

ENERGY

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## JULES ENERGY

MORE POWER  
TO THE  
SUPPLIERS AND  
CONSUMERS

JOS DEN BROEDER,  
CO-FOUNDER & CEO

\$15



COVER  
STORY



# JULES ENERGY

By Laura Davis

## MORE POWER TO THE SUPPLIERS AND CONSUMERS

JOS DEN BROEDER,  
CO-FOUNDER & CEO

In Europe's unbundled electricity markets, "balancing market" is the institutional arrangement required to maintain the equilibrium between the demand and supply of power. As more and more electricity is produced from renewable sources, energy production is no longer the same as energy consumption at any time of the day, creating a discrepancy in the market. Despite the influx of high-tech energy storage systems, electricity cannot be stored (at the wholesale level), meaning that demand and supply must be constantly balanced in real-time.

Against this backdrop, Europe's biggest enterprises—most of whom are no longer fully reliant on the grid for their energy—have an opportunity to sell their excess power at very attractive prices. To engage in electricity trading, they must deal with wholesale energy markets such as the Amsterdam Power Exchange (APX), a spot market where electricity can be

bought or sold a day in advance, and the Imbalance Market. The latter involves Netherland’s grid leveraging a Schedule Time Unit every 15 minutes of the day to balance energy surplus and shortage.

As small producers of renewable energy, enterprises don’t have direct access to these energy trading markets. Moreover, in their endeavour to contract the volumes that are precisely in line with their consumption/production profiles, enterprises expose themselves to price risks.

So, how exactly do they manage price risk while also capitalising on the benefits offered by the energy trading market?



**With the help of our online control system and a battery for electricity storage, you buy or sell electricity on the basis of minimum or maximum prices that you determine**

Meet Jules Energy, a Netherlands-based energy tech solution provider that allows its users (B2B organisations) to benefit from dynamic access to wholesale energy market-based pricing and products. “We allow energy suppliers to execute any kind of flexible contract that a B2B energy customer could conceive. This way, energy suppliers can execute flexible deals whilst being directly or indirectly exposed to the wholesale market price and market developments,” starts Jos den Broeder, co-founder and CEO of Jules Energy.

Through a revolutionary, cloud-based platform, Jules Energy allows energy suppliers to execute flexible contracts not only with their consuming customers but also with ones that possess generation assets and demand response assets. In the form of a mutually-beneficial contract that binds the energy usage of customers and digitally documents the energy purchased from the customers, Jules Energy helps suppliers overcome the pain of fluctuating energy rates. “Our system allows users to forecast power production and power consumption and translate that into forward as well as spot market hedges based. With the help of our online control system you buy or sell electricity on the basis of minimum or maximum prices that you determine. In this way, you make smart use of fluctuating prices during a particular day and profit from imbalance markets,” explains Den Broeder.

Jules Energy’s Platform-as-a-Provider (PaaS) solution is a two-way web-based platform that has energy supplier and

customer portals, linked together. The data of many products such as power, gas, and other energies supplied from an end supplier to a customer can be transferred and further recorded from this platform. The digitalised, automated processes result in fewer errors and lead to back-office cost savings. The platform “puts the steering wheel in the hands of the end customer” with pricing data of products on their screen. The prices shown come from the energy supplier as well as individual customer bespoke transaction limits (volumes and clip sizes). As such, concluded prices, their positions in the market are accessible with just a few clicks.

**Acting as a One-Stop-Shop**

Besides offering a large number of meaningful functions to digitally execute an energy contract between energy suppliers and their customers, the Jules Energy 24/7 platform has carved a niche in the marketplace for being a one-stop-shop that covers not only the supply of energy but also the capacity markets and the destruction of generation assets. Essentially, Jules Energy’s customers can engage in energy trading through a personal, secure environment, and see instant results of their production, purchasing, and sales at a glance. “Our customers spend an average of 10 minutes per day to achieve optimal results,” informs Den Broeder.

At a glance the platform offers three modules, namely, Power, Gas, and Switch. While the power module integrates into the platform all the functions required for energy suppliers to allow customers to self-service and manage electricity import and/or export contracts, the gas module does the same as it pertains to managing gas contracts. Meanwhile and optionally, Jules Energy can offer a switchbox at a customer’s site during platform deployment, allowing energy them to use the switchbox module for efficient management and dispatch of generation and consumption assets. The switchbox module enables customers to efficiently interpret and translate their power sell/buy transactions into the required ‘On/Off’ signals to operate generation/consumption assets.

“We have not come across a company that provides all our comprehensive offerings. Our one-stop solution also covers



aspects such as new data and pricing data, enabling the energy supplier to pick-and-choose the functionality they would like to offer to their end customers,” says Den Broeder. Jules Energy’s solution allows remote collection of meter data, and the physical and financial flows, which are presented as a financial results statement. Settlements between the supplier and customer can be processed either half-hourly or quarter-hourly, with day-ahead prices and bespoke settlements. Importantly, a system operator is available 24/7 to guide the supplier through the entire process and also delivers forecast analysis and position analysis to facilitate informed decisions and cost savings for everyone involved.

Furthermore, Jules Energy’s platform interfaces uniquely with end-customers, back-office staff, and portfolio managers. Each interfacing party has functionalities at its disposal to fulfil its role in the execution of the contract, leading to the monthly energy bill.

**Energy Trading Based on Appetite for Risk**

Since Jules Energy’s customers have a plethora of information at their fingertips—Spot market prices, imbalance prices, fixed price, and forecast analysis—the onus is on both the energy suppliers and the customer to determine their “appetite for risk” and accordingly deal with the various energy markets and self-service parameters. According to Den Broeder, Jules Energy empowers its customers to be flexible and determine their own risk policy. “Since the energy supplier is exposed to the risks of wholesale markets, they have the option of forecasting their own consumption or commercial patterns and engaging with premium trading products. However, if a customer has a lesser risk for appetite, they can select the energy trading products with less risk attached to them. Our solution is all about flexibility; we put the steering wheel in the hands of the customer,” he says.



