TERRA FIRMA
SUSTAINABLE ENERGY SOLUTIONS

Tring Road, Wingrave

49.9 MW Gas Peaking Plant
Tring Road, Wingrave, Buckinghamshire, United Kingdom

Contents

Director's Welcome

Thank you for joining us to find out more information on this pivotal new chapter in Terra Firma Energy's rapid growth within the UK energy market.

The last 12 months have brought into focus how reliant the UK is on natural gas for our current energy needs.

The tragic war in Ukraine and the resulting global shock to the energy market from the loss of supplies of Russian gas to Europe, have given a renewed focus on natural gas as an important part of the current and future energy blend.

Whilst the UK was largely unaffected in terms of gas supply, we were still exposed to the impact of high prices in the energy market.

Whilst energy prices do appear to have peaked for now, experts predict the wholesale price of energy will stay high and continue to rise over the coming years. This opens up significant opportunities for Terra Firma Energy's expanding portfolio of gas peaking plants, as more legacy nuclear and coal generation are decommissioned.

We are now seeing the reliance of intermittent renewable energy generation for more of our overall power generation, with gas peaking plants ideally positioned to fill these gaps.

As a business, we continue to develop our strategic partnerships in the marketplace, working alongside National Grid to deliver standby generation in the event of the grid experiencing shortages. Our partner relations with EDF Energy continue to evolve providing power directly to the wholesale energy market.

With 20MW of gas generation in operation, a further 23MW due to be operational by Q3 2023 and a pipeline of a further 64MW to commence construction in 2023, Terra Firma Energy is on track to become one of the largest owner operators of gas peaking plants in the UK market.

Richard Meakin

Richard Meakin, Director

About Terra Firma Energy

Terra Firma Energy is a privately owned U.K. based company operating in the renewable & sustainable energy market. We design, develop & construct carefully sourced, financially sound projects with the emphasis on making them a cleaner and more respectful energy production source for future generations.

With the help from our energy partners, Terra Firma's focus is to help balance the UK's evolving power needs, with innovative energy solutions that can help ease pressure on the ever-growing UK energy market.

We continue to see Britain's energy demands rise every year. As a company, Terra Firma is identifying and building new sustainable and reliable power projects across the UK. Our aim is to be consistently producing affordable and efficient cleaner energy, to help balance the UK's complex energy requirements.

Alongside our partners **EDF Energy**, **National Grid** and **Scottish Power Network**, we are rapidly expanding our energy portfolio across the UK. Our 2 sites situated in St Helens and Wrexham produce a total generation of 43MW.

Our latest project located in Wingrave, will be our largest power plant to date. Consisting of a total generation capability of 49.9MW once completed.

Terra Firma Energy's growth plan is to occupy a total of generation capability of 107MW by the end of 2024.

TERRA FIRMA
SUSTAINABLE ENERGY SOLUTIONS

Timeline

July 2020
Terra Firma Energy is established in the UK

August 2020
Terra Firma purchase Burtonhead Road power project, situated in St Helens

September 2020
Works commences on St Helens project by EPC contractor TMS Grid

June 2021
Terra Firma purchase Miners Road power project, situated in Wrexham

November 2021
Agreement signed with EDF Energy to purchase Energy from Terra Firma Energy projects

February 2022
Works commences on Wrexham project by EPC contractor Blackstone Energy

July 2022
Terra Firma Energy secures 200MW Battery Storage (BESS) connection at Heathrow

November 2022
Terra Firma purchase Tring Road power project, situated in Wingrave

Testimonials

"Last year I invested into Terra Firma Energy's St Helens power plant through their loan note and equity programme. From the start of the investment to present, I have found the company to be very helpful and their response to questions and updates being both prompt and professional at all times. An investment that produces both income and capital growth opportunity is something rare in current investment markets.

Following on from the success of their first project, I am excited to invest in their second power plant and look forward to a lasting relationship as a client and shareholder of the company projects. I would be happy to recommend Terra Firma's services to active investors looking to improve their financial position.

Richard Harry"

"Being an investor of Terra Firma Energy since August 2020, I have found the team to be both helpful and easy to communicate with.

In an ever-changing economic climate and through a pandemic, the company has continually met their financial obligations and would recommend any investors wishing to profit from the UK energy crisis, to jump onboard.

