Cabinet – 5 February 2014

Electricity Supply Contract Strategy for all Council Owned Buildings, Public Lighting and Traffic Signals from 1 April 2015 – 31 March 2019

Portfolio: Councillor A Andrew, Deputy Leader, Regeneration & Transport

Service Area: Regeneration & Neighbourhoods

Wards: All Wards

Key decision: Yes

Forward Plan: Yes

1. Summary of Report

1.1 The Council's current flexible purchasing electricity supply framework contract for council owned buildings, traffic signals and public lighting contracted through Yorkshire Purchasing Organisation ("YPO") expires on the 31 March 2015.

1.2 Flexible purchasing contracts involve YPO (the buyer) purchasing tranches of energy (depending on market conditions) on behalf of the consortium members before the contract start period at a fixed price for the contracted supply period.

1.3 The implementation of the proposed Electricity Market Reform (EMR) is forecasted to see our annual electricity cost of £5.163 million (FY13/14) increase to about £7.76 million (50%) between 2014 and 2020.

2. Recommendations

Cabinet is recommended to:-

2.1 delegate authority to the Executive Director - Regeneration in consultation with the Portfolio Holder for Regeneration:

2.1a to enter into an agreement with the Yorkshire Purchasing Organisation ("YPO") to access the YPO flexible purchasing 4-year framework contract for electricity and

2.1.b to contract with the preferred supplier, Npower, for the period from 1 April 2015 – 31 March 2019 and to sign or authorise sealing of any deeds, contracts and other related documents within the existing budget.

2.2 note the impending increase in electricity costs due to the introduction of the Electricity Market Reform (EMR) and the actions being taken to mitigate against this rise.

3. Report detail

3.1 The Council currently owns approximately 300 sites, 30,000 public lights, illuminated signs and traffic signals throughout the borough to which electricity supplies are required.

3.2 The Council's building stock are classed as metered supplies whilst traffic signals, public lighting, illuminated signs and bollards are unmetered supplies.

3.3 The management of the unmetered electricity supply for the public lighting contract is provided through a PFI contract signed in March 2002. The supply contract is between the PFI Contractor (Walsall Public Lighting Ltd) and the energy supplier. This was procured through a market testing procedure which at the time found the YPO consortium provided value and services. In 2010 the arrangements were changed such that the supply contract was made directly between Npower and the Council.

3.4 Also, the management of the metered electricity supplies to Council-owned buildings including schools are provided by Property Services and procured from Yorkshire Purchasing Organisation (YPO). In November 2007, cabinet approved the report produced by Property Services engaging the services provided by YPO. A further report was submitted to Cabinet on the 11 September 2013 and authority was given to extend the agreement with YPO to access the YPO flexible purchasing electricity framework contract and contract with the preferred supplier Npower from 1 November 2014 to 31 March 2015

3.5 Procuring both metered and unmetered supplies enhances the benefit of bulk buying. The Council's metered and unmetered supply contract and periods are both similar.

3.6 YPO as a contracting authority and a member of the Pro5 Group representing five of the largest professional buying organisations in the UK has in place over 100 best value fully compliant framework contracts covering a diverse range of services for the supply of goods and services including energy on behalf of local authorities, education establishments and the wider public and third sectors at competitive prices. The Pro 5 Group members are:

- Central Buying Consortium (CBC)
- Eastern Shires Purchasing Organisation (ESPO)
- North Eastern Purchasing Organisation (NEPO)
- West Mercia Supplies (WMS)
- Yorkshire Purchasing Organisation (YPO)

3.7 YPO is a not-for-profit organisation that provide its services free of charge to their portfolio of customers across the country. This includes schools, academies, colleges and universities in addition to local government authorities, charities, social enterprises, and the emergency services. YPO have the experience of working in conjunction with the UK's principal Buying Organisations, the Government Procurement Service on Central and Local Government contracts, providing a ready platform for obtaining competitive tenders from major energy suppliers through electronic bidding processes.

3.8 YPO have recently completed a competitive tender process, which was published in the Official Journal of the European Union (OJEU) and appeared under Contract Notice 2013/S 041-065763on the 27 February 2013. The tender process invited competing bids from OFGEM registered electricity suppliers to enable an award to be made to the successful tenderer.

3.9 Seven suppliers submitted Pre Qualification Questionnaires (PQQs) and all met the requirements. All were subsequently invited to tender and the five suppliers that submitted tenders were British Gas, EDF, Npower, Scottish Power and Scottish and Southern Energy.

