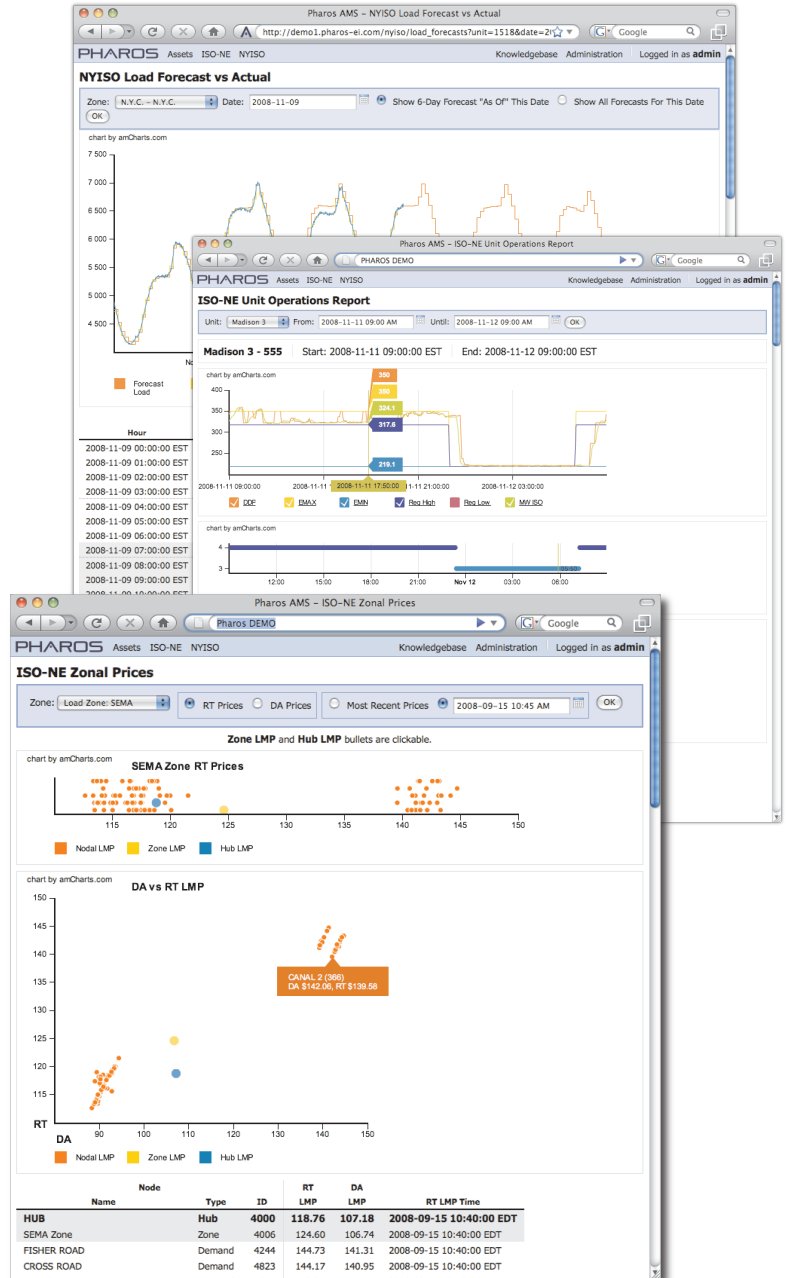
Pharos Asset Management System (AMS)

The Pharos Asset Management System is a high-performance web-based application that securely integrates an energy client's private, third party private, and public data resources in a single service. Our clients can access their data via any designated networked computer, including mobile devices such as Blackberries and web-enabled phones. Pharos AMS provides realtime business intelligence and a toolset to assist all levels of the organization.

Pharos AMS delivers key functionality:

- Aggregates and organizes data from the ISO and third-party data sources
- Provides tools to analyze, monitor, and export data
- Provides email alerts for a broad set of events and information
- SAS-70 Certified hosted data warehousing to preserve data long after ISO retention policies expire.

INCLUDED FUNCTIONALITY
 REAL TIME ASSET MONITORING
 EMAIL NOTIFICATION
 REAL TIME REVENUE ESTIMATION
 BID ANALYTICS
 BID VISUALIZATION
 PRICE AND CONGESTION ANALYSIS
 ISO WEBSITE REPLACEMENT
 DATA ARCHIVING
 OPERATIONS VISUALIZATION
 SETTLEMENTS FILE CAPTURE AND REPORTING



Aggregation and Normalization from (Almost) Any Source

Energy companies today, like many other businesses, are drowning in data. A typical power company will have tens of thousands of data points stored historically in plant databases, years of historical data stored with the ISO, publicly available market data from ISO web services, logistics information in key vendor databases, commodity and financial market data, operational information on third-party web sites, real-time feeds from the ISO, as well as difficult-to-capture information, such as verbal dispatch orders and other operational data. This data is spread all over the globe in many different formats, and each may require any of a dozen different protocols to access.

