

**TEIGNBRIDGE DISTRICT COUNCIL
EXECUTIVE
19/05/2020
PART I**

Report Title	ENERGY SUPPLY CONTRACT RENEWAL
Purpose of Report	To provide an overview of the options available for the supply of gas and electricity to Teignbridge District Council Local Authority.
Recommendation(s)	<p>The Committee RESOLVES to:</p> <p>(1) Provide the Environmental Protection Manager, in consultation with the relevant portfolio holder(s), the authority to renew the LASER energy framework covering the purchase of gas and electricity between 01/10/2020 and 30/09/2024; and</p> <p>(2) Provide the Environmental Protection Manager with the authority to submit a letter of intent to participate in the Devon Energy Collective.</p>
Financial Implications	<p>The financial implications are contained in section 5.1. By renewing the Laser Framework it is anticipated that the energy supply and staff resources will continue within existing budgets.</p> <p>Claire Moors – Principal Technical Accountant & Deputy Chief Finance Officer Tel: 01626 215242 Email: Claire.Moors@teignbridge.gov.uk</p>
Legal Implications	<p>There are no legal implications involved in this report.</p> <p>Marie Downey- Solicitor Generalist, Legal Department Tel: 01626215102 Email: Marie.Downey@teignbridge.gov.uk</p> <p>There are no Procurement implications. The recommendation is to use an OJEU compliant framework. We have benchmarked against another framework. Moreover, we are getting economies of scale by joining this collaborative procurement with other Devon authorities.</p> <p>Rosanna Wilson – Corporate Procurement Officer Tel: 01626 215120 Email: rosanna.wilson@teignbridge.gov.uk</p>

Risk Assessment	<p>Renewing the LASER framework will insulate TDC from energy price escalation, ensure TDC receives value for money on gas and electricity expenditure and will prevent any increase in TDC administration resources.</p> <p>At this stage, there is no risk associated with submitting a letter of intent to participate in the Devon Energy Collective. However, future assessments will need to be conducted to determine TDC's exposure to making payments to generators in the event of sustained low energy prices.</p> <p>William Elliott, Climate Change Officer Email: William.Elliott@teignbridge.gov.uk</p>
Environmental/ Climate Change Implications	<p>The recommendation to renew the LASER framework will not preclude or prevent TDC from implementing measures to reduce and offset carbon emissions from gas and electricity consumption.</p> <p>The recommendation to participate in the Devon Energy Collective is a significant opportunity to offset carbon emissions from electricity consumption, which will support the council's objective of becoming carbon neutral by 2025.</p> <p>David Eaton, Environmental Protection Manager Email: David.Eaton@teignbridge.gov.uk</p>
Report Author	<p>William Elliott Email: William.Elliott@teignbridge.gov.uk</p>
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Appendices / Background Papers	<p>Appendix A: Renewable Energy Guarantees of Origin Appendix B: Synthetic Power Purchase Agreements Appendix C: OJEU Compliant Procurement Timeframe</p>

1. INTRODUCTION / BACKGROUND

TDC's energy supply contract for gas and electricity is due to expire after 30/09/2020 and will either need to be renewed or replaced by a similar arrangement. As such, the following document has been drafted to advise TDC on future options available for sourcing gas and electricity.

Given the direct influence of energy consumption on TDC's carbon footprint and TDC's ambition to become carbon neutral by 2025, each of the assessed options have been evaluated in terms of climate change mitigation potential, as well as cost and commercial viability.

The recommended option, as set out in Section 3, will be to renew the existing energy supply framework and explore the possibility of Power Purchase Agreements (PPA) as a means to offset carbon emissions from electricity consumption.

Alternative energy supplier options, including alternative frameworks and alternative energy suppliers, have been explored and are set out in Section 6.

2. EXISTING ENERGY SUPPLY ARRANGEMENTS

2.1 Overview of LASER Services

TDC has procured gas and electricity through LASER Energy Ltd (LASER), a procurement and service provider, on an *OJEU*¹ compliant framework shared with Devon Local Authorities since 2016. The framework with LASER is set to expire on 30/09/2020 and will need to be replaced by a new framework to secure the supply of gas and electricity.

LASER uses a specialist trading arm within Kent County Council and is dedicated to delivering gas, electricity and other utility services for the public sector. Recognised nationally, LASER is an established Public Buying Organisation (PBO) and have been set up for this very purpose.

¹ OJEU stands for the Open Journal of the European Union. It determines how TDC needs to advertise and procure goods, services and works. Currently, the threshold to trigger an OJEU procurement for goods and services is £189,330 (€214,000). There are 5 main principles of the European Treaty that TDC needs to adhere to when conducting OJEU Procurements. These are transparency, proportionality, non-discrimination, equal treatment and mutual recognition.