3.10 Following the publication of the requisite PIN notice in OJEU journal YPO invited all consortia members, including Walsall Council to enter into a supply framework contract with Npower for a period of 48 months from 1 April 2015 to 31 March 2019 inclusive.

3.11 Electricity Market Reform (EMR)

3.11.1 The Energy Bill is due to receive Royal Assent in December 2013 and then becomes law. This will see the introduction of the Electricity Market Reform (EMR), leading to significant wholesale electricity market price increases - more than at any time since deregulation in 1994.

3.11.2 EMR will increase costs to the Council's energy bills, which will have an impact on budgets, because of the major reform it's driving i.e. the transition to low carbon generation will require huge investment in new energy infrastructure and financial support.

3.12. **Impact of the Electricity Market Reform**

3.12.1 The impact of the Electricity Market Reform means additional taxes will be applied to the electricity contract prices in the form of Feed in Tariffs with Contracts for Difference, Capacity Market, The Carbon Floor Price, Emission Performance Standard (See Appendix1).

3.12.2 The introduction of the electricity market reform would see wholesale cost of electricity increase by 50% between 2014 and 2020.

3.13 Options considered for mitigating against increase in electricity costs

3.13.1 Although the future does indicate increasingly higher electricity prices, we can attempt to soften the impact by reducing our energy consumption and cost across the Council's property portfolio by exploring initiatives such as **triad demand management and generation services**, **combined heat and power**, and building-mounted **solar photovoltaic panels**.

3.14. Triad Management (Demand Reduction Periods to Optimise Electricity Costs)

3.14.1 Triad demand measures the average maximum electricity demand at the three highest peaks in any winter period (November to February). These peak half-

hour periods are known as ‘triad periods’. By reducing demand during these peaks, we will reduce our triad charges proportionally. Triad periods typically occur between 4.00pm and 7.00pm from Monday to Friday during the cold weather.

3.14.2 This is a means for National Grid to recover its transmission charges, and to impose an incentive on users to minimize consumption at peak periods, thereby easing the need for investment in the network system. These charges are known as Transmission Network Use of System charges (TUoS).

3.14.3 Triad charges are only applicable to half-hourly metered sites. Alerts are sent from the electricity supplier advising us to reduce load at peak periods; this is often done by switching from metered electricity to stand-by diesel generators.

3.14.4 Also, other initiatives such as increased efficiency use of energy in Council owned buildings through the turn down of air-conditioning, heating, lighting and non-essential power for short periods of time including changing staff working times during the triad periods will reduce peak demand and make a significant contribution to reducing our overall electricity consumption.

3.15. Combined Heat and Power (CHP)

3.15.1 A scoping study to evaluate the feasibility of installing a Centralised District Energy Scheme incorporating CHP within the Civic Quarters to provide district heating, chilled water for air conditioning purposes and electricity to the buildings highlighted below:

- Council House/Town Hall;
- Civic Centre;
- Gala Swimming Baths.

3.15.2 The CHP engine shall meet part of the heat and electricity demands of these buildings.

The estimated cost to implement this scheme is in the region of £2m.

3.16. Solar Photovoltaic (PV) Technology

3.16.1 The Council should seek to reduce its electricity consumption by generating high quality, reliable, renewable electrical power provided by Solar Photovoltaic (solar PV) Panel technology to at least a minimum of 10% of its non-housing properties. Solar PV will offset daytime electricity demands from the grid and reduce the Council’s electricity costs.
There are various options available including roof integrated PV tiles, which are not only aesthetically pleasing but also act as a replacement to roof tiles and can be easily installed for roof replacement schemes.

3.16.2 Specific details about the installations (location, size, cost, benefits, capacity for energy generation) are not yet available and would be subject to a detailed feasibility study.

3.16.3 The following worked examples have been provided to demonstrate how the costs will be recovered and revenue generated.

Solar PV installation indicating potential costs and savings

Size	Cost (£)	Consumption Savings (kWh)	Cost Savings (£)	Revenue (£)	Total Annual Financial Benefit (£)	Estimated Payback Period
System size in kWp	Estimated Installation Cost of System	Estimated Annual Electricity Savings	Estimated Annual Electricity Savings @ 13p/kWh (using 100% energy generated)	Estimated Feed-in-Tariff on all Generated Electricity @ 14p/kWh incl. export tariff	Estimated Savings + Revenue	Years
4	**5,200**	**3,434**	**446**	**557**	**1,003**	**5.18**
10	**11,880**	**8,585**	**1,116**	**1,394**	**2,510**	**4.73**
20	**20,500**	**17,170**	**2,232**	**2,403**	**4,635**	**4.42**

3.16.4 Potential solar pv programme of 30 installations and timescales required for the technology to realise its return on capital investment. The Feed-in-Tariff guarantees payment for energy generation for 25 years, therefore by Year 5, in this model, over £90,000 in annual benefit is generated.

