

Cynulliad Cenedlaethol Cymru Pwyllgor Amgylchedd a Chynaliadwyedd	National Assembly for Wales Environment and Sustainability Committee
Dyfodol Ynni Craffach i Gymru?	Smarter energy future for Wales?
Gwybodaeth ychwanegol a ddaeth i law yn ystod yr ymchwiliad	Additional information received during the inquiry
Cyngor Bwrdeistref Sirol Wrecsam (Saesneg yn unig)	Wrexham County Council



Cynulliad
Cenedlaethol
Cymru

National
Assembly for
Wales

**SOLAR POWER
IS COMING
TO WREXHAM!**





Phil Walton
Strategic & Performance Director
Wrexham County Borough Council



**Predictions are very difficult; especially
about the future!**



GOVERNMENT POLICY

**Floundering with a large degree of
pointlessness!**







Wrexham's Green Credentials.....

2008

- Low investment
- Energy inefficient property portfolio
- Small Renewables budget
- Other Priorities (WHQS)
- Carbon Reduction not corporately significant

2014

- Largest domestic solar PV scheme in UK
- Commercial PV delivered
- Carbon Trust Standard
- High performing Welsh LA in CRC league table
- Established a recycling annual invest to save budget
- Annual renewable budget
- £4m CESP funding levered in
- ECO Procurement framework
- 3 MW solar farm
- Exploring RHI opportunities



Our solar journey.... Conditions for success

- Senior Buy in
- Strategic Priority
- Ambition & Drive
- Innovation & Creativity
- Circumstances / Fortune
- Strong Project Management ethos
- Sound Business Case development
- Prepared to take risks / Holding our nerve!
- Common sense
- The right people!

In the midst of massive FIT uncertainty

Above not normally synonymous with LA's

Set against a backdrop of worst economic downturn in living memory



Project particulars.....

2600+ Houses	175 flats	4.5+ MW
8.2 average no of panels	25,000+ panels fitted	
Up to 3000 tonnes of CO2	Completed in just 190 days	
Over 8000 tenants	£350k + electricity savings for tenants	
63 People employed locally (45%)	All panels made in Wrexham	
£400k surplus expected in 2014/15	Saving up to £100 per year	
Up to £10k FIT income per day	£15m surplus FIT income over 25 yrs	