Very happy so far!

Brian Smith"

"Aside from the exciting nature of the investment opportunity, I'd like to applaud Terra Firma (and particularly Richard Meakin, Director) for their exemplary communications: both prompt and comprehensive responses to any question I've asked and great proactive material for investors. This has helped consolidate the trust already built by Terra Firma delivering on all their promises, providing the reassurances I was looking for to increase my investment incrementally. First class!"

Julian Hatt"

"I have been investing with Terra Firma Energy for over a year now and I think it`s a fantastic financial opportunity. After being repaid my initial investment, along with my 12% interest and based on my personal experience with the company, I decided to reinvest into the project in Wrexham. Looks even better! Highly recommended.

Agnieszka Biesiada"

Current UK Energy System

The UK energy sector has undergone a great deal of change in the past 30 years, from a vertically integrated and nationalised sector to a privatised and liberalised market-based system. Government policy has likewise changed considerably, as it attempts to address issues of affordability, security and more recently, a reduction of carbon emissions. One of the key technologies for producing low-cost, green electricity is nuclear power generation. However, Britain's most productive nuclear reactor, Hinkley Point B, retired in August 2022.

With a loss of these nuclear power plants, there will be an even greater need for dependable power generation sources that can be called upon to ensure security of supply. Especially when renewable sources like wind and solar fall short due to ever increasingly frequent and uncontrollable weather conditions.

The move to renewable energy sources such as wind and solar will be pivotal to the UK's Net Zero future, particularly as demand for low carbon electricity increases. However, the intermittency of renewables means that back up power is also required to maintain the stability of the grid. When the wind doesn't blow or the sun doesn't shine, the UK grid needs a viable and consistent solution.

The importance of flexibility increases with electrification in all scenarios – especially when the electricity comes from weather-driven renewables.

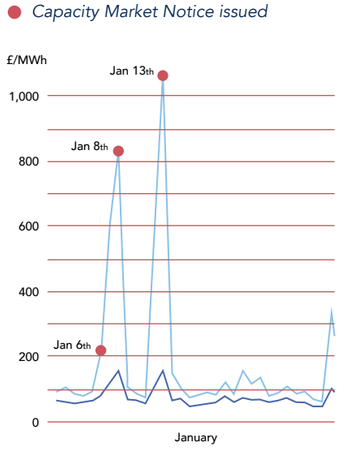
Future Energy Scenarios, The National Grid

Gas Peaking Dominance

Due to increasingly extreme weather conditions across the globe both in the summer and the winter, gas peaking is emerging as the dominant technology to provide the power required to meet national demands. In addition, the UK electricity market prices have soared to a new high and prompted the National Grid to put out an urgent call for suppliers to provide extra capacity. As a result, gas peaking plants have become highly desirable, as they are not reliant on weather conditions and their operational cost efficiency.

As an example of the effect of extreme winter conditions, in January 2021 the polar vortex - creatively dubbed 'The Beast from the East 2' - hit Europe. After seeing the coldest January since 2010 electricity demand increased due to heating load. In winter 2021, six Capacity Market Notices were issued due to a predicted supply shortage. These shortages meant that on 13th January 2021 the electricity price peaked at £1,063/MWh, driven by the extreme weather conditions.

Peak Electricity Prices Jan 2021

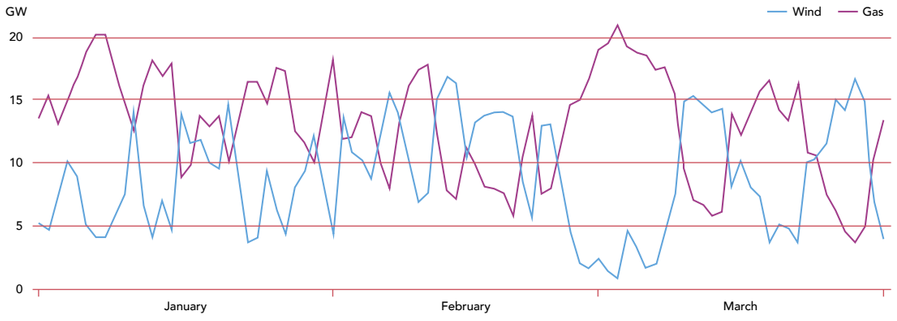


What is a Capacity Market Notice and how is it triggered?