Post-Brexit trade deals are still being negotiated. This means that TDC still falls under EU regulation in relation to the Government Procurement Agreement (GPA). Hence, TDC must continue to follow the EU Treaty Principles.

An OJEU compliant Framework is a register of suppliers whereby a majority of the procurement has already been conducted by a framework provider (LASER) on behalf of a third party (TDC). This reduces the procurement resource time needed by TDC and provides better economies of scale by being included in a collaborative purchase.

Under the existing framework, TDC procures gas and electricity collectively with Devon local authorities; this enables larger amounts of energy to be purchased on the market to achieve larger economies of scale.

LASER uses a “Purchase in Advance” model to procure gas and electricity meaning that energy is purchased in large blocks up to years in advance; this increases certainty in energy pricing and reduces the risk and impact of volatile energy markets on consumers. As such, and as a result of procuring energy through the LASER framework, TDC pays lower unit costs for gas and electricity than compared with national average energy costs.

2.2 Value for Money

The Retail Energy Price paid by TDC for gas and electricity on a £/kWh basis is made up of two cost groups:

- **Commodity Costs** – This is the *Wholesale Energy Cost* and is determined by the price at which energy suppliers purchase energy on the energy market; the *Wholesale Cost* is subject to volatility due to several factors including oil and gas prices, energy demand and generation availability.
- **Non-Commodity costs** - This includes all third-party costs associated with facilitating the transfer of energy from the point of generation/production to the point of consumption. These costs include transmission and distribution costs, environmental levies, supplier profit margins and government taxes etc. Broadly speaking, Non-Commodity Charges are determined by governments and regulators and often apply on a geographic or national basis; accordingly, all energy consumers pay the same Non-Commodity prices on a per kWh basis.

Given that energy suppliers have little or no influence over Non-Commodity Costs, the competitiveness of a supplier is best demonstrated by the wholesale energy cost, which demonstrates the price at which suppliers can purchase energy in the energy market.

Tables 1 and 2 show the wholesale cost of gas and electricity procured through LASER over the past four years. On Average, electricity was circa 8% cheaper than the average wholesale price and gas was circa 5% cheaper than the average wholesale price. This demonstrates that the existing LASER framework has provided value for money and a cost-saving to TDC.

Table 1: Wholesale Electricity Prices Achieved by TDC with LASER

Period	Achieved Price (£/MWh)	Market Average (£/MWh)	Percentage Difference
Oct 16 to Sept 17	39.65	39.23	1.07%
Oct 17 to Sept 18	41.44	44.46	-6.79%
Oct 18 to Sept 19	46.11	52.04	-11.39%
Oct 19 to Sept 20*	48.62	57.05	-14.77%
Average %			-7.97%

Table 2: Wholesale Gas Prices Achieved by TDC with LASER

Period	Achieved Price (£/therm)	Market Average (£/therm)	Percentage Difference
Oct 16 to Sept 17	37.77	37.08	1.86%
Oct 17 to Sept 18	41.99	45.69	-8.09%
Oct 18 to Sept 19	49.78	54.75	-9.08%
Oct 19 to Sept 20*	59.17	59.17	-4.54%
Average %			-4.96%

2.3 Impact on TDC Resources and Services

LASER provides a valuable service of consolidating TDC's bills from 129 gas and electricity meters into monthly billing summaries. This service is estimated to save TDC £8,000 per year in staff time; TDC does not currently have the staff capacity to carry out this work. Over the past four years, LASER has provided TDC with good customer support and have readily been available to answer energy and billing queries.

3. PROPOSED ENERGY SUPPLY ARRANGEMENTS

LASER has set up a renewed OJEU compliant framework to cover the supply of gas and electricity between 01/10/2020 and 30/09/2024. Under this renewed framework, LASER will remain to act in the same existing capacity as set out in Section 2 and continue to procure energy and provide administrative services for Devon Local authorities.

At the time of writing, with the exception of two local authorities (including TDC), all Devon local authorities on the existing LASER framework have renewed their contracts.

Following the renewal of the LASER framework, Npower would continue to act as TDC's electricity supplier and Total GP would continue to act as TDC's gas supplier. Maintaining TDC's existing

energy suppliers in the new contract period will prevent the need to switch energy meters from one supplier to another supplier, saving TDC time and money.

3.1 Renewable Energy

Preliminary results from the ongoing carbon footprint assessment for TDC local authority show a roughly 60/40 split between electricity and natural gas consumption. Electricity consumption was responsible for circa 720 tonnes of CO₂ equivalent² and natural gas consumption was responsible for circa 500 tonnes of CO₂ equivalent for the financial year 2018/19 and are two key focus areas for reducing carbon emissions.