Summarising the benefits

The environment

Up to 3000 tonnes of CO2 saved pa

The Council

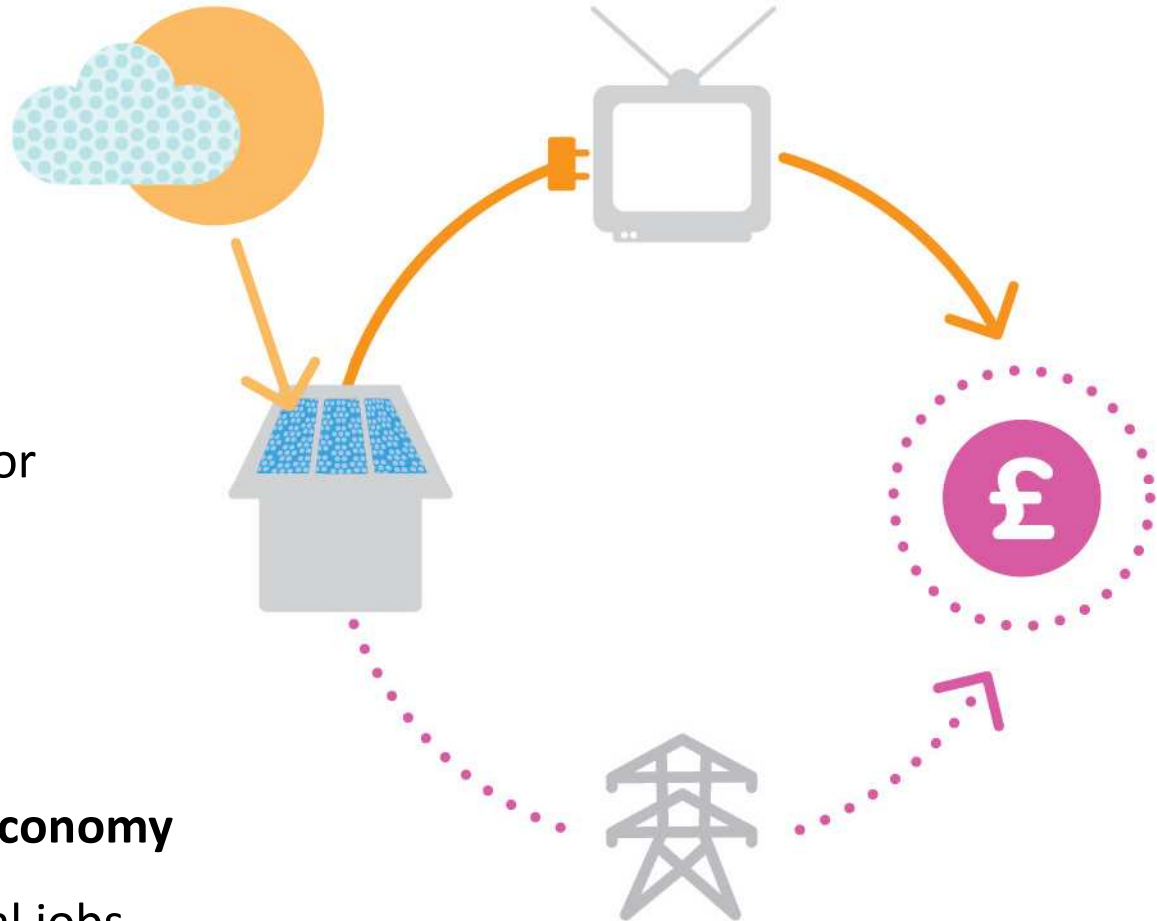
Up to £700,000 income pa for 25 yrs. Also reputation

The tenant

£100 - £300 pa saving

The economy

Local jobs, training, skills etc



Stimulating the local economy & supply chains

- 47% of workforce recruited locally
- 75 people (jobs)



Panel installers x 15



Admin / TLO x 9



Electricians x 20



Local scaffold companies x 5



Warehouse staff x 10



Plus – panels sourced locally



Necessity of extensive comms and engagement!

Mae Cyngor Bwrdeistref Sirol Wrecsam yn mynd i osod paneli ffotofoltaidd ynni'r haul ar hyd at 3000 o eiddo y mae'r Cyngor yn berchen arnynt, ledled y bwrdeistref.

Cofrestru ganwyll 14m
Os hoffech chi gael mwy o wybodaeth am y paneli ffotofoltaidd hyn, ydych chi chi hysbysu i: 19000188888
E-bost: info@wrexham.gov.uk
www.wrexham.gov.uk

Mae tŷi cymdeithasol ymhlith y petlora hynny sy'n gysylltu âmy gyfrifiadurol a di trosedd Wrecsam. A dywys pam y mae'r cynnydd hwn, set un o'r cynnal a'i rwyngol o'i fath yn y D.U, mor hysbysu ar rwyngol o'r cymdeithas i ffyniwr yr arllwg a'i ffyniwr hysbysu y cyfnewidiadau.

POWER PŴER

MAE WRECSAM AM DDEFNYDDIO YNNI'R HAUL!

www.ynni'rhaulwrecsam.org

POWER PŴER

WHY SOLAR? PAM YNNI'R HAUL?

Because it's good all round...

...for the climate
Climate change is a serious issue that will affect us all. Solar power is a renewable energy that doesn't use fossil fuels, so it's better for the planet. It also helps to reduce carbon emissions. At a local level, solar power is much better for the environment.

