



## Creating value and reducing risk in a rapidly changing energy landscape

World energy consumption has doubled in three decades, placing substantial pressure on finite resources and raising concerns about security of supply, environmental impact, social equity and the rational use of resources. This rapidly evolving and politically sensitive marketplace requires robust and reliable decision making tools.

*We use our proprietary Future Energy Scenario Assessment (FESA) software to model energy system scenarios and develop insights into the resulting opportunities, risks, and implications for policy makers innovators, investors and businesses.*

### Policy Makers

We provide an understanding of the energy generation, demand-side management and technology options that satisfy future energy security, environmental and fuel poverty objectives, thereby enabling policy makers to focus finance, legislation and regulation to maximum effect.

### Innovators and Technology Developers

We provide pragmatic insights into the size and needs of emerging markets, enabling innovators to develop solutions that best meet customer needs.

### Investors and Businesses

We identify technologies, services and businesses that best meet the functional and economic demands of evolving energy markets, enabling informed investment decisions.

### Energy and Transport Strategists

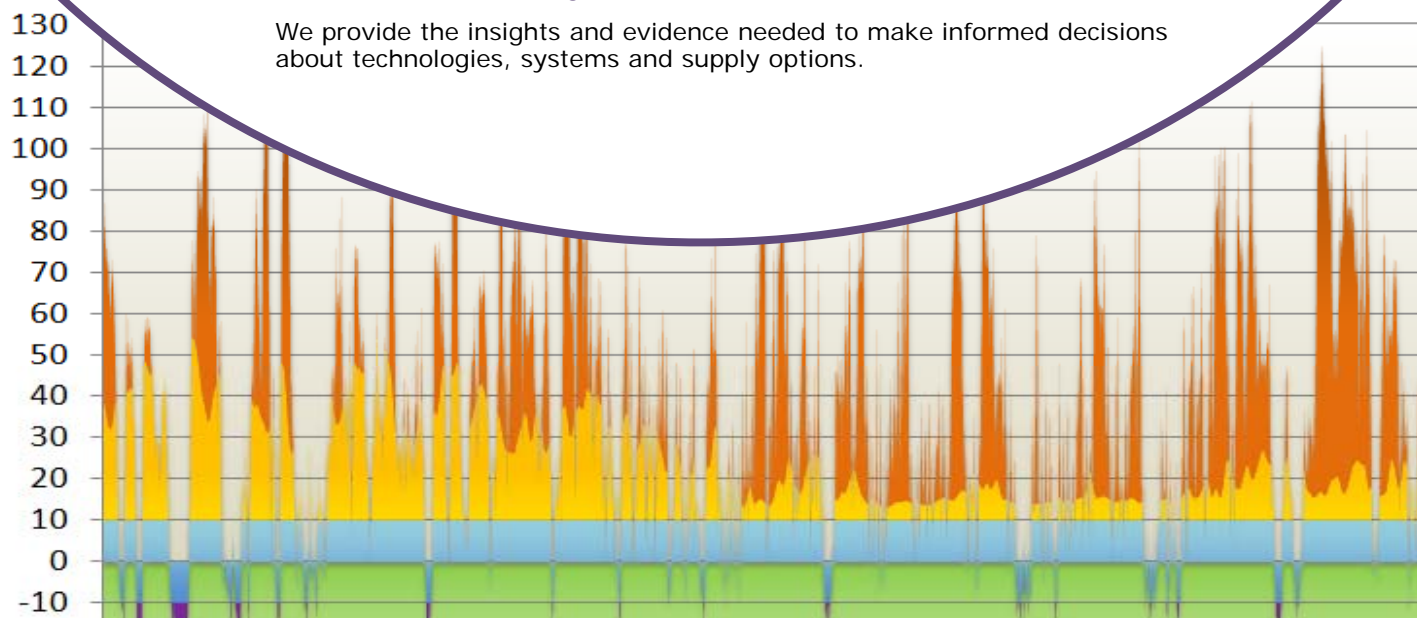
We create and test visions of future energy systems and transport infrastructure options, thus informing energy and transport strategies.

### Utilities and Grid Infrastructure Companies

We identify and assess options to generate and deliver reliable, affordable, low-carbon energy in a manner that balances supply and demand, enabling informed strategic and operational planning.

### End Users, Academics and Industry Commentators

We provide the insights and evidence needed to make informed decisions about technologies, systems and supply options.



### What is unique about our offering:

FESA has a number of unique features that sets it apart from other models:

- It takes a uniquely **cross-sectoral and holistic view**, bringing together all aspects of energy generation and use (i.e. heat, power and transport)
- It employs a **high time resolution** (year-round hourly time steps), which is critical to understanding system dynamics and the crucial issue of load balancing and the flow of energy between sectors
- It uses **meteorological data** to analyse how supply and demand will vary over time and to determine how these can be balanced
- It is **driven by practical considerations** in which economic analysis is combined with technical and functional assessment of technology performance.

### What our customers say about us:

*"The Orion Innovations/Bryte Energy team gave us the confidence we needed in order to plan for the future. Their use of FESA was very helpful in providing insights into the timing, nature and scale of likely renewable hydrogen futures in Scotland." – John Bingham, Director, Scottish Hydrogen & Fuel Cells Association*

*"Bryte Energy's Future Energy Scenario Assessment tool has contributed to E.ON's understanding of the potential role of hydrogen as an energy vector in future energy systems. While the results of any modelling work are dependent on input assumptions and the approach used, Bryte Energy combined their first hand knowledge of hydrogen technologies with an analytical energy system tool to deliver a selection of reasoned future scenarios which inform the energy debate."*

### Who we are:

**Orion Innovations LLP** is a London-based strategy consultancy that works with organisations to address the challenges and to realise the opportunities associated with the transition to a low carbon economy.

**Bryte Energy Ltd** is a Loughborough-based consultancy that specialises in system integration and strategic studies on low-carbon energy systems and future energy markets.

These **partner organisations** have many years of experience in providing integrated advice and support to public and private sector clients looking to exploit opportunities in the transition to a low carbon economy.

**If you have any questions or would like to discuss FESA, contact:**

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