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PROFESSIONAL EXPERIENCE

2024 - Present, *Economist*, Compass Lexecon, Paris, France
2022 - 2024, *Senior Analyst*, Compass Lexecon, Paris, France
2020 - 2022, *Analyst*, Compass Lexecon, Paris, France

EDUCATION

2020, *M.A. in Economics*, University Paris Dauphine - PSL, Paris, France
2019, *M.Sc. in Engineering*, AgroParisTech, Paris, France
2019, *M.Sc. in Engineering*, Mines Paris Tech, Paris, France

SELECTED CONSULTING EXPERIENCE

Power markets modelling

- **Development of a power market model for a French-based large international utility:** Co-development with the utility team of their power market model in Plexos®. The work consists of structuring the model, implementing it, calibrating it, creating the necessary databases and providing insights on the modelling. This work concerns the wholesale market as well as the ancillary services markets (reservation and activation). In order to calibrate and validate our models, we conducted several backtests.
- **Provision of a price outlook for many countries for a large international utility:** Assessment of power prices and merchant revenues for RES capacities across European countries with assumptions in line with recent National Energy Climate Plan (NECP). The analysis covered three scenarios to assess the uncertainties related to the profitability of RES capacities.
- **Provision of a revenue outlook for an interconnection for a European investor:** Assessment of power prices and merchant revenues for an interconnection line across two European countries. The analysis covered a base case scenario with sensitivities to assess the social benefit and profitability of this potential new line.

Ancillary services modelling

- **Development of Compass Lexecon's internal ancillary services model:** Modelling of capacity reservation (FCR, aFRR, mFRR, RR) and energy activation (aFRR, mFRR and RR), including modelling of PICASSO, MARI and TERRE platforms. Additional model development for specific reserves in the UK and Nordics. Calibration of the model on many countries. Definition of bidding strategies and offered volumes for the different participants. Development of a modelling tool to optimize battery dispatch between different markets (wholesale and ancillary services markets) depending on inputs from market models and battery technical characteristics.
- **Modelling long term flexibility in Europe (Germany, The Netherlands, Sweden, UK, Hungary) for a large European utility:** Price forecasts for the different type of reserves (FCR, aFRR, mFRR), as well as a quantitative and qualitative impact assessment of the main drivers of these markets: technology changes, regulatory and market design changes and power market trends.
- **Impact assessment of options to develop cross-border electricity balancing between UK and the EU for the British Electricity System Operator (NGESO):** Identify, analyse, and model the impacts of various options to enable cross-border exchanges of balancing services between GB and other European countries, in the context of the implementation of the Trade and Cooperation Agreement between the UK and the EU.

Small non-interconnected power systems and islands - Regulation and Modelling

- **Economic valuation of a Pump storage project in Corsica in the context of a regulatory filing and PPA negotiation for a French utility:** Modelling Corsica's power system and assessment of the value of the different services provided by the asset to the system operator (including energy arbitrage, provision of operating reserves, inertia and peak capacity) by taking into account the possible conflicts and synergies between those services. Provision of quantitative evidence to the French energy regulator CRE supporting PPA contracting.
- **Economic valuation of a Pump storage project in La Réunion in the context of a regulatory filing and PPA negotiation for a French utility:** Modelling La Reunion's power system and assessment of the value of the different services provided by the asset to the system operator with a provision of quantitative evidence to the French energy regulator CRE supporting PPA contracting. Recommendations on project design to best fit the needs for flexibility and inertia of the system operator and maximise the value for the system and consumers.
- **Economic valuation of a hybrid PV/Pump storage project in Martinique in the context of a regulatory filing and PPA negotiation for a global investor and asset manager:** Modelling Martinique's power system and assessment of the value of the different services provided by a multi-services hybrid PV/Pump Hydro project in the context of a cost-benefit analysis to provide quantitative evidence to the French energy regulator CRE supporting PPA contracting. Technical discussions and recommendations on the project design to best fit the needs for flexibility and inertia of the system operator and maximise the value for the system and consumers.