Pharos AMS will aggregate, store, and organize this data for you. We have aggregators for supported energy markets (ISO-NE and NYISO, and more on the way), common databases, and third-party data sources. We pride ourselves on the flexibility of our data aggregators, and the breadth of our support. If we don't have an aggregator for your critical data source, we will build one.

Data Access

Pharos AMS can be securely accessed by any networked device with a web browser: during the day, from your desktop, at night, from your laptop, and when on the road, access from your phone, Blackberry or mobile device.

Without per-seat license fees, you can also authorize anyone inside or outside your company to access Pharos AMS. A full-featured user privileging system allows you to limit access to sensitive data and screens.

Your in-house analytical tools and IT staff can leverage Pharos AMS by accessing your data using our data APIs. We can provide the data to you in a variety of formats (XML, JSON, CSV) allowing your staff to focus on improving your business and not reinventing the wheel.

It's your data. Access it whenever you want, however you want it.

NYISO Asset Operations Summary									
LBMP Time: 00:45:00 EDT									
N.Y.C. Load: 4771			N.Y.C. Load Forecast: 4828			ConEd Load: 5511			
	MW ISO	MW Plant	UDG	SCD	Dev	DAM	LBMP	DAM LBMP	
Unit_1	93.1	94.1				127.5	49.69	51.71	
Unit_2	138.7	138.9				SRE	49.69	51.56	
Unit_3	81.1	80.3					49.69	51.56	
N.Y.C. LBMP: 49.83		MILLWD LBMP: 49.50			HUD VL LBMP: 49.41		LONGIL		
DA Regulation East: 45.0			Regulation East: 45.0			DA Regulation West: 45.0			

Realtime Monitoring

Pharos AMS makes every piece of data available in realtime. We actively pull data from your sources so that as soon as the data is published, you see it in front of you. Every screen dynamically updates as new data becomes available, and visual cues indicate what data has changed.

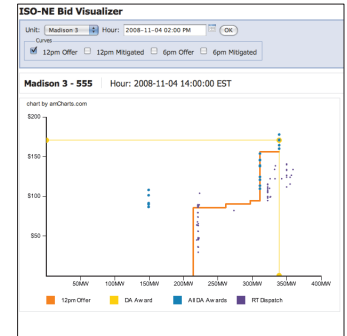
Pharos AMS has screens pre-configured for each energy market and common roles at energy organizations. But you can also design your own screens for specific purposes or to meet the needs of your own users and roles.

Data Visualization and Analysis

Pharos AMS empowers you to view your data many different ways. Some data is best suited in tabular form while some data is best visualized graphically. We use the latest graphical technologies to give you as much control as possible to view and analyze data in real time. You can create historical charts for one or more data points, and

perform on-the-spot calculations on the data. Moving averages, sums and differences, and many more advanced calculations are at your fingertips.

The real value of the Pharos AMS is in integrating data from multiple sources to produce rich meaningful content. We make it easy to go back historically to see operational data along side settlements data or to conduct post-mortem studies of decisions made during critical situations by replaying events as they happened. We learn from studying the past. We make learning quicker and easier making the Pharos AMS and ideal training tool for new employees.



Bidding Analytics

Pharos AMS can sanity-check your market offers prior to close to ensure they abide by market rules and mitigate the significant risk of asset managers submitting unintended offers due to computer or human error.

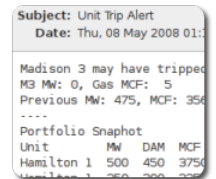
Pharos AMS also allows asset managers to analyze and visualize their bids and offers to and understand past performance to develop improved strategies.

Alerts and Events

In the words of David Hubel, "We need above all to know about changes; no one wants or needs to be reminded 16 hours a day that his shoes are on."

Pharos AMS keeps you informed by alerting you, via visual cues or email, that an event has happened somewhere in the system. Get alerted when a plant lights off by creating an alert that watches your gas burns. Know when a unit hits the line, shuts off or has an issue by watching for sudden MW changes. Be alerted if your operators aren't hitting their basepoints, or if the ISO schedules your unit. The possibilities are limited only by the available data.

Using Pharos AMS alerts, you don't even have to pull up a web browser to know everything about the status of your plants and your business. Sometimes no-user-interface is the best user-interface.