3.1.1 Electricity

Under Npower's standard tariff, 26% of electricity supplied to TDC will come from renewable energy, with the remaining energy supply being derived from conventional sources; this share of renewable energy will increase over the duration of the contract as the grid decarbonises. As such, it is recognised that the proposed energy supply tariff is not a 100% "Green Energy Tariff".

Following Government approved methodologies for greenhouse gas emissions reporting, companies purchasing electricity on Renewable Energy Guarantee of Origin (REGO) backed "Green Energy Tariffs", can report net-zero emissions for all renewable energy stated on the tariff. (See Appendix A for a description of the REGO mechanism). However, there are many drawbacks to REGO backed "Green Energy Tariffs" as follows:

- REGO backed "Green Energy Tariffs" primarily support existing generation and are ineffective for directly supporting the development of new and "Additional" renewable energy capacity. Therefore, REGO backed "Green Energy Tariffs" have limited ability to incentivise decarbonisation of the energy system.
- REGO certificates aren't always traded hand-in-hand with the green energy they represent and as a result, through purchasing REGO certificates, energy suppliers can "green" their energy mix without purchasing energy from renewable generators. See Appendix A for a diagram showing this effect.
- Purchasing energy on REGO backed "Green Energy Tariffs" effectively intensifies the carbon emissions of energy available on standard tariffs and results in the same net global emissions contribution.

² Equivalent carbon emissions consider the overall impact of seven greenhouse gasses covered by the Kyoto Protocol. These gasses are expressed relative to CO₂, the predominant greenhouse gas, where CO₂ has a global warming potential of 1.

- REGO backed “Green Energy Tariffs” can prevent energy consumers from taking meaningful and proactive steps to becoming more energy-efficient and decarbonising the wider energy system.

For the four reasons mentioned above, there is consensus between TDC and other Devon local authorities that REGO backed “Green Energy Tariffs” are not a credible approach to offsetting emissions from electricity consumption.

Instead of using REGO backed “Green Energy Tariffs” TDC should investigate options for supporting both on-site and off-site renewable energy schemes to reduce electricity consumption from the grid and mitigate any remaining unavoidable emissions from electricity consumption. Examples of how this could be achieved include but are not limited to:

- Installing on-site renewable energy and low carbon generation such as roof-top solar PV.
- Setting up Power Purchase Agreements (Covered in Section 4) to support the development of new large-scale, off-site renewable energy capacity.

3.1.2 Gas

Under the new LASER framework, Total Gas and Power will supply TDC with gas on a standard natural gas tariff.

Renewable Gas Guarantee of Origins (RGGO) have recently become available and operate similarly to REGOs to track the generation and consumption of biogas. Due to the same issues as bullet-pointed in 3.1.1 for REGO backed “Green Energy Tariffs”, RGGO backed gas tariffs are not recommended for TDC as a means for offsetting carbon emissions.

Best practice approaches to reducing or offsetting emissions from natural gas heating will involve:

- Increasing the thermal efficiency of buildings through better insulation and draught proofing to reduce heat losses.
- Replacing natural gas heating systems with low carbon alternatives such as air and ground source heat pumps.

3.2 Value for Money

LASER has proven to provide value for money through delivering energy at prices below the average wholesale market value, as discussed in Section 2.2. At the time of writing, wholesale electricity and

gas prices stand at £37.97/MWh and £31.34/Therm respectively. It is therefore likely that TDC will see reduced energy costs between the current period and the beginning of the new LASER framework, demonstrating continued value for money. Retail energy costs paid by TDC will be confirmed once TDC has signed up to the new framework and once LASER finish procuring gas and electricity on the wholesale market.

4. Devon Energy Collective

As identified in Section 3.1.1, Power Purchase Agreements represent a significant opportunity for offsetting a large share of TDC's carbon emissions from electricity consumption.

One such opportunity will be to enter into a Power Purchase Agreement (PPA), as described in detail in Appendix B, with the Devon Energy Collective, a Devon based not-for-profit organisation. This would directly support the development of new large scale solar energy scheme(s) of up to circa 100 MW in capacity.

In return for TDC's commitments under the PPA, TDC would receive REGO certificates for each unit of energy generation it chooses to back, which in turn can be used as a credible carbon emissions offset for electricity consumption.

The approach of financially supporting "Additional" and new renewable energy capacity will further decarbonise the energy system and is, therefore, a much more effective approach to offsetting carbon emissions when compared to REGO backed "Green Energy Tariffs" provided by traditional energy suppliers.

