

Power Trading and Retail System

empowering **smarter trading** across the energy value chain



Smart energy. Powering progress

Atos
Worldgrid

In today's turbulent and increasingly complex energy markets, Atos Worldgrid PTRS (Power Trading and Retail System) can give your business a clear competitive advantage. Your customers are already taking full advantage of liberalization, so what about you?



Trading to Business advantage

Change is a given in today's liberalized energy business, which is characterized by intense competition, new business models and unprecedented levels of variability and price volatility. There are less and less certainties but one thing is for sure, tomorrow's industry will face even greater levels of diversity and an ever more complex value chain.

The unbundling of the traditional vertically-integrated power utility has created big benefits for energy users and new business opportunities for energy companies but it has brought in its wake significant challenges.

As well as facing growing competition from non-traditional players and more complex commercial and regulatory environments, energy producers face increasing variability of both production and loads, and reduced levels of availability.

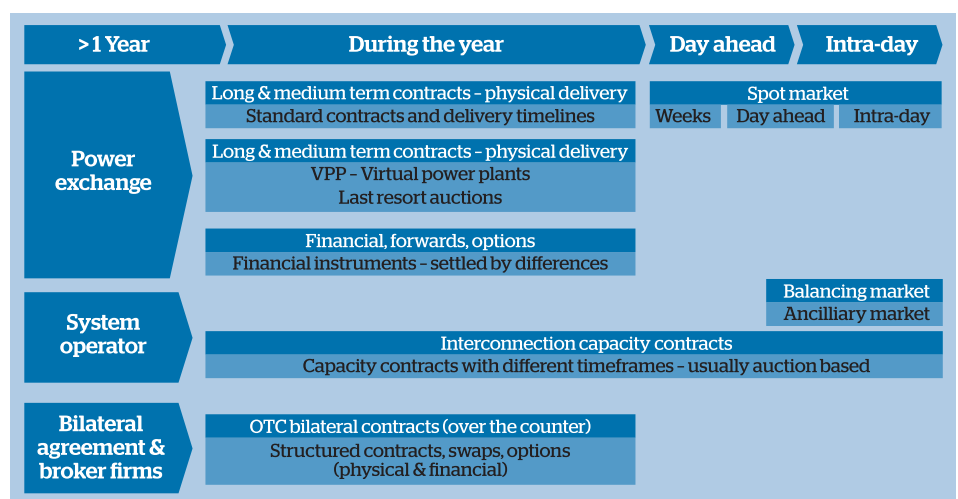
The past decade has seen the development of mechanisms such as TSO-backed markets and power exchanges, which have proved to be effective tools for countering the growing volatility and optimizing grid resources.

However, the amount of additional RES capacity, particularly wind and solar, scheduled to come online in the current decade will undoubtedly add more price volatility as renewable intermittent sources grow to become significant factors in short-term markets and in energy trading portfolios.

As the structure and product offerings in short-term power markets becomes more complex, market participants will need to ensure information systems are up to the task of competing in a much more dynamic energy trading environment.

Share of RES-generated electricity in the EU to reach 35% by 2020

Wholesale markets and transactions



Information is power

Energy companies are going through a period of unprecedented change but many are hampered by information systems which date back to an era when markets were much more predictable and the business environment stable. This prevents them from taking full advantage of the trading opportunities that today's dynamic market conditions create.

Deregulation and liberalization have transformed the energy sector into a dynamic information-driven business in which IT is used not just to help with operations management and decision support, but to drive competitive advantage through smarter trading strategies.

For example, when gas prices are high it may be more profitable for CCGT producers to sell gas rather than use it to generate electricity, and purchase power in the market to meet their load requirements or contract commitments.

These arbitrage opportunities can also exist across the generation portfolio -- through dual-fuel generation, for example -- but generators

that wish to take advantage of them need to adopt a smarter approach to energy trading.

