



Digitalizing European Energy Trading – an expert insight

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Biography

Scott Hestenes is Head of Energy Sales at Brady Technologies (<https://bradytechnologies.com/>). He has 25 years' experience in working in energy, having been part of the industry since the early days of deregulation. Scott's deep industry expertise comes from witnessing at first hand the creation of energy markets in the Nordics, across Europe and in other parts of the world.

Operating in both market and customer facing roles, Scott has had the privilege to work with many of the blue-chip leaders in this community as well as smaller players and start-ups. Previous roles have included Head of Operations EDM physical trading and settlement as well as Senior OpsBoard Member.

Scott has secured the delivery and go-live for many of the sales he has closed and continues to work with his customers. Scott claims his strength is the strength of Brady Technologies, 'we follow through on our commitments'.

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Paper type Opinion

Abstract

When the energy markets first opened-up in the early 1990's, market participants completed weekly planning and scheduling, using rudimentary forecasting and analysis tools. Now times have changed, and as the drive towards real-time data management and an increasing growth in data volumes continues many are undertaking digitalization initiatives to gain market insights, improve business agility and accelerate information flow within the energy sector. In this article, the author discusses how digitalization in the European energy markets holds the key to mitigating market shocks, and how critical data managed within the business can be integrated with key systems to create an ecosystem of best of breed solutions.

Introduction – The evolution of energy trading technology

Initially, when the markets first opened-up in the early 1990's, market participants completed weekly planning and scheduling, using rudimentary forecasting and analysis tools. During those early days, Brady had weekly definitions built into its systems for setting up weekly profiles, before the market transitioned towards day-ahead planning and scheduling, with the day-ahead market being the spot market, setting the market reference price for financial trading.

Today, we are seeing the next step change. Intra-day markets are capturing more and more liquidity signalling that market operations are shifting granularity, coming



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ever closer to real-time. In addition, when we look at the balancing and frequency markets, there is also a drive towards interfacing trading systems with Supervisory Control and Data Acquisition (SCADA) systems for supporting managing assets through electronic activation of accepted bids.



The role of digitalization in European energy markets

In Europe today many factors contribute to a complex physical energy trading environment. These include; advances in forecasting and analysis applications, competitive market operators communicating with the Nominated Energy Market Operative (NEMO) and requirements for electronic activation of physical assets.

Digitalization in the form of advanced system support with seamless integration across multiple applications is the only way in which market participants will be able to process all of the data quickly enough and stay competitive.

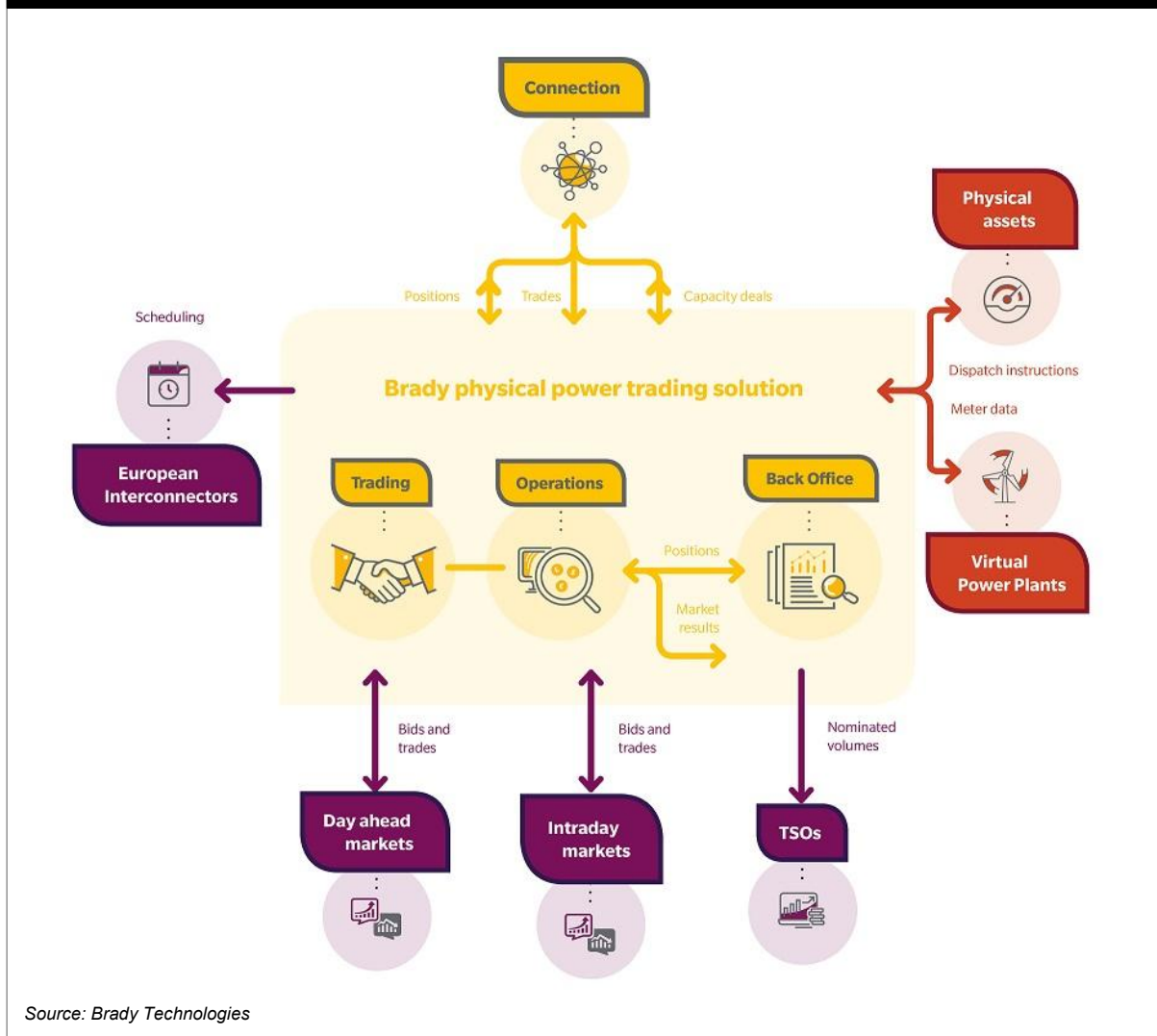
Without having digitalization as part of your core company strategy with an investment plan and roadmap for securing efficient market operations, you will be left behind.