Knowledgebase

In our experience, documents posted by ISOs and other information providers about their systems can be wrong, incomplete, out of date, or just plain uninformative.

In putting significant resources into integrating our system with the ISOs. We have gained an understanding of how each provider's system works, their APIs, what when and where the data is made available, and the context around each piece of information. We have put this information consisley into a set of internal documents we call the Pharos Knowledgebase.

We're making that hard-won knowledge available to our customers via the Asset Management System. As part of our commitment to improving our customers' information management, we believe that providing this meta-data will increase everyone's understanding of the ISO and energy market, and result in increased market opportunities for our clients. As we learn more, we will to the knowledgebase and expand its coverage and depth.

Who is this product for?

Business Unit Customers

Within an organization we are developing tools for the entire enterprise. Here are some examples.

Asset Desk. We provide tools to assist the asset desk in managing their power plants. With the Pharos AMS the asset desk has rapid access to real time information. We can alert them to events as they are happening to mitigate their impact. We provide business intelligence and analysis quickly so they can better interpret what is happening and make faster, more informed decisions. Our software provides an automated second set of eyes to help minimize errors and spot issues and trends in dispatching.

Settlements. We provide access to both settlements and operations data, keeping documents indefinitely so they are available after the ISO retention policies terminate. We make it easy for a settlements analyst to perform forensics on the events on a particular day and facilitate closing the feedback loop between settlements and the asset desk. We track every bid and offer to market close through the award and mitigation process allowing settlements to have a complete record of changes.

Management. We provide management with tools to track the assets and monitor their asset managers on multiple levels. We allow management to easily see how the asset managers offer power into the market as well as give them the tools to perform ad-hoc analysis. We can provide up-to-the-hour settlements estimates and performance tracking.

IT/Programming. Included in our license is SAS-70 certified data warehousing to make your data accessible to you from anywhere. Your internal software development staff can leverage our data warehouse via Web Services to build custom functionality.

Engineering. With access to performance data we can provide your engineers and plant personnel with real time analysis and access to data to help them spot performance issues.

Organizational Customers

Power plant investors who outsource energy management. This can be an investor or several investors such as hedge funds and private equity who have invested in a company to own, operate, or manage other people to manage their assets. We provide the tools to track their investment.

Contract energy managers. These are companies who are in the business of managing power plants for other people. We provide the tools to not only help them manage the power plants but also to keep their clients informed. We make it easy to securely share information with anyone outside of the company firewall.

Owner/operator/managers. These are companies who do it all. Essentially there is no difference between this type of client and a contract energy manager except there need to share information outside of the organization.

Our pricing structure allows the administrator to grant full or limited access to the Pharos AMS to anyone inside or outside their organization at no additional cost.

"Perfecting Commercial Operations"

Taking commercial operations to the next level begins with:

- Access to meaningful real-time intelligence and analytics
- Access to good collaboration tools
- Streamlined processes
- Location independence (ability to work from anywhere)
- Solid information management

Pharos delivers on all these capabilities, and more.

Pricing and Return on Investment

A good asset management system can pay for itself and have a positive return on investment.

Will this help me generate revenue?

- Gain a better understanding of your assets and the market by integrating your operational, settlements and market data.
- See more opportunities with powerful visualization and analytical tools.
- Evaluate the financial impact and effectiveness of operations more quickly with immediate and total access to settlements data.
- Close the feedback loop between the settlements and asset management with a shared set tools to analyze the financial impact of operations.

Will this save me money?

- Minimize human errors such as costly bidding mistakes and operators not following asset manager directions.
- Be alerted to problems and issues while they are happening when there is still time to influence their outcome.
- Streamline processes. Reduce the time consumed by common tasks.
- Analyze data, rather than waste time collecting it.
- Minimize the need to have someone tethered to a computer 24/7 with comprehensive automated alerts.
- Train new team members more quickly on market behavior and business strategies using Pharos visualization and analytical tools as a teaching platform.

What is the return on investment?

The alternative solution, designing, building and maintaining an in-house system requires:

- software development staff
- project manager
- someone with detailed business knowledge for each market

- IT resources for network and administration
- hardware, software and database support costs
- hiring, training and general staff overhead

Evaluate how knowledgeable and efficient the team is in producing content. A more efficient, high cost team may actually be less expensive than a lower cost, less efficient team.

Why go with the Pharos AMS?