Entering into a synthetic PPA with a local renewable energy generator would complement TDC under the Preston Model through supporting investment in the local economy.

The Devon Energy Collective is in the early stages of project development and is currently determining the scale of interest from local authorities. To support TDC's engagement in this process, a major recommendation of this report is for the Council to provide the Environmental Protection Manager with the authority to submit a letter of intent to participate in the Devon Energy Collective.

5. Implications, Risk Management & Climate Change Impact

5.1 Financial

The future cost of energy is hard to predict ahead of time. However, as identified in Section 2.2, the existing LASER energy framework has demonstrated value for money by delivering energy below the average wholesale energy price and as a result, we do not anticipate any adverse effects on the current budgets due to renewing the LASER framework.

Bill consolidation services provided by LASER result in a saving of £8,000 per year in staff resources. This equates to a saving of circa £32,000 over the past four years. LASER will continue to provide this benefit, should TDC renew the energy supply framework.

5.2 Legal

The new LASER framework covering 01/10/2020 to 30/09/2024 is an OJEU compliant framework and is compatible with TDC's terms and conditions.

5.3 Risks

TDC's exposure to energy price hikes is mitigated through LASER's "Purchase in Advance" model, which seeks to minimise wholesale energy costs and secure energy prices years in advance. Energy cost increases are further mitigated by TDC's in-house monitoring of electricity and gas consumption and implementation of energy efficiency measures.

The existing LASER framework has demonstrated value for money to TDC by procuring energy below national average wholesale costs. Procuring energy through an alternative supplier or framework may not yield the same cost-saving and will likely increase energy costs and management fees.

There are limited timescales for nominating an alternative to LASER through a new OJEU procurement. As such, there is a significant risk that such a contract will not be awarded on time and will not provide value for money.

If TDC were to sign up to an alternative OJEU approved framework, TDC would lose its aggregated buying power with the Devon Energy Group and will likely be exposed to higher energy costs and delays in resolving billing queries or disputes.

Should TDC not sign up to a framework for the supply of gas and electricity ahead of 30/09/2020, TDC will be liable to pay default rates at an increased cost.

5.4 Environmental/Climate Change Impact

Electricity and gas consumption are recognised to have a significant impact on TDC’s carbon footprint, as identified in Section 3.1. The recommendation to renew the LASER framework for the supply of gas and electricity was made with full consideration of TDC’s ambition of becoming carbon neutral by 2025. The following provides a summary of key points discussed in sections 2 to 4 regarding the impact of renewing the LASER framework on climate change:

- Committing to the new LASER framework will not preclude TDC from being able to reduce and offset carbon emissions through on and off-site renewable and low carbon energy schemes.
- Sourcing gas and electricity on standard tariffs under the new LASER framework as opposed to alternative “Green Energy Tariffs” will not increase TDC’s carbon emissions or result in a net change in carbon emissions globally.
- The best practice options for reducing carbon emissions from electricity and gas consumption will remain to include and not be limited to:
 - Implementing energy efficiency measures, installing renewable energy on-site and entering into Power Purchase Agreements with off-site renewable energy schemes.
 - Increasing the thermal efficiency of buildings and replacing natural gas boilers with low carbon heating systems such as air and ground source heat pumps.
- Renewal of the LASER framework will save TDC money through reduced energy costs and reduced staff resources. Saved time and money can be used to support energy efficiency and emissions mitigation projects.

6. ALTERNATIVE OPTIONS

6.1 Nominating an Alternative Energy Supplier by Conducting an OJEU Procurement

This option would involve a full OJEU approved tender process and would be open to utility suppliers and brokers. The process could take up to 34 weeks, as shown in Appendix C, resulting in the delivery date exceeding the existing contract period. As such, there is a significant risk of not awarding a suitable contract on time.

Advantages:

- Allows all organisations both public and private to bid providing greater competition and opportunities in delivering savings and innovation.

Disadvantages:

- There is a high risk that a contract will not be awarded on time ahead of the existing framework expiry date.
- Firm energy pricing will not be available until TDC receives tenders from energy suppliers and brokers leaving TDC exposed to uncertainty.
- Delegated authority may need to be given to the private company (if successful) to purchase energy on TDC's behalf. TDC will need to be comfortable with providing this.
- There is limited governance on utility brokers compared to PBOs & regulated energy companies.
- Brokers will apply a profit margin to energy bills and will need to transact with a regulated energy company who in turn will apply management fees.
- Appointing a broker can involve extended times in resolution of account management queries.
- Pricing transparency with multiple suppliers for gas and electricity is often difficult to obtain and monitor.
- TDC staff resources will be required to undertake the procurement process and switch energy meters from one supplier to another.