Trading profitably

At Brady we developed our physical energy platform to support physical trading on short-term markets (day-ahead/Intraday) as well as balancing markets.

Figure 1: Physical power reach



Our software suite includes powerful energy data management tools for calculations and meter data management with extensive back-office functions for settlement and invoicing:

- The core platform has multiple market connections delivering pan-European coverage of the two main exchanges Nord Pool and European Power Exchange (EPEX), as well as being made ready for further emerging markets. In addition, it has an extensive number of Transmission System Operators (TSO) connectors, supporting pan-European scheduling for the majority of European countries.



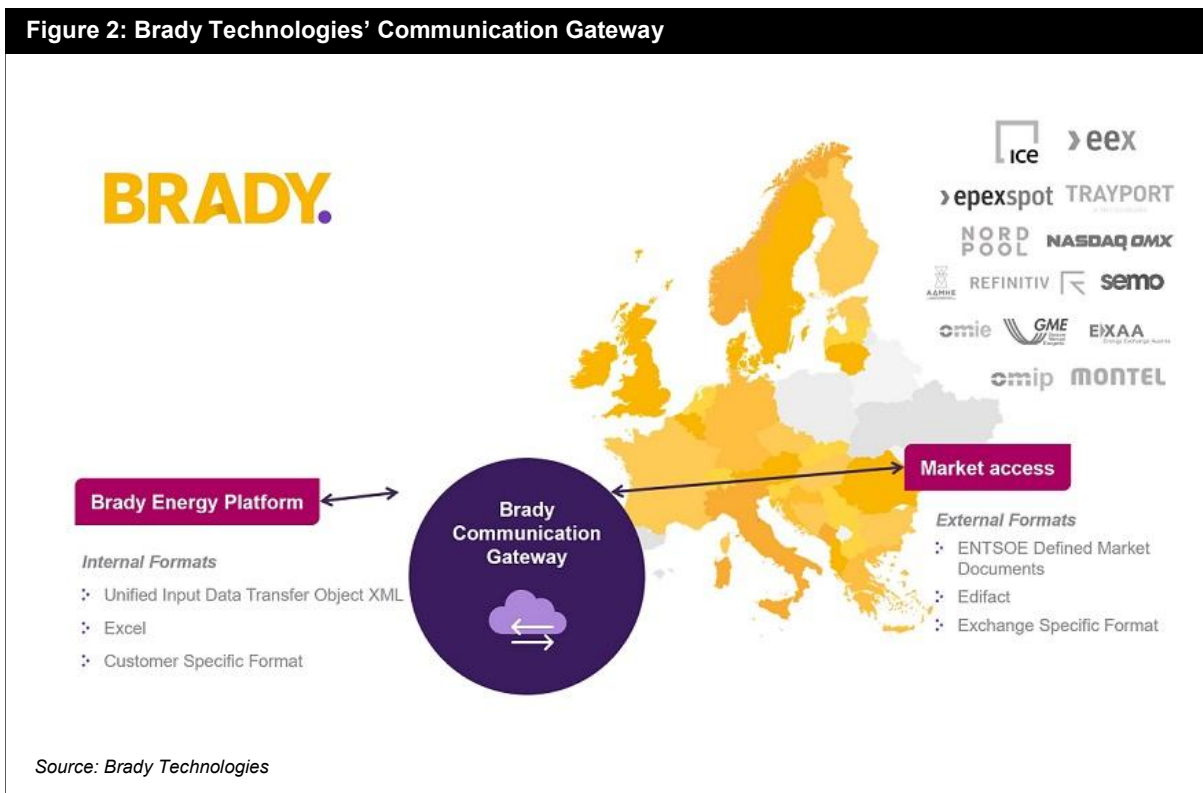
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- Brady's physical energy suite is largely based upon time-series management concept. This is the means for handling large volumes of data and the basis for configuring calculations. Our platform runs complex calculations, automating many functions thereby delivering significant efficiency gains. Often as such, this platform becomes the central system of record for trading operations.
- The system also automates the collection of meter data used in settlement and invoicing.
- With its support for managing complex data and calculation frameworks as time-series, Brady's energy software suite delivers tremendous benefits in the form of scalability and flexibility.
- The acquisition of Brady by Hanover Investors earlier this year, creates an exciting investment opportunity to expand the current footprint of this platform to more geographic regions.

