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Large Scale Renewable Energy Systems.

Flintshires Carbon Reduction Strategy

Target: 60% reduction between 2007 and 2021

Four Elements:

- **Good practice**
- **Technical fixes**
- **Building Rationalisation**
- **Renewables**

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- **Achievements:**

- **20% reduction to date, primarily through good housekeeping and investment in technical fixes e.g. new lighting, heating controls, insulation etc etc.**

- **BUT: A Carbon Trust progress report identified that we would not achieve our Carbon Target without significant generation from large scale Renewable Energy systems**

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Flintshire's "Hopes and aspirations "

- **Generate significant proportion of our consumed electricity, in order to :**

- **Reduce energy supply/inflation risks to the County**
- **Reduce revenue costs**
- **Generate income from FITs/ROC's etc**
- **To ultimately be able to supply tenants, (housing and commercial) at favourable rates to reduce domestic fuel poverty and encourage commerce.**

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Flintshires “Hopes and aspirations “

Identified 5 possible P.V solar farms-

- **Three on former landfill sites, two of which also currently generate from landfill gas.**
- **Potential generation capacity of these sites, range between 500KWp and 5MWp.**
- **About to develop a 10 year Renewable (and Environmentally sustainable) Energy Action plan**
- **Also in the process of developing specifications etc, to go out to tender ….. aim to complete some prior to any change in FIT’s /ROC’s.**

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Some “Common” Terms

Sleeving …

- What is it and how might it help ?
- who has done it ?

Private Wire ..

literally your own “cable” from the point of generation to your own or third party building.

Balancing…

The process required to match the exported energy from your renewable scheme, to the imported energy at your site(s)… carries a risk to your supplier and a cost to you !

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But this is where it gets more difficult……

Flintshire as a partner in the APSE initiative, put forward a 5MWp site along with 10 various English L.A. sites in a Private Sector Joint venture exercise.

Flintshire identify the site and a third party develops the solar farm…no cost or risk to Flintshire

The offers were evaluated by APSE and on initial inspection looked very interesting… but the deeper I looked into the figures the less convinced I became …..why ?

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Quite low ground rent circa £750 to £1000/acre (approx. 25 acres for a 5MWp solar farm)

……Or circa 5% of gross revenue

Offer of Power Purchase Agreement (PPA) at 5.8 p/kwh

But what does this PPA offer mean….

1. **Its more expensive than wholesale electricity**
2. **complex multi partner agreements req'd**
3. **……and we cannot complete the circle ???**

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What do I mean, completing the circle:

We cannot effectively use the power generated, in our own buildings,

Currently, if we purchased the energy from the solar farm through a PPA, all the elements of a standard Electricity contract e.g Transmission costs, (TuoS), Distribution costs (DuoS) and a Balancing charge (BSuoS) will still be levied !

No facility within the Electricity Supply Industry to remove TouS charges or possibly reduce DouS…so our costs rise

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Alternative to Joint Venture

Invest ourselves…

This is the simplest of options, if the funding can be found

Giving a financial ROI from FIT/ROC payments

.. and in future the possibility of further significant benefits if we can sleeve our generation, from:

- **Reduced supply constraint issues/global factors**
- **protection against rising energy costs**
- **Opportunity to complete the circle and become a supplier/user of own generated power**

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Licence Lite :

The so called simplified Energy suppliers licence..

But is still very complex, and needs further simplification, to encourage wider take up…a fact recognised by Ed Davey, Sec. State for Energy.

Conclusion:

The whole range of legislation and contractual arrangements need to be carefully thought through and simplified as far as possible, to enable L.A's and the private sector become local generators and distributors.

Thank you
Any questions?