Illustrative model for 30 installations

Initial cost to install 7 small, 10 medium and 13 large solar PV systems	Annual Financial Benefit for 25 years (Estimated Savings + Revenue)
£421,700	£92,376
Payback Period of 4.57 years with 20 years of revenue to follow	

It is important to bear in mind electricity prices will increase over time, leading to increased financial savings.

3.17. Flexible procurement contracts

3.17.1 The Pan-Government Energy Project (part of the Cabinet Office) recommends that all public sector organisations adopt aggregated, flexible and risk-managed energy procurement, and develop best practice recommendations for energy procurement in consultation with public sector buying organisations.

3.17.2 In March 2010 to mitigate against the extremely volatile energy market, CMT approved aggregated, fixed/flexible and risk-managed energy procurement as the compliant procurement route offering best value for the Council.

3.17.3 Flexible purchasing allows the price of energy to be fixed over a number of trades on the wholesale market. The benefits of flexible purchasing are:

- Transparency of costs that make up the delivered price of energy
- Focus on controllable energy cost element
- Purchasing conducted in real time
- No long- term price lock in
- Reduced forward risk premium

- Responsive to market trends

3.17.4 It is a long-term strategy for which prices will be determined by the aggregated price of the multiple trades under the new four-year framework agreement commencing 1 April 2015 to 31 March 2019 inclusive. The actual price for each 12-month supply period is arrived at prior to the start of the contract period.

3.18. Procurement Options Considered

The energy market is significantly different to other commodities. The complexity of procuring energy cannot be achieved through traditional procurement methods. The volatility of such a market means all energy contracts are risk averse and purchasing decisions have to be made on the way the risk is managed.

The risk is managed by flexible purchasing of electricity throughout the year. Greater flexibility in energy contracts allows for options to mitigate and control risks.

The following contracts' options are to be considered:

3.18.1 **Fixed Price Contracts**

Fixed Price Contracts was the strategy used by the Council prior to 1 November 2010. Through this type of contract the Council purchased its total electricity requirements on one day when market conditions were deemed favourable. Under this model we go to the market between three and six months in advance of the contract start date.

Fixed price contracts are not cost-competitive with the current approach and is therefore not recommended.

3.18.2 **Fixed/Flexible Contracts in Advance of Supply Period (Current Approach)**

This is a flexible purchasing contract with fixed prices for one year, whereby YPO will purchase the Council's electricity requirements over several transactions. The Council will be notified of the electricity price for the full 12 months of each contract year. This is possible as energy is bought a year in advance on a flexible buying option.

This is the current procurement approach as it reduces the Council's risk in a volatile energy market and is subjected to Cabinet approval.

3.18.3 **Do Nothing**

A decision not to enter into new electricity contracts would render the Council to be charged non-competitive 'out of contract' or 'deemed' tariff rates. These contract rates are the most expensive in the industry and would have a detrimental financial effect on the Council.

4. Council priorities

4.1 Property Services in conjunction with Procurement and Public Lighting will facilitate greater purchasing power to obtain optimum energy cost savings. Putting customer needs at the centre of our service delivery is outlined in the Corporate Plan and complies with European competition rules.

4.2 The new YPO framework agreement proposals will be submitted to Cabinet to ensure fit for purpose continuity of supply at the end of the current contracted arrangements.

5. Risk management

5.1 The recommended approach is to continue with the current flexible procurement strategy due to the extremely volatile energy market seeing significant variation in prices on a daily basis. Should this option not be acceptable, the alternative is to initiate a tender process reverting to a fixed price procurement strategy from 1 April 2015.

5.1a Risk associated with this proposal

Risk	Mitigation	Risk Rating
Reduction in electricity consumption due to schools gaining academy status and withdrawing from the Council's energy contract	The contract will allow flexibility on consumption.	Amber
Reduction in the non-education property portfolio and		
Increase in consumption for public lighting and traffic signals due to growth		

5.1b Risk associated with not undertaking the proposal

Risk	Risk Rating
The risk of reverting to fixed price contracts or doing nothing is documented in the report (paragraphs 7.2 and 7.4).	Red

5.1c Risk of initiating tender process

Risk	Risk Rating
The council initiating its own tender would be exposed to potentially inflated market prices because of the low volume to be purchased compared to bulk buying with other consortia members.	Red

5.1d Risk of not approving proposals

Risk	Risk Rating
If no contract arrangements are in place by 31 March 2014, the Council would not meet its statutory obligations, disruption to the delivery of services and breach of Public Lighting PFI contract terms	Red

6. Financial implications

6.1 The energy supply market continues to be extremely volatile, and estimates of future prices shall continue to be provided to Financial Services. Property Services and Public Lighting shall advise Financial Services of the actual electricity costs prior to the start of each contract period commencing 1 April 2015.