A Capacity Market Notice is a signal triggered 4 hours in advance that, when taking into account additional operational reserve requirements, there may be less generation available than National Grid Electricity System Operator (ESO) expects to meet the national electricity demand.

Extreme temperatures are not the only impact on power generation. At the start of March 2021, Britain experienced its longest spell of low wind output in more than a decade. For more than a week calm weather covered the country. The output from Britain's wind farms is almost exclusively balanced by gas power stations. Throughout the quarter their outputs were the mirror image of one another, performing an elaborate dance to keep the system balanced.

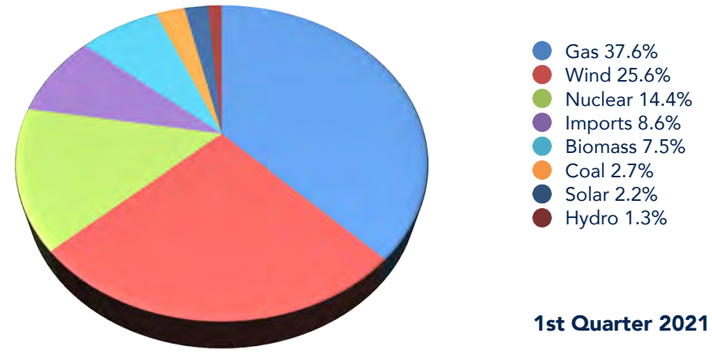
Daily Output from Wind Farms and Gas power Stations, 1st Quarter 2021



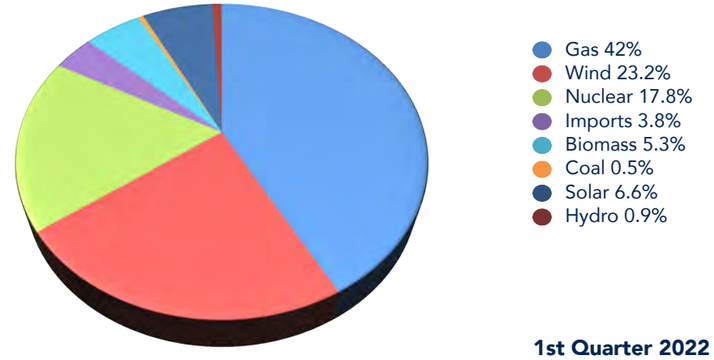
In addition to extreme winter conditions, the recently experienced extreme summer conditions also have a large impact on the wholesale electricity market - most notably the summer heat wave of 2022. Britain saw increased electricity demand during this period due to air conditioning and refrigeration loads. As this increase came at a time when demand would normally be low and many larger power stations were offline for routine maintenance. Electricity prices surged to nearly £750/MWh in much the same way as they do during the coldest winter spells, and it was predominantly gas peaking that was called on to meet demand.

The post winter electricity production data shows that in both 2021 and 2022, gas fired power generation provided the largest portion of power to the UK electricity market. This highlights Britain's dependency on gas peaking to provide that much needed security of supply to the grid.

UK Generation Volume



1st Quarter 2021



1st Quarter 2022

To take a closer look at the current supply, price and source of energy, please visit the Drax Insights website for more information behind Britain's electricity grid.

electricinsights.co.uk

Power Agreements & Revenue Streams

There are two primary revenue streams for gas peaking plants located in the UK. These are trading on the wholesale electricity market via a **Power Purchase Agreement** (PPA) and the Capacity Market via a **Capacity Market Agreement** (CMA).

Power Purchase Agreement (PPA)

The UK's wholesale electricity market is traded in half hourly intervals, which means the sell price of electricity fluctuates depending on the type and capacity of generation and the demand on the grid at that time. With the UK's generation landscape becoming more decentralised and having a larger dependency on renewable sources of generation, the grid has become vulnerable to climatic changes, as wind and solar are solely reliant on favourable conditions. This has resulted in the requirement of a scalable and quick response solution to make up for the shortfalls of these renewable assets.

For financial modelling purposes, a conservative figure of £75/MWh is used by power generation assets like Terra Firma Energy but peaking plants will regularly trade in well above £170/MWh for their permitted hours each year. Peaking plants will only turn on when demand is at its highest meaning the sell price is also at its highest.