TDC carried out a preliminary assessment of procuring energy from private sector energy suppliers. Due to the complex metering structure of TDC's gas and electricity supply, which is made up of 129 half-hourly and non-half hourly gas and electricity meters, it was not possible to achieve firm energy prices ahead of a formal tender procurement process.

Ecotricity was unable to provide an electricity tariff for any site with a metered demand above 100,000 kWh per year of electricity; TDC owns six sites with half-hourly metering exceeding this threshold.

Good Energy was unable to provide a gas tariff for any site with Automatic Meter Reading (AMR) gas meters. As such, separate energy providers will be required to cover both gas and electricity utilities, which will increase billing complexity and TDC staff resources.

TDC was provided with indicative costs from Green Energy UK for half-hourly metered sites, which represents the majority of TDC gas and electricity consumption. Under this tariff, electricity costs would increase by 2% and gas costs would increase by 39% relative to current LASER energy pricing, as shown in Table 3. This equates to a cumulative cost increase of £173,600 over the next four years; such an increase in operational costs is not deemed viable.

Table 3: Indicative Costs under an Alternative Energy Supplier

	Electricity Costs	Gas Costs
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Provider	Day Rate (£/kWh)	Night Rate (£/kWh)	Estimated total annual Cost	Unit Rate (£/kWh)	Estimated total annual Cost
Green Energy UK	0.159	0.129	£331,600	0.044	£111,700
Current LASER Costs	0.158	0.118	£323,600	0.027	£68,300
Increase in Costs/Annum	0.001	0.011	£8,000 (+2%)	0.017	£43,400 (+39%)

6.2 Adopting an Alternative Existing Public Buying Organisation Framework

Several alternative OJEU approved frameworks exist, including Crown Commercial Services (CCS), Yorkshire Purchasing Organisation (YPO), Eastern Shires Purchasing Organisation (ESPO) and the Energy Consortium (TEC).

Switching to an alternative PBO would involve switching suppliers for gas, electricity or both, which will require increased TDC resources. TDC may also lose the good customer service and bill consolidation services currently provided by LASER,

Firm energy prices from an alternative PBO to LASER will remain unknown until TDC shows a real commitment to entering into an agreement. As such, there is uncertainty in the cost-benefit of switching from LASER to another PBO. It is understood that alternative PBOs will charge higher management fees, and as such, may not provide the same value for money.

Advantages:

- Using a PBO framework would be OJEU compliant without TDC having to run a further procurement process; this will save TDC staff resources.
- TDC could have the ability to implement a bespoke set of terms and conditions.
- PBO would have been through an OJEU compliant competitive process to demonstrate value for money.
- Mutual public sector interest in supporting public bodies.
- Profits are reinvested within the Public Sector.
- Energy volumes aggregated to give better purchasing volumes.

Disadvantages:

- There is a risk that an alternative PBO to LASER will not provide the same high level of service and benefit to TDC.
- Firm energy pricing will not be available until TDC shows commitment to an alternative PBO framework, leaving TDC exposed to financial uncertainty.

- Other frameworks may not have the same aggregated buying power and result in increased energy costs.
- TDC staff resources will be required to research potential PBO frameworks and switch energy meters from one supplier to another.
- Opting out of the LASER framework renewal will reduce the benefits received by Devon local authorities.
- Not all frameworks will be suitable for Local Authorities with large numbers of non-half hourly metering and low consumption levels resulting in increased energy costs.

7. CONCLUSION

The existing LASER energy framework has proven to provide value for money over the past four years and has enabled TDC to procure gas and electricity at levels below the average wholesale market price.

LASER has provided the valuable service of consolidating energy bills and reducing the requirements on TDC staff resources. They have also provided good customer support regarding energy and billing queries.

Conducting a full OJEU compliant procurement process to appoint an alternative energy supplier or broker will reduce TDC's buying power and likely result in increased energy costs and supplier management fees; the time required to conduct this process will exceed the existing contract expiry date.

Using an alternative PBO framework has also been considered. However, uncertainty in the cost of energy procured through an alternative PBO and increases in management fees means this option is less attractive than renewing the LASER energy contract.

The Devon Energy Collective would be able to run in parallel with any energy supply contract and offers a significant opportunity for TDC to mitigate carbon emissions from electricity consumption.

The recommendations of this report are therefore to:

- Provide the Environmental Protection Manager, in consultation with the relevant portfolio holder(s), the authority to renew the LASER energy framework covering the purchase of gas and electricity between 01/10/2020 and 30/09/2024; and
- Provide the Environmental Protection Manager with the authority to submit a letter of intent to participate in the Devon Energy Collective.