As for the client onboarding process, Jules Energy does not directly interact with the end customers (energy consumers) at any stage of the process. “That is the commercial strategy of the energy supplier, and we don’t intervene,” says Den Broeder. In its existing deployment model, Jules Energy creates a license agreement in the form of an internet-based portal and allows the energy supplier to present the platform to its final customers. He adds, “We have a second line of support to address technical problems. Although energy suppliers can call us, we do not directly interact and interfere with final customers on their commercial usage.”

It’s important to note that the Jules Energy platform comes with a white-labelling functionality, allowing energy suppliers to customise the look and feel of their self-service platform. They can modify the logo and colours of the platform to suit the preferences of each client. The personalised dashboard also allows each customer (energy supplier) to manually key in their consumption profile, capacity, sustainable generation type, required battery type, and the size of their connection—to accordingly shape and influence their potential revenue model. Since each customer is

unique, Jules Energy makes a concerted effort to visit each client site to perform customised analysis and quotation to ensure complete transparency and accuracy.

**A Pioneer in Netherland’s Energy Industry**

Jules Energy is, by no means, a new player in the energy market. In fact, Team Jules Energy was the driving force behind the creation of the world’s first energy transaction platform, Powerhouse, which is now a well-known player in the Dutch energy market.

One of Jules Energy’s biggest contributions involves introducing Netherland’s horticultural segment to the infinite benefits of energy trading. Until a project that started more than a decade ago, none of the horticultural companies in Holland “had any idea” about the benefits associated with the overproduction of energy.

Just take the example of an energy-intensive greenhouse company that grows peppers, tomatoes, and a number of cash crops. The company utilises a CHP (combined heat and power)energy engine to create artificial heat for the crops to grow at an optimal temperature of for instance 22 degrees Celsius 24/7.





JOS DEN BROEDER,  
CO-FOUNDER & CEO



**Our one stop solution also covers aspects such as new data and pricing data, enabling the energy supplier to pick-and-choose the functionality they would like to offer to their end customers**

However, since the engine runs on natural gas and diesel, it emits a ton of CO2 and also produces electricity. For years, the greenhouse returned the energy surplus at a fixed low price back to the grid, an automatic process. That was until Jules Energy stepped in.

“We asked them, ‘why don’t you want to benefit from all this energy overproduction?’ It didn’t make sense for them to not profit from their own assets,” recalls Den Broeder.

By utilising the imbalanced energy market, Jules Energy convinced the greenhouse company to shift their production cycles to peak hours. “We developed a forecasting algorithm to allow them to predict the arrival of the next price-peaking minutes precisely,” says Den Broeder. Moreover, since the client could store energy in large water reservoirs, they could utilise Jules Energy’s switchbox module to customise their consumption patterns. “We allowed them to separate their heat demands from the moment they switch their machine on or off. This way, they could control what was being exported back to the grid.”

More than 12 years since the project, almost the entire greenhouse sector in the Netherlands has embraced energy trading markets. “Today, 1200 enterprises and more than 95 percent of the horticulture sector uses either Jules Energy or a similar platform,” says a proud Den Broeder.

A bright future awaits Jules Energy. Over the last ten years, the company has made considerable strides in penetrating the energy markets in several EU-countries. Since June 2011, Jules Energy has partnered with Total Gas & Power to develop the first energy platform in Great Britain on which both electricity and gas are traded for the short and long term.

Although the company’s focus is on the energy suppliers, Jules Energy has never backed away to add value to the experience of the end customers. “Our focus has always been to add new functionalities and optimise the platform for the end customer’s usage. While our customers are energy suppliers, we are creating win-win relationships all the way around,” stresses Den Broeder.

Jules Energy’s proficiency has pushed forward its name globally, and the company is looking to expand into the U.S. market. It is on the lookout for the most profitable market to begin its tally. When it comes to the development of the solution, Den Broeder concludes, “A good platform is never completely furnished. Our 12 years in the market have seen us pushing continuous growth and new functions into our solutions alongside maintenance.” **EC**

Top 10 Energy Technology Solution Providers Europe- 2019

Constant climate changes have made a dramatic impact on planet Earth. Alarmed by the rising climate issues, the energy tech industry in Europe is carrying out various initiatives to increase the use of renewable energy. To combat global warming, many organizations have already developed affordable renewable energy solutions. Technology innovators are exploring the value of artificial intelligence (AI) to thwart the damage caused to the environment due to climate change. For instance, AI-infused robots are being used extensively in research laboratories to build solutions that can inspect, maintain, and repair offshore energy installations.

Many European organizations are promoting the efficient use of smart grids and microgrids for holistic energy needs.

With effective technologies, power grid operators can manage distribution grids reliably, safely, and optimally. A number of energy tech solution providers in the continent have been striving to meet the growing demands of the market in terms of energy and environment safety.

In this edition of Energy CIO Insights, we bring to you top energy tech companies that are bringing a fresh perspective to the industry through their cutting edge solutions. We hope this issue of Energy CIO Insights helps you build the partnership you and your firm need to meet your goals.

We present to you Energy CIO Insights’ “Top 10 Energy Technology Solution Providers in Europe-2019.”



**Company:**  
Jules Energy

**Description:**  
An independent software company that empowers energy suppliers to enjoy a higher yield for their energy surplus and reap the benefits of overproduction

**Key Person:**  
Jos den Broeder,  
Co-Founder and CEO

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