EDF Energy is currently the preferred offtaker for all current and future Terra Firma Energy sites, with a 7 year rolling Power Purchase Agreement in place for each power plant.

Capacity Market Agreement (CMA)

The capacity market was created and brought in by National Grid to ensure electricity supply in times of emergency. Capacity Market Agreement (CMA) contracts will pay a fixed price per year for a specific capacity to be available and connected to the grid. In addition to this standby cost, if a capacity market event is called, the plant will be called for power for as long as is required. These run hours will not be deducted from the annual permitted hours. National Grid will then pay the wholesale market rate per MW.

The auction of 2022 closed at a price of £31kW, which, for a 49.9MW power plant, equates to an annual payment of £1,549,969 for being connected to the grid. This is secure for 15 years. Future auctions are anticipated to clear around £35-£40/kW.

The table (right) lists the major Capacity Market events that took place in 2022 and the 'peak' trading price it rose to, due to that occurring event. To further give an insight into the revenue significance an event like this can generate, the table also includes the revenue which a 49.9MW site would have produced. These figures are based on the actual Capacity Market trading prices for 2022.

National Grid currently employs a Capacity Market Agreement with all Terra Firma Energy power plants in the UK for a period of 15 years

2022 Capacity Market Events and Revenue Generated Throughout by a 49.9MW Site

Event Date	Peak Trade Price	Duration (hours)	Revenue from Event for 49.9 MW
24/01/22 (AM)	£3,763.00	3	£563,321.10
24/01/22 (PM)	£4,035.00	2	£402,693.00
18/07/22 (AM)	£470.00	2	£46,906.00
18/07/22 (PM)	£683.00	2	£68,163.40
11/07/22 (PM)	£760.00	3	£113,772.00
22/11/22 (PM)	£250.00	5	£62,375.00
28/11/22 (PM)	£750.00	2	£74,850.00
Total Revenue			**£1,332,080.50**

These figures are in addition to the £1,549,969 standby annual payment

Latest Project
Tring Road, Wingrave

49.9MW Gas Peaking Plant

The Wingrave Gas Peaking Plant is a 49.9MW gas fired electricity generation station located in Buckinghamshire. This development will be Terra Firma Energy's third and largest gas peaking station to begin construction. The site will comprise of eleven Janbacher 4.5MW generators and will run for approximately 1500 hours per year in normal operation.

A precedent has been set in 2022, where for the winter months, sites will be awarded exemptions allowing them to increase their total running hours above the allocated 1500.

The development costs for the Wingrave site are as follows:

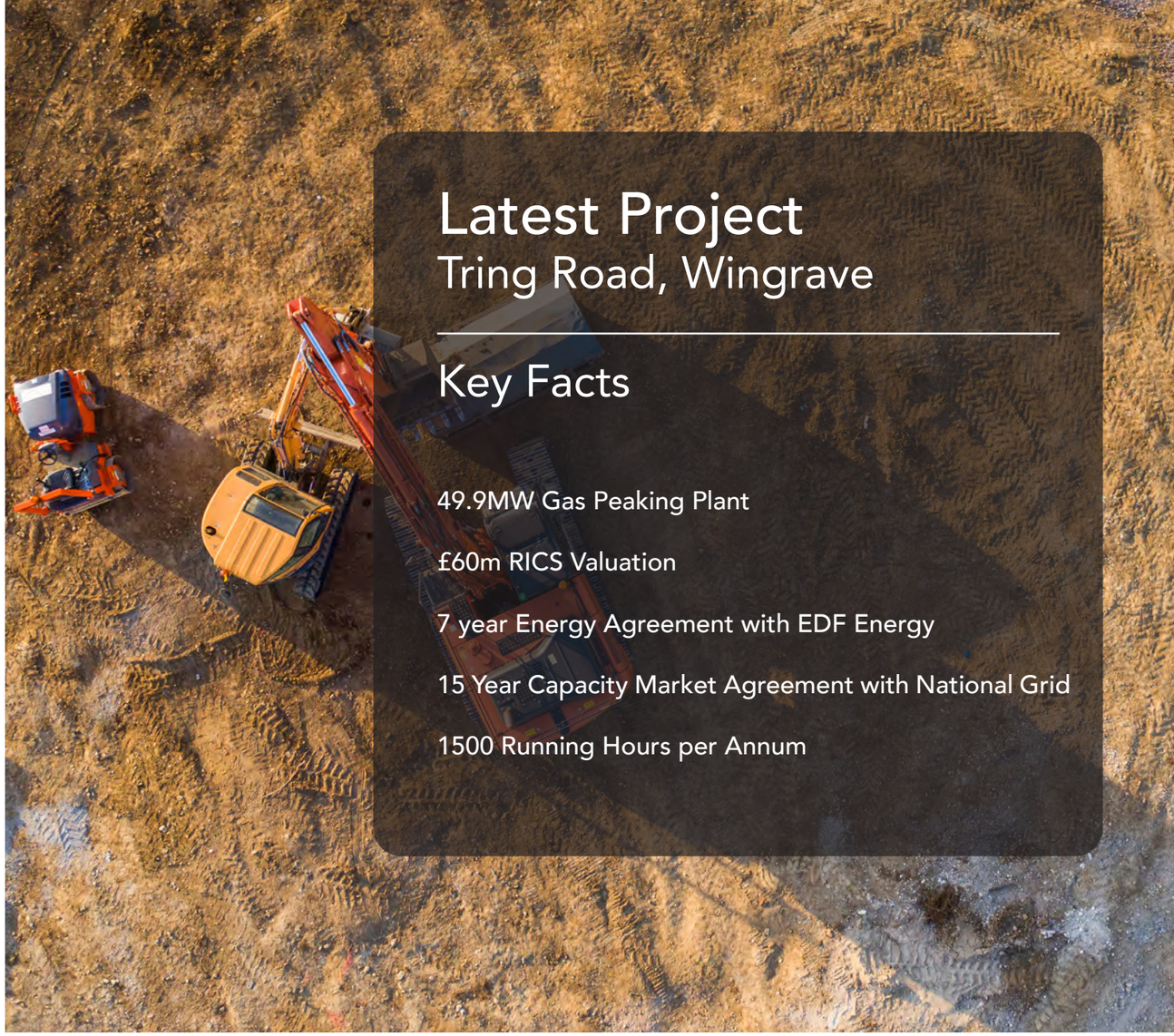
Construction	£2,109,000
Generation Equipment	£26,176,324
Commissioning	£1,049,000
Total Development	£29,334,324
Project GDV	£60,000,000

Forecasted revenue for the site is categorised into a Power Purchase Agreement (PPA) with EDF Energy and Capacity Market Agreement (CMA) with National Grid.

PPA Revenue Forecast

The table below displays the PPA annual running costs, annual revenue, carbon tax and profit using the 2022 12-month average prices for electricity and gas.

Annual Revenue	£14,679,225
Annual Running Costs	£5,567,760
Carbon Tax	£1,570,059
Annual Profit	**£7,541,406**



CMA Revenue Forecast

Based on the 2022 auction, the Capacity Market Contract is expecting to pay £1,549,969 for being connected and on standby to the grid. Revenue for generating in these events is difficult to forecast based on changing variable conditions from year to year. However, based on the 2022 event history a 49.9MW gas peaking site would have generated for 19 hours and made a profit of £1,144,403.31. The total annual profit from the CMA would then be equal to be £2,694,372.31

Forecasting with both 2022 CMA trading figures and PPA predictions, a 49.9MW site such as Wingrave would estimate a total annual profit of £10,235,778.31

Investment Highlights

£10,000,000

AVAILABLE

7 year

EDF Energy Agreement

18 month

INVESTMENT TERM

18%

FIXED RETURN

15 year

NATIONAL GRID CAPACITY MARKET AGREEMENT

£60,000,000

RICS PROJECT VALUATION

Terms of Offer

Fixed interest bearing loan notes are being issued by Terra Firma Energy to provide the bridge funding capital needed to develop a 49.9 MW power plant situated in Tring Road, Wingrave. Terra Firma Energy will issue up to £10,000,000 redeemable loan notes with an option of 0.05% equity shareholding per £50,000 in the Tring Road project.