APPENDIX A – RENEWABLE ENERGY GUARANTEES OF ORIGIN

REGO certificates are used to track the quantity of renewable energy available on the energy market. Ofgem awards one REGO certificate to a renewable energy generator for each megawatt-hour of electricity generated.

Energy suppliers procure energy on the Energy Market and can separately procure REGO certificates to demonstrate the “renewable” share of their energy mix; energy procured by energy suppliers is then sold to final energy consumers (such as TDC) in a range of energy tariffs.

The amount of renewable energy generated and the number of corresponding REGO certificates available within one given period is finite. On this basis, allocating REGOs to “Green Energy Tariffs” effectively increase the carbon emissions of standard energy tariffs. Accordingly, the overall global balance in carbon emissions remains the same; this effect is shown in Figure 1 below.

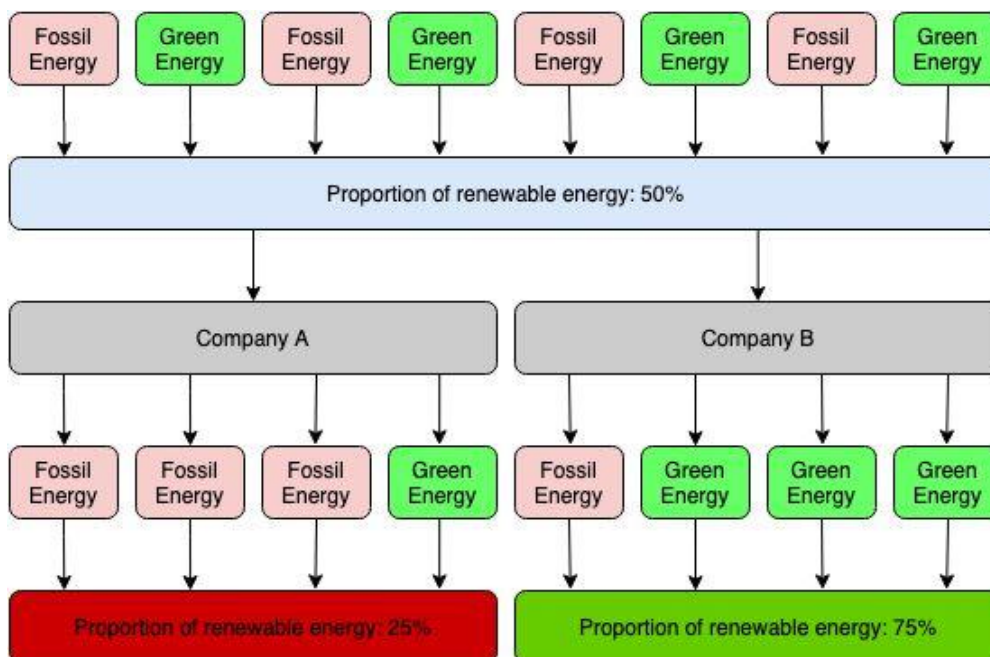


Figure 1: Energy Supply Mix

APPENDIX B: SYNTHETIC POWER PURCHASE AGREEMENTS

A Synthetic Power Purchase Agreement (PPA) is a leading option for TDC to offset carbon emissions from electricity consumption. It is a financial mechanism which bears similarity to the Contracts for Difference mechanism used to support the development of new and “Additional” large-scale renewable energy projects.

Through entering into a Synthetic PPA with a renewable energy developer, TDC could make a direct and measurable contribution towards supporting additional renewable energy capacity in Devon and in return, will have a credible means of offsetting electricity carbon emissions. The mechanism would run in parallel and separately to any energy supply framework and as such, will not impact on current or future energy supply framework decisions.

Renewable energy projects are capital intensive and rely on access to finance. Energy price volatility is a significant barrier to renewable energy developers gaining access to affordable finance since generators cannot be sure about how much revenue they can generate in the energy market. Synthetic PPAs overcome this barrier and as a result, are increasing in popularity as an instrument for eliminating the risk of energy price volatility to renewable energy generators and energy consumers.

Mechanism Overview

The most common form of a Synthetic PPA is a two-way agreement between a renewable energy generator and an energy consumer (e.g. TDC). The following bullet points and flow diagram (shown in Figure 2 overleaf) provide an overview of how the mechanism works:

- The energy generator and energy consumer (TDC) agree on a strike price (in £/MWh) which represents the minimum amount a generator will receive for energy generation.
- When the market price for energy is less than the strike price, the energy consumer (TDC) will pay the generator the difference between the market price and the strike price.
- When the market price for energy exceeds the strike price, the generator pays the difference between the strike price and the market price to the energy consumer (TDC).
- The generator supplies REGO certificates directly to the energy consumer (TDC), which can be used to offset carbon emissions.