6.2 Forecast Increase in Electricity Costs

Based on average electricity price

Contract Period	Electricity prices	Effect of EMR	Service	Consump-tion	Electricity Unit Price (p/kWh)	Forecast Annual Budget
2013/14	Average Price	n/a	Property portfolio including education	35,731,462 kWh	10.316	£3.686m
			Traffic Signals	1,019,877 kWh		£105,000
			Public Lighting	15 GWh		£1.5m
					Sub total	**5,291,000**
2014/15	Estimated Price	n/a	Property portfolio including education	36,803,405 KWh	11.000	£3,796m
			Traffic Signals	1,006,480 kWh		£110,712
			Public Lighting	15 GWh		£1.65m
					Sub total	**5,556,712**
2015-20	Estimated Price with Additional taxes*		Property portfolio including education	36,803,405 kWh	16.500	£3,796m
			Traffic Signals	1,006,480 kWh		£116,069
			Public Lighting	15.1 GWh		£2.49m

Although 2014-15 budgets have not been approved at the time of this report, increases have been applied which should cover the estimated costs for 2014-15.

6.3 When the effects of EMR from 2015 comes into force the additional estimated taxes provided by Npower are as follows. These estimates are subject to increase.

Effect of EMR	Electricity Unit Price (p/kWh
*FiT Contracts for Difference	1.000
*Capacity Market	1.500
*Carbon Floor Price	3.000
Estimated total	**5.500**

7. Legal implications

7.1 The Council's Legal Services will advise on all relevant documentation regarding Yorkshire Purchasing Organisation framework contract agreement.

7.2 Any award of new contracts will need to be in compliance with the Public Contract Regulations 2006 (as amended) (if applicable) and Walsall Council's Contract Rules 2010.

8. Property implications

8.1 The continued work of Property Services will enable the delivery of electricity supplies to Council buildings. The PFI project agreement for Public Lighting will continue to deliver the electricity supplies to all Council public lighting, illuminated signs and bollards.

9. Health and well being implications

9.1 None

10. Staffing implications

10.1 None

11. Equality Implications

11.1 None

12. Consultation

12.1 Normal process has been followed for internal consultation.

Background Papers

Appendix 1 – Electricity Market Reform

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July 2013: Electricity Market Reform: FAQs

1. What is the Electricity Market Reform (EMR)?

The government is pursuing EMR to prepare the UK's generation market for the future, as existing fossil fuel plant goes offline and we have to work to tighter targets to reduce our carbon emissions. A key aspect of this is creating a market which will attract more than £100-billion of investment in the new electricity infrastructure we require in this decade alone. The aim of EMR is to create a legislative framework which will deliver a low-carbon, secure and affordable energy supply via a diverse portfolio of generation sources.

2. What are the key elements of EMR?

Through the EMR, two key mechanisms will be introduced that will directly impact customers:

• **Feed-in Tariffs with Contracts for Difference (CfD)** – this will pay a minimum agreed price for low-carbon generation, providing greater certainty to those investing in new technologies. It will run alongside then replace the Renewables Obligation from April 2017.
• A **Capacity Market (CM)** – this will take the form of an auction to secure reliable supply (or demand reduction – see below) up to four years in advance. Auctions are due to start in 2014 to secure capacity in 2018.

***You can find out more about the CfD and Capacity Mechanisms here:*
http://www.npower.com/idc/groups/wcms_content/@wcms/@corp/@iac/documents/digitalassets/emr_customer_pack.pdf

These mechanisms will be supported by:
• The **Carbon Price Floor (CPF)** – a tax in place since April 2013, to guarantee a minimum price for carbon emissions within wholesale prices.
• An **Emissions Performance Standard (EPS)** – a regulatory measure which limits emissions from new fossil fuel power stations from Autumn 2013 (it essentially rules out building any more coal-fired power stations, unless fitted with Carbon Capture and Storage technology.

