WHITE PAPER

contigo

Part of the energyone group

Responding to Continual Market Change

smarter. simpler.

www.contigosoftware.com

TEL: +44 (0)845 838 6848

INTRODUCTION

The European power and gas industry is currently going through a period of very rapid change that has potentially far reaching consequences. While change is certainly no stranger to the industry, it requires players in the industry to constantly re-evaluate their business process and technology infrastructures in order to adapt and thrive. Examples of the drivers for change include:

- Changes in the regional and national political landscape in terms of both environmental issues and the overall structure of the industry,
- A host of new regulatory and governance regulations,
- Decreased profit margins and,
- Major shifts in all aspects of technology from generation to computing.

Energy companies will need to rapidly respond to these changes and this response will certainly include a review and perhaps upgrade of their Energy Trading and Risk Management (ETRM) and related software.

THE EU DRIVES CHANGE

The EU has committed to a single European energy market and it has been working to eliminate barriers to wholesale and retail competition for several years. Although progress has at times been painfully slow, nonetheless, there has been significant forward momentum. The highly regional nature of the European power industry in particular, has been diminished by market coupling between many national and regional markets across the continent[1], [2]. This continued movement to a single market for power and for gas, will also require steady and sustained investment in infrastructure as well as further standardization, in order to succeed.

At the same time, the EU has also aggressively committed to the reduction of CO2 emissions across the continent with the 20:20 legislation that was enacted in 2009[3] . This commits EU countries to a 20% reduction in CO2 emissions (versus 1990 levels), as well as ensuring that 20% of power is generated from renewable sources along with a 20% improvement in energy efficiency. In turn, this has driven national legislation and energy strategies, providing subsidies for renewables and penalties for certain types of fossil fuels or even their elimination, such as the UK's decision to move away from coal generation by 2025[4] , for example. The decision by Germany in the shadow of the Fukushima disaster to eliminate all nuclear generation by 2022 and to immediately shut down eight nuclear facilities[5] has also had a massive impact on the European generation mix. Indeed, the EU has now set the bar even higher requiring that 27% of all generated power be from renewable sources by 2030[6] .

By 2014, the EU had already achieved a 15.3% share of gross final energy consumption from renewable sources and, in 2015 some 26% of power generated was from renewable sources[7],[8]. Given the decision in Germany on nuclear power, it currently leads the way, generating around 33% of its final power consumption in 2015[9] via renewable sources on the way to meeting an aggressive target of 45% by 2030[10]. This massive shift in the industry has put the EU in the lead globally in many areas of renewable and smart grid technology innovation and development, but it has also had a huge impact on the industry at large.

1. See - http://www.acer.europa.eu/en/electricity/regional_initiatives/cross_regional_roadmaps/pages/1.-market-coupling.aspx for more details
2. http://www.acer.europa.eu/en/The_agency/Mission_and_Objectives/Documents/ACER%20Work%20Programme%202016%20-Revised%20Jan%202016.pdf
3. http://ec.europa.eu/clima/policies/strategies/2020/index_en.htm
4. http://www.theguardian.com/environment/2015/nov/18/energy-policy-shift-climate-change-amber-rudd-backburner
5 http://www.reuters.com/article/us-germany-nuclear-idUSKCN0SQ1G520151101
6 http://ec.europa.eu/energy/en/topics/energy-strategy/2030-energy-strategy
7 https://ec.europa.eu/energy/en/topics/renewable-energy
8 http://smartcities-infosystem.eu/sites/default/files/concerto_files/concerto_presentations/Renewable_energy_progress_report%20.pdf
9 http://www.volker-quaschning.de/datserv/ren-Strom-D/index.php
10 http://www.worldwatch.org/node/5430

MASSIVE IMPACTS

A significant and growing area of impact has been on European utilities and generators who have been left with essentially 'stranded' nuclear and fossil fuel generation facilities to manage. Already, this has begun to have a knock on effect in terms of the structure of the industry with utilities like E.ON hiving off the increasingly unprofitable and unattractive fossil generation side of their business[11], for example, while others such as ENEL in Italy, are rapidly shutting down fossil-fuel generation facilities[12]. Green and renewable power, and to a lesser degree natural gas sourced electric power, have become the focus and are also demanded by consumers.

Similarly, the utilities, generators and grid operators have all been faced with the increasing prospect of managing network reliability issues as unpredictable and distributed renewable power inputs increase. This is driving change in industry structure as well as smart grid developments, two-way flow and a new relationship with customers in which the utility might be buying or selling power to/from a customer at any point in time. This is driving research into power storage, which is the missing piece of the puzzle and would help resolve potential grid stability issues.

As the cost of renewable energy declines and/or is subsidized, it becomes the default 'base load' except that it is extremely variable and unpredictable. As other natural base load generation alternatives such as nuclear and/or coal are removed from the stack, the onus is on natural gas fired generation to plug the gap. This is also problematic for a variety of reasons not least of which is that the EU is and will remain a net importer of natural gas and it is driving gas turbine research and development.

In combination with market coupling, which helps to eliminate pricing differentials, power trading and risk management is also changing significantly as volatility and liquidity moves closer in on the forward curve. The emphasis for many firms is increasingly on intra-day and less on forward period trading, driving further significant changes in the industry's business processes. This has been reflected in the increasing introduction of intra-day trading instruments such as the 15-minute intra-day power products in Germany[13], for example.

However, the increasing interest and need for intra-day power trading has created many other challenges, such as the need for increased and more timely market data and information; which in itself is coming from a massively increased number of data sources by virtue of transparency regulations now in force. Demand and

production must be managed or forecast on an ever shorter-term basis within day and day ahead, requiring systems to manage demand profiles and forecasts, load forecasts, data management and analytics, and increased and more diverse risks. Increasingly, various optimization tools are needed to help manage these activities so that increasing amounts of automation will also be key in the future.