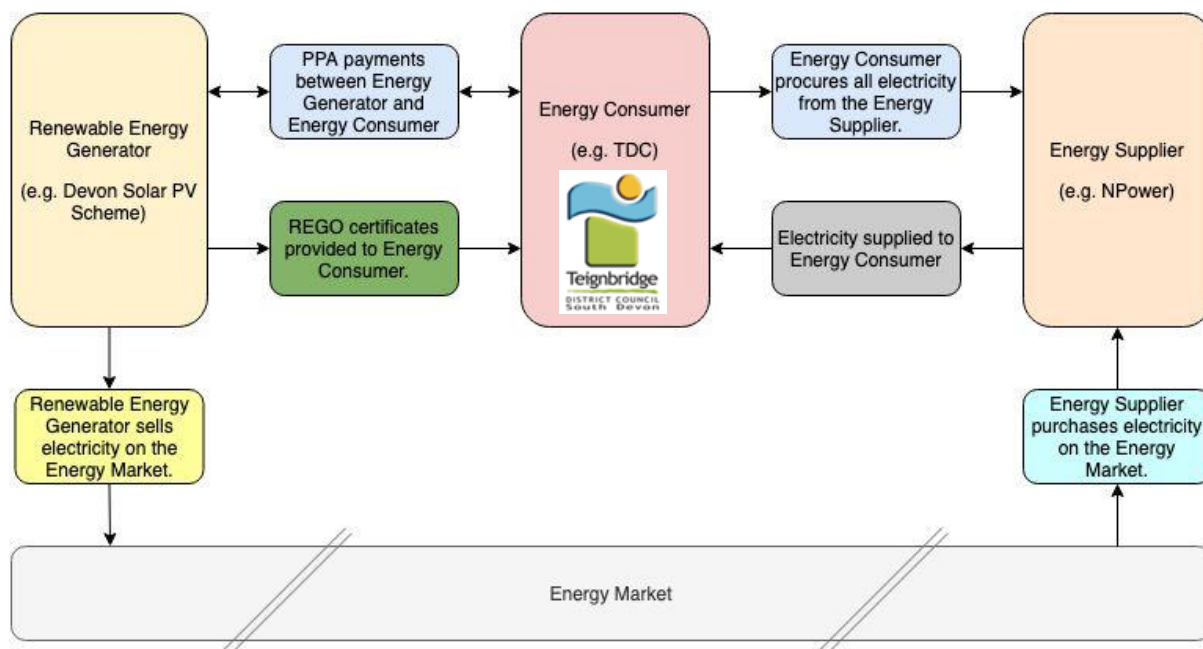


Figure 2: Synthetic PPA energy supply mechanism

To demonstrate the operation of a synthetic PPA over the course of one year, the following bullet points and Figure 3 below show three possible scenarios based on the market price of electricity:

- Scenario 1 is based on a low energy market price and results in TDC paying a top-up price to the generator.
- Scenario 2 is a cost-neutral scenario, where the energy market price matches the strike price and hence, no payments are made between the generator and TDC.
- Scenario 3 is based on a high energy market price and results in the generator paying the difference between the market price and the strike price to TDC.