...for the council
Wrexham Council will be paid for each kilowatt of solar that is generated by the panels and the money will be reinvested into the delivery of council services... so everyone in Wrexham will just enjoy a better environment through solar power.

...for the tenant
As energy costs continue to rise, more and more businesses are looking for ways to reduce their energy bills. Solar panels can help to do this. They also mean that you can generate your own electricity, so you'll be self-reliant on electricity bills and savings of £100-300 every year.

Oherwydd mae'n llesol drwyddo draw...

...i'r hinsawdd
Cymhlethdod y cyfnewidiadau hinsawdd sy'n dod i'r amlwg yn ddiweddar. Mae'n hysbysu bod ynni'r haul yn ffordd dda i gyrru'r cerbydau. Mae'n helpu i gynyddu'r cynnydd a'i ffyniwr hysbysu y cyfnewidiadau. At a lefel lleol, mae'r ynni'r haul yn ffordd dda i'r amgylchedd.

...i'r Cyngor
Bydd Cyngor Wrecsam yn cael i'w talu i'r ynni'r haul sy'n gennedol gan y paneli a bydd y arian hon yn cael i'w defnyddio i wellhau'r gwasanaethau'r Cyngor... mae hysbysu'r ynni'r haul yn ffordd dda i'r amgylchedd.

...i'r tenant
Wrth i gwynt ynni'r haul gynyddu, mae'r ynni'r haul yn ddiweddar yn ddiweddar yn ddiweddar. Mae'n helpu i gynyddu'r cynnydd a'i ffyniwr hysbysu y cyfnewidiadau. Mae'n helpu i gynyddu'r cynnydd a'i ffyniwr hysbysu y cyfnewidiadau. Mae'n helpu i gynyddu'r cynnydd a'i ffyniwr hysbysu y cyfnewidiadau.

POWER PŴER

SOLAR POWER YNNI'R HAUL

Solar power is coming to Wrexham!
Wrexham Council is installing solar panels on up to 3,000 council properties across the borough. This is a great way to reduce our carbon footprint and save money on electricity bills. The solar panels will be installed on a variety of council properties, including schools, libraries, and community centres. This will help to reduce our carbon footprint and save money on electricity bills. The solar panels will be installed on a variety of council properties, including schools, libraries, and community centres. This will help to reduce our carbon footprint and save money on electricity bills.

Mae Wrecsam am ddefnyddio ynni'r haul!
Mae Cyngor Wrecsam yn cael i'w talu i'r ynni'r haul sy'n gennedol gan y paneli a bydd y arian hon yn cael i'w defnyddio i wellhau'r gwasanaethau'r Cyngor... mae hysbysu'r ynni'r haul yn ffordd dda i'r amgylchedd.

www.solarpowerwrexham.org

www.ynni'rhaulwrecsam.org



What else went well....?

- On time (almost)
- Under budget
- Putting Wrexham on the map / reputation
- Well received by tenants (buy in)
- Procurement
- Outcome of FIT review
- Partnership working
- Local employment
- Communications
- Weather
- Health & Safety



Not everything went to plan....



*What do you
want from a
Solar Scheme?*



Wrexham Solar Farm Berthengron Farm, Legacy, Nr. Rhosllanerchrugog



www.wrexham.gov.uk / www.wreccsam.gov.uk



Background

- Carbon reduction and energy efficiency has been a council priority since 2008
- Build on the success of previous carbon reduction projects.

Domestic PV

- Largest Social Housing Solar PV scheme in Europe
- 2700+ properties retrofitted with PV.



Schools PV

- 15 Schools and 2 commercial buildings retrofitted with PV. This is an installation of almost 0.3Mwp

Why a Solar Farm?