It is not even necessary to own physical assets to participate in today's energy markets, as shown by the advent of energy trading companies and the development of new ideas such as "virtual power plants" which may only exist as software code.

In this new scenario of constant change and fragmented value chains, the ability to optimize the process flows and business intelligence between wholesale trading, generation and retail activity will become a key differentiator and a source of competitive advantage.



Complete ETRM solution

Atos Worldgrid PTRS (Power Trading and Retail System) is a comprehensive energy trading and risk management platform that spans the needs of three groups of market participant: traders and retailers, generators, RES/self producers.

Whatever your role, PTRS has been designed to help you achieve a sustainable business advantage in today's turbulent and increasingly complex wholesale and retail markets.

Using PTRS, producers can optimize the energy supply to fluctuating demand, and ensure that all the energy generated is sold at the optimum price.

As well as handling spot deals on the day-ahead and intra-day markets, you can use PTRS for long and medium-term contracts on power exchanges or financial transactions such as options and forwards or OTC transactions via broker firms.

As well as offering a comprehensive set of tools for traders, PTRS integrates front, middle and back-office functions to handle not just trading, but deal capture, settlement and billing, as well as portfolio evaluation and management.

The PTRS solution is being continually enhanced and broadened to meet the evolving demands of today's integrated energy businesses. The most recent additions to the PTRS suite include modules covering areas such as gas trading and logistics, emissions rights trading and risk management.

Multiple players, diverse business benefits

Role	PTRS Business Benefits
Traders and Suppliers	<ul style="list-style-type: none">▶ Ensures continuity of supply at fair prices▶ Delivers superior service to end users▶ Builds a complete picture of market developments through comprehensive business intelligence▶ Manages trades to ensure maximum ROI▶ Handles interfaces with other players through efficient, automated systems
Generation Companies	<ul style="list-style-type: none">▶ Manages production for maximum efficiency and profitability▶ Plans generation levels based on real-time information▶ Trades output for highest available margins▶ Manages downtime and maintenance in ways that protect business outcomes
Self Producers and RES	<ul style="list-style-type: none">▶ Reduces risks and maximize profits as the market evolves▶ Manages your operations to ensure market alignment▶ Aggregates capacity from small generators to be negotiated in the market▶ Allocates committed schedules to each production unit

Technology tailored to your business

PTRS has been developed by Atos Worldgrid to cover the increasingly complex requirements of liberalized and liberalizing energy markets. It allows you to trade the full range of contracts across all time horizons and offers extensive connection possibilities both internally to your existing business systems and externally to markets, exchanges and third parties.

PTRS provides a flexible and integrated solution for energy trading and risk management. Its modular design means your ETRM solution can be tailored to your specific business model and customized to your existing IT capabilities and trading maturity, so reducing implementation times and risk.

The wholesale market is the key arena for energy trading and it is characterized by agreements of widely different scale and duration.

Reflecting the complexity of wholesale markets, the PTRS Wholesale Contracts module can deal with a large number of contract types. It allows you to manage physical and financial deals with ease, and has been designed to register, settle and bill complex contracts from the OTC market.

In addition, its interface with the standardized instruments listed in organized markets supports both auction and continuous trading in futures, forwards, options and swaps

Redefining retail

The retail energy business today is a lot more complex than it used to be. The Retail Contracts module in PTRS has been designed to accommodate the complex types of supply contract included those tied to formulas based on external indices such as forward curves or Brent oil.

APIs allow the exchange of information with customer-facing CRM systems and back-office ERP systems using web services or files.