The functionality your competitors have been asking for and staying ahead of the competition

Without doubt, the evolution of European energy markets has resulted in a drive towards real-time data management and an increasing growth in data volumes. The key requirement being the introduction of automation to manage incrementally growing data.

Figure 2: Brady Technologies' Communication Gateway





Imagine the vast resource and time required to manage administration processes; capturing meter point parameters such as power consumption, power production, metering data estimation and validation. Staying lean and nimble is essential in today's fast paced markets, a realistic possibility for competitive trading houses that choose to invest in digital solutions. This crucial data can be effortlessly captured, reported on and added into workflows for automated billing and settlement within specialized physical power trading solutions such as Brady's system.

Additionally, physical power market players require the ability to meet tight deadlines and react fast to changing factors. As an example, the new mFRR energy activation market (2022-2023) requires response times from activation to actually ramping up/down production to be just a few minutes. Time series data management, automated calculations and robust workflows are critical necessities in achieving these challenging deadlines. You can guarantee if your competitors do not already have these solutions in place, it will be high on their agendas for 2021.



Creating a nimble and functionally rich landscape

Critical data managed within your energy suite can be integrated with key systems to create an ecosystem of best of breed solutions, making optimization possible. You do not need to rely on a monolithic system if you have capability to integrate specialist systems.

Brady's strength is connectivity and we see this as a critical ingredient in forward thinking software solutions today. We have a comprehensive communications layer, able to handle time-series and over 300 different message types. Whether it



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is connecting with optimizing tools or AI solutions, we are able to help customers meet their current and future technical landscape requirements.

Looking at the current models of systems and vendors, the monolithic approach is no longer an optimal one. Upgrade timescales are slower, testing resources greater and maintenance costs higher, meaning systems cannot be as nimble or cost effective to both market changes and moving customer requirements.

Our view is that companies should review key processes, measure them up against a best of breed strategy, and devise a strong integration strategy to consolidate the main systems supporting core data flows to create optimal business process support.



Prepare for tomorrow's market changes

The direction of travel for power markets in Europe is for increased integration across national borders. Currently European power markets have more or less a one-to-one mapping between country power grids and country specific capacity, ancillary services, day ahead and intraday markets. More and more we are seeing projects to integrate these individual country markets to create much wider cross European or sub-regional marketplaces.

Brady's energy heritage

Our heritage comes from the Nordics where we have an exceptionally strong footprint. With over 30 years' experience in energy, we have been at the forefront of exchange market design, helping to develop the operations for the first power exchange in Europe.



In addition to the Nordic market, Brady also has a strong presence across continental Europe. For decades, we have successfully delivered pan European solutions to customers across many Western European countries. Outside of Europe, Brady has customers operating our physical platform for the Ontario power market in Canada.



In conclusion

We see the European energy markets moving away from individual European country exchanges to wider market areas like the ISO/PJM markets in North America. This will initially occur with the short-term power and electricity services market in the next five to ten years to be followed by futures markets offerings covering these new wider regions rather than individual countries.

Closer engagement with customers is essential in understanding how market changes impact their processes. We commit to frequent User Council meetings in addition to a busy timetable of product update webinars and an annual Energy User Summit, so that we can remain connected and in sync with all of our customers' needs.

At Brady, we continuously keep abreast of the evolving European markets and adapt our solutions to allow our customers to take advantage of developments.

Europe continues to progress towards a single marketplace with greater automation and closer to real-time activities. Brady has long standing relationships with key regional exchanges and stands at the forefront of developments in energy trading solutions.