- Building on Wrexham's reputation for delivering large scale solar PV projects
- Innovative use of Council owned assets for securing long term income generation
- Reducing Wrexham's Carbon Footprint
- Reduced equipment costs for solar Installations
- Generation of Green Energy
- Income Generation
- Community Leadership



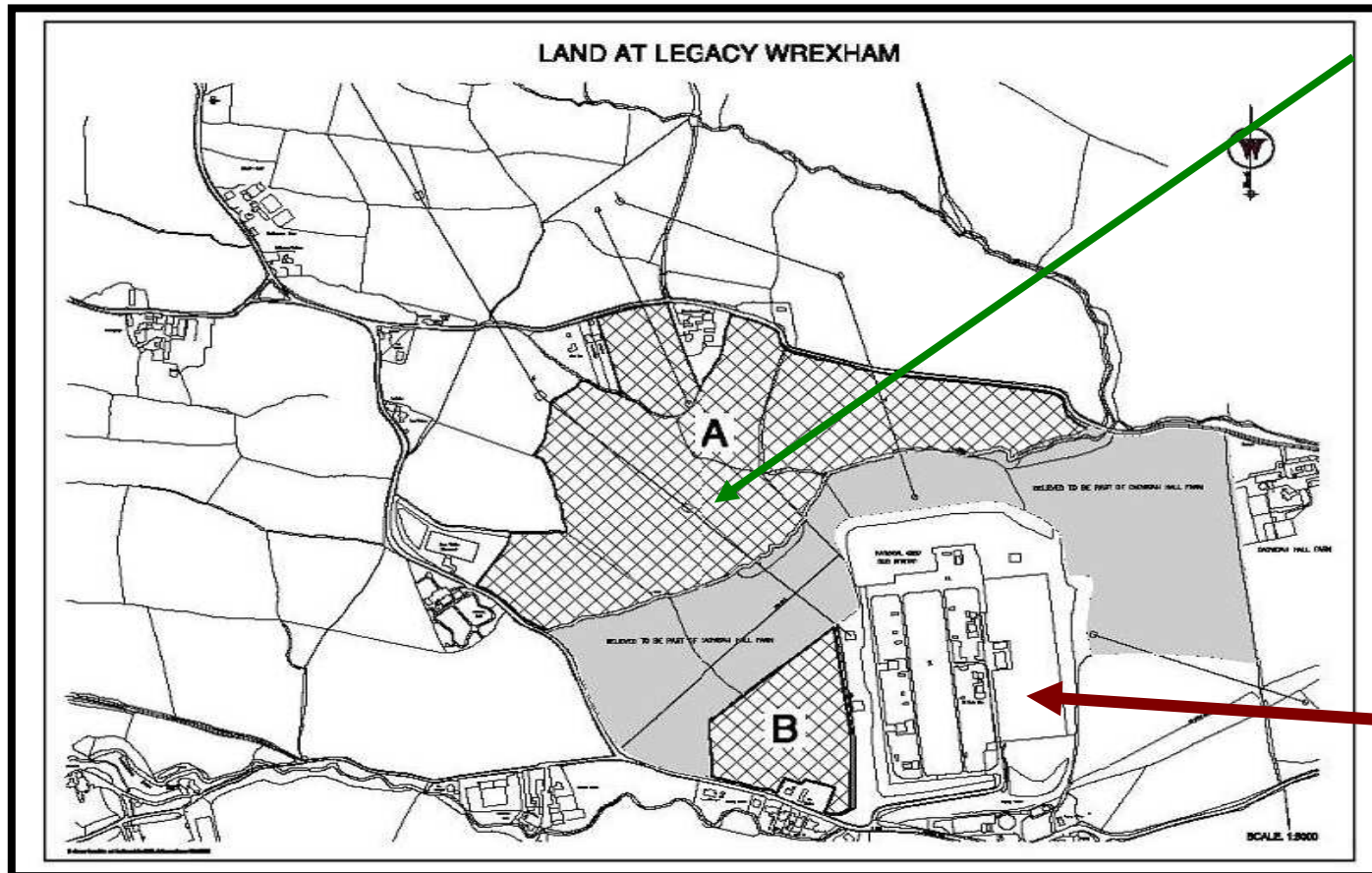
Wrexham's Solar Ambitions

- To establish a procurement framework to permit the delivery of multiple land based solar schemes
- 43.1 acre site of council owned land
- Proposed 5MW solar farm based on land close to the National Grid substation
- Planned 12,000-15,000 PV modules
- Site to retain agricultural use
- Good connectivity to the grid
- Favourable site topography



