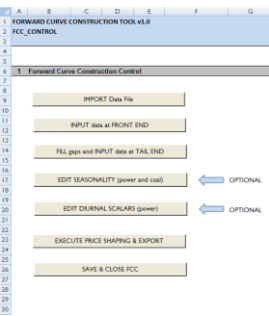# Redpoint Energy Generation Planning and Optimisation Toolkit

Designed for independent generators without large in house teams that undertake market analytics, the Redpoint Energy Generation Planning and Optimisation toolkit provides support for trading and hedging decisions, operational analysis and business planning and strategy.

Our toolkit provides a way to assess potential hedge volumes based on generation and margin profiles and assesses the range in gross margin and cashflow headroom for a given station or portfolio of stations under commodity price/hedging strategy scenarios. The toolkit provides risk measures sufficient to show compliance with risk policy and other governance measures and a set of business planning reports including profit/loss and cash flows.

A bespoke forward curve construction and price shaping tool for power, fuels, carbon and FX
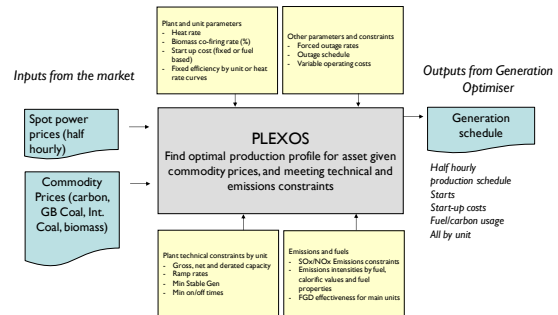

- Creation of contiguous forward power, coal, carbon and FX curves based on market forward contract prices and user input

- Seasonality on the flat regions of the coal and power forward curves

- Derivation of half-hourly power curves from monthly forward curves for power baseload and peak

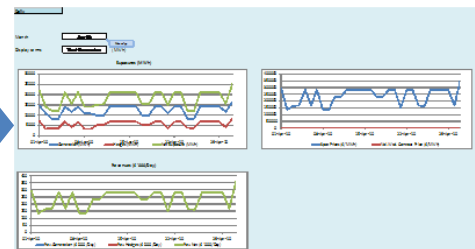## A powerful generation optimisation engine with bespoke interface tools

- Methodology for generation optimisation based on maximizing the achieved profit by dispatching the asset against a price series, effectively modelling it as a price-taker

- Modelling the asset in *PLEXOS for Power Systems*, a third party software package

- The optimisation is subject to a set of constraints

  o On longer timescales (e.g. a year) the asset's operations are optimised against policy constraints e.g. emissions (LCPD and IED handled)
  o On shorter timescales the model captures physical operating constraints.

Assess potential hedging strategies and volumes based on generation and margin profile

- Enter power, coal and EUA trades

- Shaped, non-shape and physical/financial hedges

- What If and live trades capability
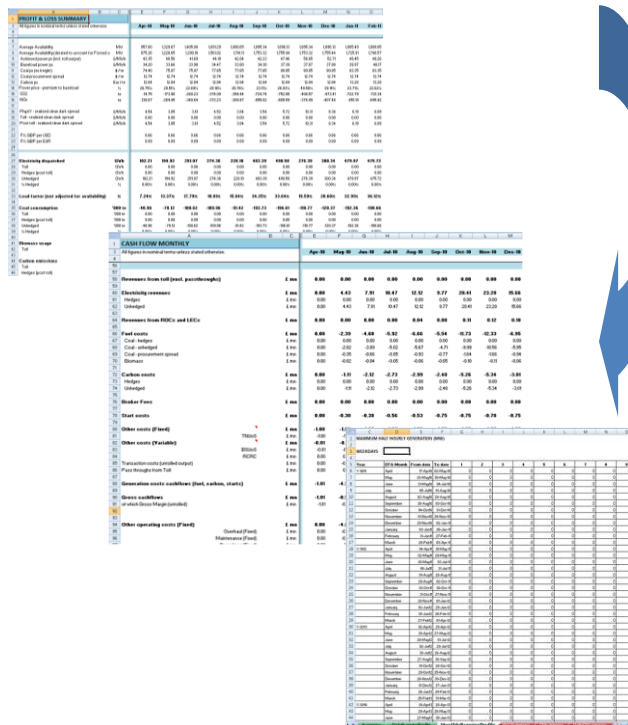
- Import deals from other sources

Sophisticated analytical and profit/loss reporting capabilities to provide trading analysis, business planning and basic risk management

Drill down on generation profile, spread and marginal cost analysis

P&L, cashflow, position reporting and management dashboard

Energy Policy & Regulation Consultancy

Market design
Renewables policy
CCS policy
Smart metering policy
Grid access
Price regulation and incentives
Competition economics

Market Advisory

Market scenarios
Long term price projections
Price simulation
Green certificate pricing
Transmission modelling
Investment dynamics
Market model deployment
Energy systems model development

Investment Analytics

Market entry strategies
Asset valuation
Contract analysis
Mergers and acquisitions financial modelling
Project financing support
Due diligence
Investment strategy
Sell side advice

Commercial & Risk Strategies

Hedging and contracting strategies
Risk measurement
Risk policy
Governance
Organisational design
Transfer pricing
Development of bespoke risk applications
Demand forecasting

About Redpoint Energy

Redpoint Energy (www.redpointenergy.com) is a specialist economic and commercial energy consultancy, advising clients on investments, strategy, policy and regulation across Europe's power, gas and carbon markets.

*Since its formation in 2004, Redpoint's clients have included some of Europe's largest energy companies and financial institutions, as well as governments and regulators. Its team provides advice and analysis centred on four key service lines: **Policy and Regulation Consultancy, Market Advisory, Investment Analytics, and Commercial & Risk Strategies***

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