European energy and climate policy issues – Decarbonisation

- **Modelling and economic impact assessment of different scenarios of the European energy sector involving deep decarbonisation:** Modelling the evolution of the power energy sector in Europe up to 2050 in the context of full decarbonisation of the European economy using our in-house power model developed in Plexos®. It involved a long-term optimization of investments and of flexible capacity (batteries, power-to-gas-to-power...). A cost assessment was also performed to compare scenarios.
- **Economic modelling of the potential of electrification in Finland for the Finnish Innovation Fund (Sitra):** Support to the new strategic and cost-efficient climate policy in Finland by presenting cost-efficient energy scenarios in line with the ambitious climate target. We also analysed the levers, bottlenecks, and investment needs for full decarbonisation of Finland by 2050.
- **Electricity demand forecast in a context of a decarbonisation of the global energy system in Europe in 2050:** Demand forecast based on a long-term energy balance model covering the full EU economy under a set of constraints (decarbonation objective) with a breakdown of main sectors (industry, buildings, services, transports, and agriculture). Work on new demand usages: electric vehicles, heat pumps (cooling and heating), industrial hydrogen, industry electrification, data centers. Comparison of our forecasts with public sources.

Regulatory issues in electricity markets

- **Strategic, regulatory, economic and financial support in the context of PV FiT tariff cuts in France for various European renewable electricity producers and investors (7 clients, 40+ affected plants/PPA totalling 230+ MW):** Support in the context of interactions with the French regulator CRE (derogatory request submitted through a regulatory filing) and litigation processes. Assessment of the tariff cuts' economic and financial impact on the affected plants, SPV, holdings and companies, as well as possible mitigation measures.
- **Calculation of the market-based CO2 emission factor for Belgium for the Flemish Government:** In the context of the revised Guidelines, we helped the Flemish government to compute the CO2 emission factor for Belgium. It implied assessing what would be the power price in the hypothetical situation without CO2 price. We relied on our dispatch model to perform this task. We also provide a full report that were used in the negotiations with the European Commission.
- **Impact assessment of the change in alpha for the calculation of imbalance costs in a context of a dispute about a power offtake agreement for an offshore wind farm operating in Belgium:** Qualitative critical review of the opposing party's approach. Quantitative critical review with an analysis of the historical and projected impact of this change in alpha on balancing costs.



Investment and strategic support and/or opportunities screening

- **Assessment of battery revenues in France and Germany for a large investor:** Assessment of the regulatory framework and market design for electricity storage in France and Germany, followed by a forecast of wholesale and balancing prices to compute battery storage revenues using our modelling tool to optimize battery dispatch.
- **Forecast of revenues for a new battery in Belgium for a European utility:** Analysis of the business case of a new battery in Belgium. This study focused on the revenues that can be captured by the battery, either from the energy market or the ancillary services market. This included a projection of Belgian wholesale, ancillary services and imbalance prices over the next decade, based on our ancillary services model.
- **Assessment of market potential and business models for hydro pump storage in Europe and overseas territories for a global investor and asset manager:** Support consisted in understanding the value drivers and market potential for pump storage, including comparison with other flexibility solutions, identification of jurisdictions with high economic and technical potential, mapping of the range of business and regulatory models in each selected jurisdiction, and assessment of business cases.

Commercial and regulatory due diligence of energy projects

- **Economic and regulatory due diligence of a battery operator in France for a large French car manufacturer:** Outlook of the French power market and modelling of the anticipated revenues of the asset in different scenarios from electricity as well as ancillary services markets. Review of positioning strategies for an electric car manufacturer in the battery storage value chain, focusing on synergies with existing activity.
- **Analysis of the vendor market report of a renewable portfolio in France for a potential buyer:** Assessment of the vendor's outlook regarding captured prices and future tender tariffs. We also provided our own view of future captured prices for wind and PV assets in France based on our power market dispatch model.
- **Economic and regulatory due diligence of a CCGT plant in Hungary for a European utility:** Outlook of the Hungarian power market and modelling of the anticipated revenues of the plant in different scenarios from electricity as well as balancing and ancillary services markets.

TECHNICAL SKILLS

- Python
Proficient in Pandas
- Microsoft office
Proficient in Word, Powerpoint and Excel (including VBA)
- Energy System Modelling
Proficient in Plexos

LANGUAGE SKILLS

- French – Native
- English – Fluent