Terms of Offer	
Issuer	Terra Firma Energy Ltd
Availability	£10,000,000 fixed rate loan notes. This invitation is available for direct investment by institutional investors, professional investors, sophisticated and high net worth individuals and companies.
Event of Death	In the event of a death of loan note holder, sums will form part of the estate and will be paid out on receipt of a valid death certificate and deed probate.
Term	18 months The Loan Note will accrue interest from and including the issue date of each Loan Note for a maximum of 18 months. The interest on the Loan Note is payable 30 business days after withdrawal date. The company hold the right to extend the loan note for a maximum of 6 months from start date, with a pro rata interest being applied on the investment total.
Interest rate options	4% paid biannually; 18% paid at completion
Security	Legaleze Limited a HMRC regulated trustee has been appointed as the authorised 'Security Trustee' and will employ a legal debenture/charge over the company assets for the protection of investors with Companies House. Should the company fail to pay an investor's interest or capital back within the agreed term, the Security Trustee will instruct a default and take control of the company, sell off all company assets and return original capital to clients.
Equity Shareholding	0.05% equity per £50,000 invested

Example Investment

Below are two example tables, outlining both return options available for investors to choose on the Terra Firma Energy loan note investment programme. An investor can choose either to be paid 4% biannually totalling 12% over 18 months, or paid 18% at the end of the 18 month term.

Example Investment - Biannual			
Investment	Time Period	4% Biannual Interest	Total Amount Repaid
£50,000	18 Months	£2,000	£6,000
£100,000	18 Months	£4,000	£12,000
£250,000	18 Months	£10,000	£30,000
£500,000	18 Months	£20,000	£60,000

Example Investment - End of Term			
Investment	Time Period	18% Interest	Total Amount Repaid
£50,000	18 Months	£9,000	£9,000
£100,000	18 Months	£18,000	£18,000
£250,000	18 Months	£45,000	£45,000
£500,000	18 Months	£90,000	£90,000

Current & Future Portfolio

The table below provides an overview of all current and future projects purchased and identified by Terra Firma Energy.

Our current portfolio consists of an operational and live St Helens site, with Wrexham due to be completed and operational by September 2023.

Our latest Wingrave project will consist of an additional 49.9MW and will be a significant milestone in the company's target to be producing a total of 107MW of sustainable energy generation by the end 2024.

Currrent Portfolio

Project	Acquisition	Build-Out Cost	GDV	Generation Capacity
St Helens	£1,400,000	£13,000,000	£21,440,000	20 MW
Wrexham	£1,500,000	£16,000,000	£29,000,000	23 MW
Wingrave	£1,100,000	£29,334,334	£60,000,000	49.9 MW
Colne	£300,000	£6,000,000	£TBC	7 MW
Birmingham	£300,000	£6,000,000	£TBC	7 MW

Burtonhead Road
St Helens

20MW Gas Peaking Plant

Burtonhead Road, St Helens, WA9 5EA, U.K.

Grid Reference	Latitude Longitude
SJ 50877 94627	53.446107 -2.7410702

Launched August 2020, the Burtonhead Road project situated in St Helens, Merseyside was Terra Firma Energy's first gas peaking energy plant.

Peaking gas installations are essentially a balancing mechanism to ensure the continued supply of electricity to local people and businesses during what is anticipated as being a volatile energy supply period of transition away from a predominantly fossil fuel bulk supply of energy.

Located at the M&D Business Park, Burtonhead Road, St Helens, the station has a generating capacity of approximately 20MW per hour and allows for 2500 hours of running time per year using ten 2MW Cummins Generator sets.

Currently this operational site has a 7-year Power Purchase Agreement with EDF Energy and a 15 year Capacity Market Agreement with National Grid.

Time lapse video:

https://vimeo.com/490624922/1b015d3c46

Key Facts

20MW Gas Peaking plant

£21,440,000 RICS valuation

2500 running hours per annum

7 year Energy Agreement with EDF Energy

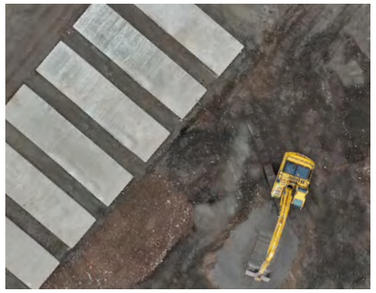
15 year Capacity Market Agreement with National Grid

Miners Road
Wrexham

23MW Gas Peaking Plant

Miners Road, Wrexham, LL12 0PJ, U.K.