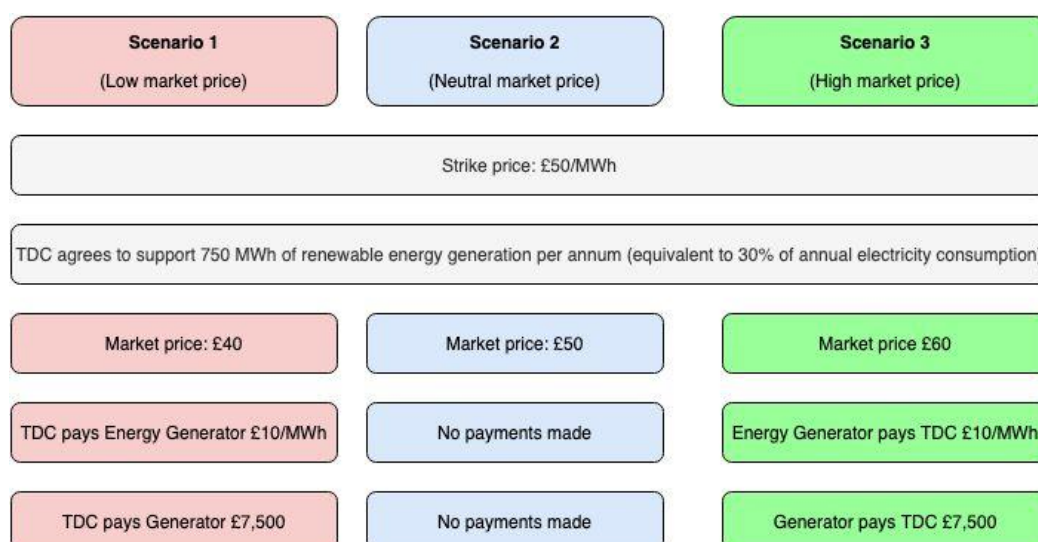


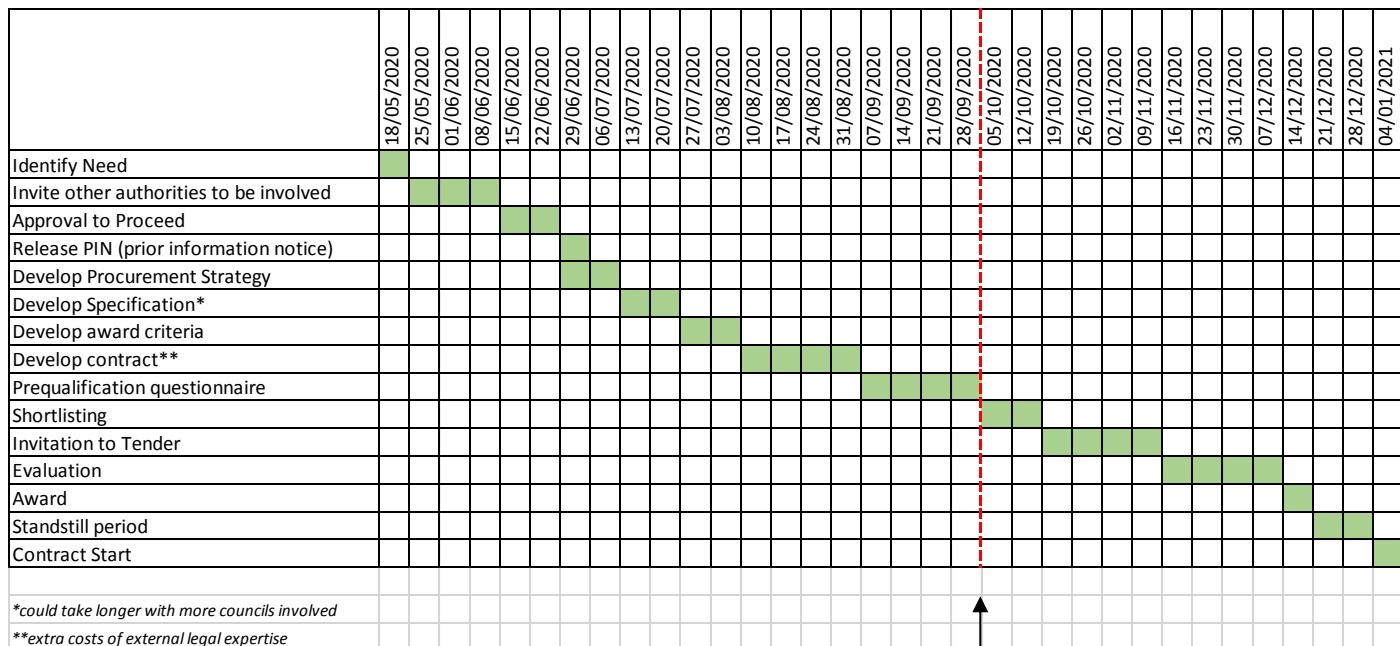
Figure 3: Payment scenarios under a Synthetic PPA

Due to escalating energy costs, a likely scenario would involve TDC making payments to the generator for the first few years (e.g. zero to five years) of operation until the market price exceeds the strike price, from which point the generator will make payments to TDC for the remainder of the contract duration (e.g. 15 years or more). There is, therefore, some risk that TDC will be exposed to

making payments to the generator if the market price remains less than the strike price for extended periods. However, under the likely scenario, by entering into a Synthetic PPA, TDC will gain credible carbon emissions offsets, become insulated from increasing energy prices and develop an income from PPA payments. Further work will be required to determine the level of risk associated with entering into a PPA.

Appendix C: OJEU COMPLIANT PROCUREMENT TIMEFRAME

The following diagram shows an indicative timeframe for running an OJEU approved procurement process to secure an alternative energy supplier.



Existing LASER framework expiry.