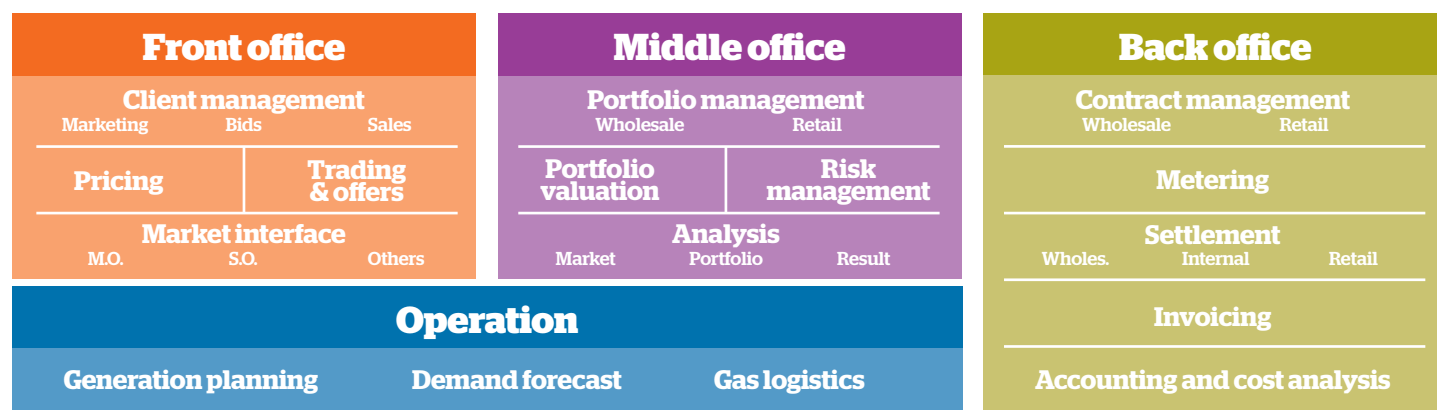
For businesses that want a turnkey solution, PTRS can also be implemented with an integrated CRM system, thus providing a complete end-to-end solution for retail-focused energy businesses.

Traders interact with organized markets via the PTRS Power Exchange Front Office module. This allows market participants to prepare and submit bids to day-ahead, intraday and ancillary

services markets using simple templates coded in HTML or Excel.

Rounding out the PTRS solution are specialist modules for Portfolio Management, Physical Dispatch, Risk Management and Gas Trading.

Irrespective of the scope and scale of the implementation, customers can rest assured that PTRS is a flexible solution that can easily be adapted to the customer's business model and local market specifications, languages and characteristics.



Atos Worldgrid & Fortia. Partners in success

Atos Worldgrid customer Fortia offers an excellent example of how technology can be leveraged to rapidly exploit new market opportunities in liberalized energy markets.

Fortia was set up to pool the energy needs of large industrial consumers in Spain and Portugal when regulated tariffs were abolished in 2008.

Fortia buys electricity from different providers and sells it to its associates in order to obtain competitive and stable prices.

By buying its energy direct from providers, rather than through intermediaries, the

17 companies represented by Fortia have obtained important cost savings on their energy bills.

As well as eliminating commission costs, their greater negotiating power means they can obtain better prices from producers.

Fortia needed a system that would allow it to efficiently gather energy consumption data from its partners, negotiate bilateral contracts at the best price and optimize trading positions in the wholesale markets. And because of time-to-market challenges, Fortia turned to Atos Worldgrid for help building an IT solution that would fit its specific needs.

Atos Worldgrid developed a complete IT solution including bid and contract management, meter readings, settlement billing and reporting. It also defined and implemented the business processes to ensure Fortia members get the best possible service.

But the partnership did not stop there as Atos Worldgrid is also responsible for hosting the solution, along with its operations, maintenance and evolution during a five-year period.

Proven experience

PTRS is a proven solution that has been in existence for more than a decade and today has more than 15 reference customers. As markets have evolved to embrace deregulation and liberalization, so too has PTRS.

Reflecting the diversity of the modern energy business, our PTRS customers have distinct profiles in the energy industry- generators, traders, retailers - and all are active participants in the wholesale energy markets.