OTHER DRIVERS

As if this were not enough, companies engaged in European energy must also comply with an increasingly aggressive regulatory environment that includes trade reporting to multiple jurisdictions, an increased emphasis on risk management (including operational risks via confirmation matching and so on), trade surveillance, transparency and possibly in the future, capital adequacy testing. Stakeholders are also demanding increased transparency. All of this simply adds further complexity and cost into the equation of change.

Many of the companies operating in European energy markets actually produce, sell, trade or buy multiple commodities including electric power, natural gas, LNG, lignite, various biofuels such as wood chips, and emissions certificates. They are essentially multi-commodity concerns and each additional commodity is impacted in various ways by the changes in the structure and operation of the market adding further overall complexity and cost.

Perhaps it should be no surprise that many utilities in the European energy industry are struggling to be profitable as costs increase across the board and yet prices have declined and in some instances, moved into negative figures! As a result, they face increased scrutiny from stakeholders and find it harder and more costly to obtain financing and investment.

SYSTEMS IMPACT

The biggest requirement in European energy from a systems perspective is to provide the business agility and flexibility and allow them to respond to such changes. Survival in an era of increased costs and lower energy prices simply means that all have to increase efficiency and focus on protecting margins. Essentially, critical systems like ETRM and related software need to have built-in flexibility to cater for both disruptive changes and the evolving user needs. They need to be supplied by vendors that are committed to delivering the required functionality within a cost and delivery structure that works for the new dynamics of the industry. The vendor needs to be reputable, experienced, knowledgeable and committed to partnering with its users through the waves of change being experienced across the industry.

All European energy companies need to continually review their short to medium-term goals to ensure that they have the flexibility required. Additionally, they need to constantly review their systems needs and suppliers to ensure that they too can deliver flexibility and reliability while supporting the business. In a world where energy has moved from a stable longer-term horizon to a faster paced renewables market, the significance of timely and accurate positions and the ability to trade at low granularity is critical to the responsiveness of the business. Trading companies need to ensure that their systems and processes are capable of meeting these requirements and if not, look to the ETRM solutions currently available on the market that will allow them to achieve this.

11 http://www.theguardian.com/environment/2016/jan/04/eon-completes-split-of-fossil-fuel-and-renewable-operations
12 http://energydesk.greenpeace.org/2015/03/17/enel-commits-coal-investment-phase/
13 https://www.eex.com/en/products/power

Questions energy companies should be asking themselves include:

- Can they easily implement intraday trading without major systems changes?
- Do they have the systems in place to evolve and adapt with change?
- Do they have the ability to enter new markets and seize new opportunities across Europe and beyond quickly and will its systems support this?
- Can they meet the regulatory requirements with the systems that it has in place?

In fact, the new regulatory regime is also causing many smaller energy companies to consider an ETRM solution for the first time as in the past; they have been able to use spreadsheets. Other's are becoming increasingly focused on the Intra-day power markets in Europe and are wondering if their current solution can support those activities. Many need significantly closer integration between their ETRM solution, execution venues and System Operators. In short, now is the to critically re-evaluate your ETRM software and if necessary, rapidly deploy something that can support the business through these changes.

CONTIGO IS READY TO HELP

Contigo Software Ltd, provides software solutions that have all of the functions, features and deployment capabilities that modern European energy companies need to both survive and thrive in current and future markets and at the right entry cost too. enTrader®, Contigo's Energy Trading and Risk Management (ETRM) solution simplifies energy trading, and is already used by leading energy businesses in the UK and across Europe. It uses the latest technology and can be delivered in the Cloud or on-premise, and can be implemented quickly and with low risk, to support all traded European energy market derivatives. It is designed to be easy to use and flexible, so that it can adapt with businesses, without the need for costly re-configuration.

Contigo's enTrader is also preconfigured for the European energy market with ready to use functionality and is fully integrated with European power and gas exchanges and venues. All trades executed on these platforms can be automatically imported into enTrader for further processing and validation, with minimal configuration.

Contigo's software enables straight-through processing across all business functions, including trade execution, portfolio risk management, physical delivery scheduling and EMIR and REMIT regulatory compliance. Key features include trade data enrichment, real-time trade valuation, confirmations, formula based pricing, forward curve management and automated settlement.

With enTrader pre-configured for European energy markets, and the option to choose Cloud delivery with a SaaS (Software as a Service) license agreement, enTrader can be deployed in hours and be fully implemented in as little as eight weeks at a very affordable cost.

It also allows a lower cost of ownership, making it suitable for businesses of all sizes. enTrader is designed to be extensible and can be customized to meet each customer's individual requirements, while still allowing them to benefit from fast, standard upgrades. It is also highly scalable, dealing easily with increases in trade volume and user numbers.

contigo
Part of the energyone group

SUMMARY

The world of energy trading is changing and is always dynamic and challenging. Regulations mean that risk and trade reporting are now important for all energy companies regardless of size, and changing European markets through regulation and use of renewables means that trade opportunities are often more short-term. In order to survive and even profit in such markets, companies need a flexible, cost-effective infrastructure including ETRM software such as that provided by Contigo with its enTrader® software solution. Now is the time to review your needs and compare what you have to what is available.

Energy Risk Software Ranking 2017

EnergyRisk Software Rankings 2017 | Winner

Contigo have been voted number one for ease of implementation and number two for best cloud based ETRM solution globally by the ETRM community. Contigo was also awarded in the top five for a further ten ETRM awards.

Find out how Contigo software can support your business by speaking with our Energy experts today:

Call +44 (0) 845 838 6848

email sales@contigosoftware.com

smarter.
simpler.

Responding to continual market change