• **Electricity Demand Reduction (EDR)** – incentives to support the efficient use of electricity among consumers (see question 5 below for more detail). The government estimates encouraging greater energy efficiency in Britain has the potential to save £56,400 per year on the energy bills of the average large business, and provide £1.9 billion benefits to the UK as a whole.

3. When will EMR be finalised?

The Energy Bill, which sets out the key mechanisms of EMR, is on track to be made law in December 2013. However, it is a framework bill – much of the actual detail is still to be worked out, which is why consultations are ongoing currently to determine the best way to apply the principles of each mechanism

in practice, and secondary legislation will then follow in 2014. The exception is the Carbon Price Floor, which is a tax on carbon emissions, and this has been operating since April 2013.

4. What will the impact of EMR be for business customers?
EMR will add costs to energy bills because the major reform it's driving – ie the transition to low-carbon generation, requiring huge investment in new energy infrastructure – will need financial support.

Although much of the actual detail is still to be worked out, the npower EMR team is working closely with DECC to analyse information as it becomes available. Our current estimates are as follows:

• Contracts for Difference are forecast to add £5-10 per megawatt hour by 2020. This is expected to appear as a separate line item on bills for I&C customers, similar to Renewables Obligation and Feed in Tariff. While the government has already published some draft strike prices (ie an indication of the minimum costs low-carbon generators can expect for each megawatt of power generated), there is still a lot of other detail to finalise, so a tighter estimate is not yet possible.
• The Capacity Market is expected to eventually reduce wholesale prices because it will help to smooth out the peaks that occur in the market when capacity is tight, but the cost of securing capacity this way is likely to add as much as £15 extra per megawatt hour by 2018. Again, this cost is anticipated to be charged as a separate bill item.
• The Carbon Price Floor is already operational, and adds £4.94 per tonne of carbon for 2013 (which equates to around a £2 per megawatt hour cost to consumers, paid within wholesale prices), rising to £9.55 per tonne of carbon in 2014 and then £18.08 in 2015 – with smaller annual increases anticipated thereafter until it's reviewed in 2020.
• The Emissions Performance Standard (EPS) will not result in any direct cost to consumers.

5. Will EMR provide any positive opportunities for businesses?
Electricity Demand Reduction (EDR) will provide incentives for businesses who can reduce their energy consumption, either via permanent energy efficiency measures or via demand reduction at key times. The latter will enable large organisations to participate in the Capacity Market if they are able to agree to reduce demand when asked to do so – either by halting activity or by switching to on-site generation, much in the same way that npower's SmartSTOR product currently works.

6. What are the key timeframes for EMR?
• A draft EMR delivery plan, with details of the costs involved, was released in mid July for consultation, with the final EMR delivery plan expected by the end of 2013.

• In December 2013, the Energy Bill should receive Royal Assent, meaning it then becomes law.
• In mid 2014, the first allocation of Contracts for Difference will be available (although it will run alongside the Renewables Obligation initially, with the RO phased out by 2017).
• In 2014, the first Capacity Market auction will be held to secure capacity for 2018/19.
It's worth noting that Contracts for Difference and the Capacity Market are both subject to State Aid approval before they can definitely go ahead.

7. Will there be any exemptions for businesses?
Compensation has recently (June 2013) been approved for energy-intensive businesses in certain chemical, mining, metal and plastics manufacturing and other industries for the cost of the EU Emissions Trading System. While this is a Europe-wide tax on carbon and is therefore outside of the legislation being introduced as part of the UK's EMR, it still has an impact on the cost of energy. The criteria for eligibility is also the same as that for forthcoming compensation to offset the costs of Carbon Price Support (the tax from the Carbon Price Floor measure). Eligibility for both is two-fold – a business must belong certain industry classifications and then demonstrate that their carbon costs will exceed 5% gross value added (an economic measure of cost of output) in 2020. State aid approval for Carbon Price Support compensation is expected later in 2013.
A consultation on exempting certain businesses from the cost of Contracts for Difference (CfD) is currently underway and closes at the end of August 2013. Eligibility is likely to centre on those organisations who are energy intensive and/or trade intensive and could mirror criteria already offered for the EU ETS and Carbon Price Floor. The difference here though is that by offering an exemption – rather than compensation – the overall cost will be higher for those consumers who aren't eligible. npower is collating feedback during July and August 2013 on the options currently being considered for CfD exemptions to submit to government policy makers – visit our customer pack below for more information and to submit your views.
http://www.npower.com/idc/groups/wcms_content/@wcms/@corp/documents/digitalassets/exemption_customer_pack.pdf