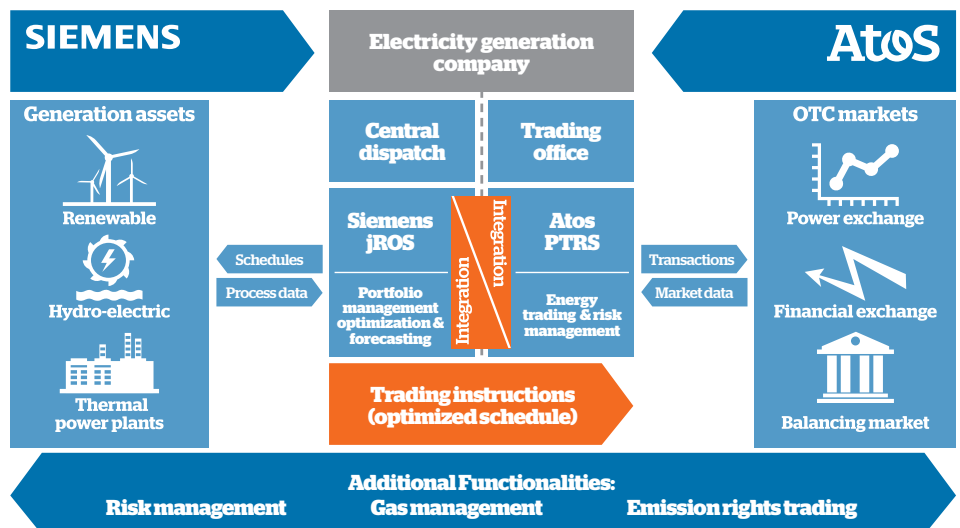
Energy generators who wish to implement the PTRS solution will benefit from the synergies and enhancements made possible by the recent strategic alliance between Atos and Siemens.

This brings together the experience of Siemens as provider of generation technology equipment and the complementary experience of Atos as provider of IT solutions for energy wholesale markets.

This alliance takes PTRS to a next level of integration by enabling generators to complement the ETRM strengths of Atos Worldgrid PTRS with the specialist functionalities offered by Siemens' jROS offering for energy generation planning.

This integrated approach lets generators access an extensive range of modules for all aspects of optimizing their power plant and contract portfolio. At the same time, it minimizes integration risk because jROS and PTRS communicate via joint standard interfaces tested in-house, so they do not need to be implemented in a project first.

Easier technical integration translates into a real competitive edge to generators. By offering a seamless data flow between generation planning and energy trading, the combined PTRS-jROS solution allows faster decisions to be made in the bidding process on energy exchanges and for bilateral trading.



About Atos

Atos is an international information technology services company with annual 2011 pro forma revenue of EUR 8.5 billion and 74,000 employees in 42 countries. Serving a global client base, it delivers hi-tech transactional services, consulting and technology services, systems integration and managed services. With its deep technology expertise and industry knowledge, it works with clients across the following market sectors: Manufacturing, Retail, Services; Public, Health & Transport; Financial Services; Telecoms, Media & Technology; Energy & Utilities.

Atos is focused on business technology that powers progress and helps organizations to create their firm of the future. It is the Worldwide Information Technology Partner for the Olympic Games and is quoted on the Paris Eurolist Market. Atos operates under the brands Atos, Atos Consulting and Technology Services, Atos Worldline and Atos Worldgrid.

About Atos Worldgrid

Atos Worldgrid is an Atos business unit delivering sophisticated integration projects and real time Smart Energy solutions to Energy & Utilities companies across the power, water, oil & gas value chains. With 1,600 engineers and over 30 years' experience, Atos Worldgrid operates in more than 15 countries. It has in particular equipped 70 nuclear power units with its Supervision and Command & Control software in France, UK, Russia and China and delivered the world's largest smart metering system. Atos Worldgrid operates under the brands e-utile in Italy and Energy4U in Germany, and Atos Worldgrid in the rest of the world.

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