- Unlimited seat licensing pricing starting at roughly 0.5 FTE (dependent on number of markets, turbines, and entities).
- Web-based application is securely accessible from anywhere over the internet.
- New features and enhancements are constantly in development, and our software can be upgraded automatically as new releases are available.
- Configurable modules to match client requirements.
- Customer-driven product development. Our clients are our best source of ideas for new features and enhancements.
- Agile software development team builds custom content quickly.
- Online knowledgebase access documenting all ISO public and private data.
- Facilitates sharing of information with others inside and outside the organization with secure user management.
- Data warehousing, accessible via standard web services.
- Fast implementation; within hours of receiving ISO credentials you can be up and running.
- Fast development of proprietary tools. Your IT department can leverage our web services and data warehouse to avoid reinventing the wheel.

Other Services Provided

Operations Management Consulting

We specialize in developing and improving asset management business processes. If you are about to enter a new market that we support, we can assist in developing your asset management desk. Alternatively, if you are already established, we can analyze your operations for improvements. We emphasize leveraging the latest technology to provide low cost and flexible solutions to managing power plants. Our experience in improving business process has resulted in increasing efficiency (reduced hours spent on mundane tasks), reduced errors, and enhanced understanding and control of managing power plants. We also analyze communication and collaboration processes to enhance your ability to do more with less.

Analytical Tool Development

Software creation does not have to require a dedicated programming staff. We believe that for many applications Microsoft Excel with Visual Basic, standard on most PC installations, is a powerful solution. Excel is a tough program to beat for flexibility and ease of use. It allows a non technical analyst to easily maintain and modify functionality which is critical in a dynamic industry like power where rules change, strategies change and the ISO's change their data formats. We use this environment to build bid and decision analysis tools and simple settlements and accounting systems. We can develop new tools or enhance existing ones to streamline your workflow.

Analytical Support

We can provide additional analytical support for your operations. We can perform the time consuming data collection and preparation or take it further and provide a more detailed analysis. We have the technical capability to work quickly and efficiently as well as the business knowledge to understand what is relevant.

Training

If you are new to a market or have new employees, we are available to educate your staff to succeed. Our current expertise is in the NYISO and ISO-NE energy markets. We are also available for technical training in market interfaces and analytical tool development. If you are interested in building your own asset management system, we can help you understand the basics.

Information and Knowledge Management

Information management is proving to be an increasingly important part of any business. It is part of the reason why we created the Pharos Asset Management System. An energy company has access to terabytes of data at any given moment. Knowing what information exists, how to access it, who owns it, and its derivatives are all important to understanding your business and making good decisions. We can assist in setting up processes for managing your information.

Proper communication is equally important. How do you communicate and share information throughout different levels of your organization? Good decision making begins with getting the best possible information into the hands of the right people. We can implement simple strategies for improving organizational communication and collaboration.

Knowledge management is about documenting the hard-won experience your organization develops over time. It plays an important role in business continuity and risk management. What happens if you lose key individuals? How quickly would you be able to recover and fill that role? How quickly can someone new be trained and get up to speed? There are simple technological solutions to mitigate those risks. We can assist in developing processes and creating solutions for managing your knowledge.

Management Team

Mike Dalessio Managing Partner

Mike has spent the last 15 years designing and implementing software, primarily for the financial and energy markets. He has a degree in Physics from The Johns Hopkins University, where he was a research assistant at NASA's Space Telescope Science Institute. He was previously at Bloomberg L.P, where he was the chief architect and lead implementer for the next-generation Bloomberg Professional user interface. He has also worked for Moneyline Telerate and ASPEED Software, where he was Head of Software Development building high-performance distributed computing solutions for clients in energy, pharmaceuticals and finance. Most recently, he was Director of Commercial Applications at US Power Generating Company, where, along with Carl, he designed and built the asset management systems used by the commercial operations desk.

Carl D. Liggio, Jr. Ph.D. Managing Partner

Carl has a bachelors, masters and Ph.D. in Civil Engineering from The Johns Hopkins University and a Masters in Systems Analysis and Economics for Public Decision Making from the Department of Geography and Environmental Engineering also from The Johns Hopkins University. He previously worked for Orion Power Holdings as a pricing and operations strategist, performing quantitative analysis, asset optimization, and commercialization. Orion was purchased by Reliant Energy where he was briefly a market analyst. He left Reliant to start Meissa Consulting LLC, a consulting company specializing in operations management consulting. In 2006 he joined US Power Generating Company where he was the Director of Commercial Strategy and Alternative Energy Programs. At the time USPowerGen had no energy management infrastructure in place. Carl was instrumental in building the asset management desk and its business processes. At USPowerGen he was an asset manager for the New York City portfolio, and later supported the asset management desk, analyzing operations, developing and validating bidding and commercial strategies, and developing tools to manage the commercial operations.

For more information email us at info@pharos-ei.com