Grid Reference	Latitude Longitude
SJ 32497 56382	53.100347 -3.0096290



Following on from the success of Burtonhead Road, Terra Firma launched an additional 23MW power plant, situated in Wrexham. Miners Road will produce 20MW of sustainable energy with an additional 3MW of battery storage and multiple electrical vehicle charging stations for both public and corporate usage.

The Wrexham site is Terra Firma's first use of battery energy storage systems (BESS) commonly known as Battery Storage. These devices enable energy to be stored and then released when consumers need power the most. Battery storage is the fastest responding dispatchable source of power on grids and is used as a vital stabilising solution. Battery storage can transition from standby to full power within milliseconds to deal with potential grid failures & incident shortages.

Terra Firma Energy plans to install a fully integrated Electric Vehicle (EV) charge station with a fleet of power points around the vicinity of Miners Road. EV owners will have access to multiple power points to charge their vehicles, with the energy supplied from the 3MW of battery storage situated onsite.

Almost all major car companies are now developing or producing zero emissions vehicles as battery technology improves and costs reduce. A zero emission vehicle mandate set by the Government has propelled the EV market with battery production soaring worldwide over the last decade. The Government's commitment to end the sale of new petrol and diesel cars by 2030 has seen a rise in EV manufacturers production and demand.

Time lapse video:

https://vimeo.com/734472909/781b7f0096

Key Facts

23MW Gas Peaking plant

£29,000,000 RICS valuation

2500 running hours per annum

7 year Energy Agreement with EDF Energy

15 year Capacity Market Agreement with National Grid

Directors & Advisers

RICHARD MEAKIN - Director & Financial Controller

Richard's experience has been in financial control and compliance for over 30 years within various companies and countries. Within the finance industry, Richard has guided the controller, treasury, shareholder relations, accounting, tax and internal audit functions to pursue the companies he has worked with growth strategies, in meeting clients' and investors' expectations.

MARK THOMAS - Project Planner

Mark has travelled the world providing professional planning advice to many multinational blue-chip organisations on 5 continents. Mark is an expert in the construction process including rail, metro and energy infrastructure projects and also has a healthy back catalogue on road and heavy civil construction projects, to compliment his all-round construction experience.

RICHARD MCCARRON - Technical Manager

Richard is a Chartered Electrical Engineer with over 20 years' experience of successfully delivering energy infrastructure projects. Focused primarily on the UK market he has managed the build to a value of over £200 million worth of works across a wide range of industries including Utility Scale Renewables, Nuclear, Petro-Chemical, Offshore, Transmission and Distribution Networks.

SIMON FAGAN - Legal Advisor

Simon is a qualified solicitor-advocate who has regularly appeared before the High Court and the County Courts in relation to complex corporate and regulatory matters. Having qualified in 2001, Simon developed a niche client base, specialising in the representation of companies and directors engaged in litigation and the development of their businesses.

TOM HORNSBY - Project Manager

Tom is a degree qualified electrical engineer who has worked in the UK power and distribution industry for over 13 years. Initially specialising in the refurbishment, testing and commissioning of transformers. He has developed his skill set to focus on the successful delivery of flexible generation projects on time and within budget.

ZACH DODDS-BROWN - Project Development Manager

Prior to joining Terra Firma Zach spent 12 years in the British Army. Commanding multinational teams in a wide range of operations in complex, hostile environments, Zach has developed many skills related to planning, managing, communicating and decision making.

Company Information

Company Name:	**Terra Firma Energy Limited**
Company Registration Number:	12619765
Registered Address:	Queens Chambers, 5 John Dalton Street, Manchester, M2 6ET, England, United Kingdom
Website:	**www.terrafirmaenergy.com**
Director:	**Richard Meakin**
Security Trustee:	**Legaleze Ltd**, 95 Mortimer Street, London, W1W 7GB, England, United Kingdom HMRC Trustee Services (HMRC Reg No. XRML00000105610)
Accountants:	**Valentis (UK) Ltd**, 36 Alie Street, London, E1 8DA, England, United Kingdom
Lawyers:	**Aticus Law Ltd**, Queens Chambers, 5 John Dalton Street, Manchester, M2 6ET, England, United Kingdom

Terra Firma Energy - Tring Road, Wingrave

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