Site Map

Plot A and B:
Council owned
land



Legacy
Substation

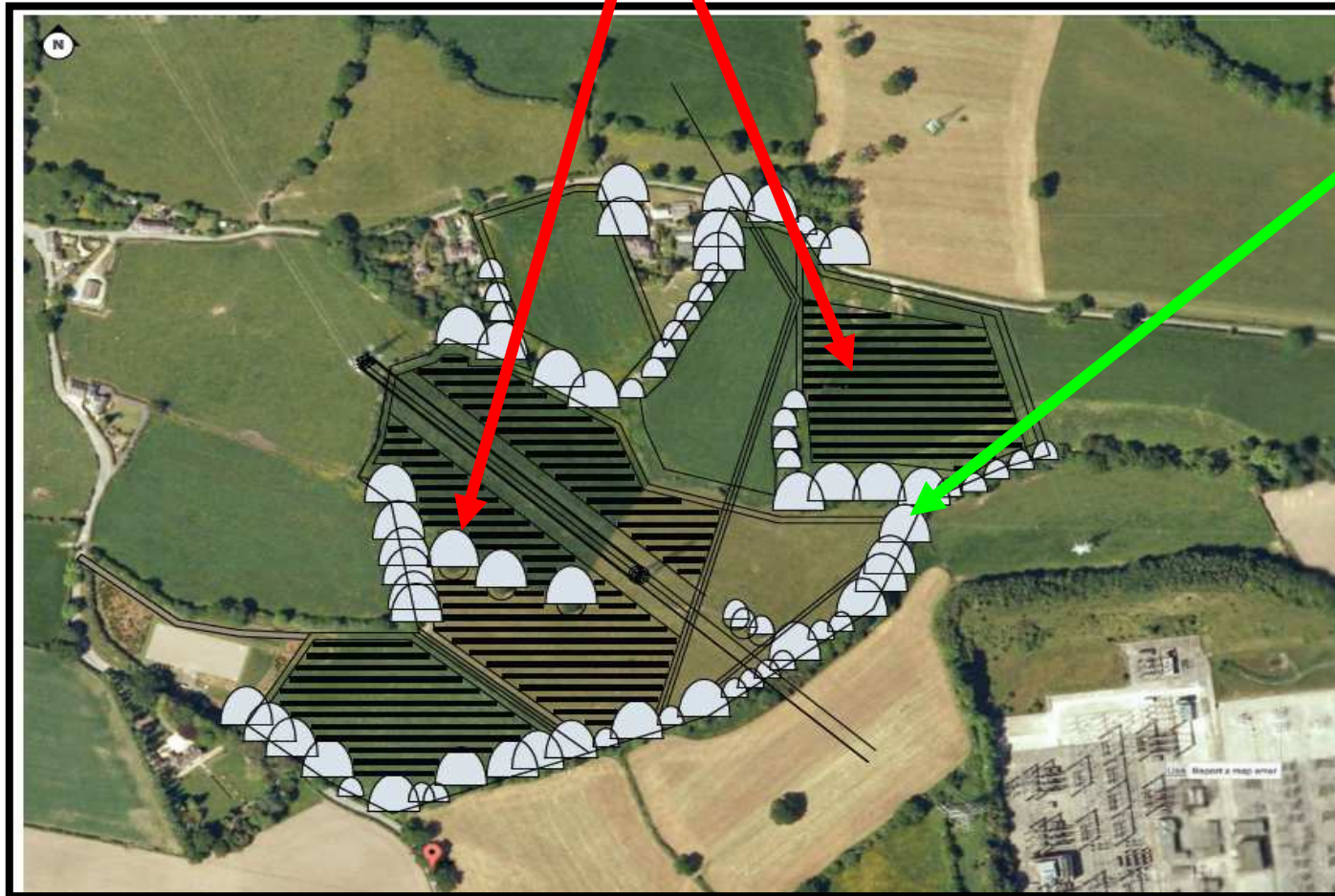
Preliminary Works

- Prior to work commencing on site a number of processes needed to be completed, these included:
 - Obtaining grid connection agreement with Scottish Power
 - Commission the indicative Design and layout of site to support planning application
 - Establish a procurement framework to appoint contractor
 - Planning application was required. The following main assessments and studies were included in the planning application process:
 - Ecological study
 - Landscape and visual assessment
 - Transport management plan

Site Map

Proposed areas for development:
Location of panels

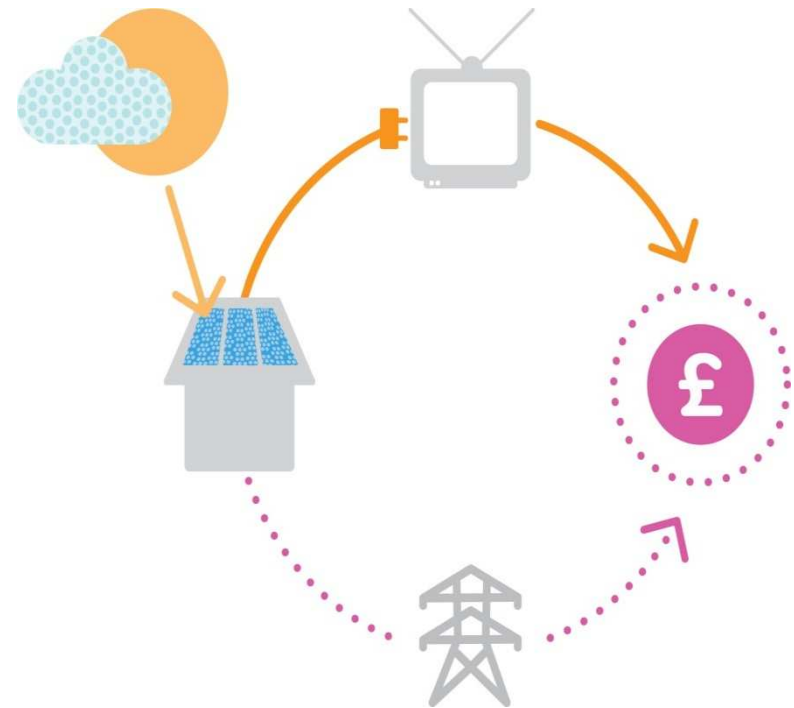
Half moon sections,
indicate areas of
potential
shading due to
hedgerows and
trees



Direction
of Solar
Panels

Developing a Solar Farm

- Tenders were issued out before planning permission was granted;
- LPA/Planning Committee postponed the decision and requested site visit;
- Once planning application granted the contract was awarded to British Gas
- Work commenced on site in January 2015
- Scottish Power witness tested the scheme on the 14th May



Lessons Learnt

- Construct a solar farm during the summer months to ensure that poor weather conditions do not affect the deadlines for the scheme
- Start early discussions with the DNO and LPA
- Apply for connection at the early stage
- Sign PPA agreement before you commence construction phase
- Ensure that the grid connection points are on land owned by the local authority and not in third party ownership
- Make sure Community Benefits are agreed before project is approved
- Project/Contract management is a full time job!

Lessons Learnt

- Project/Contract management is a full time job!
- Planning and connection offer to be incorporated into the contract
- Make sure all demands from the DNO are met/agreed with the contractor at the beginning of the contract
- Create OFGEM application early and keep chasing them
- When the construction phase starts approach MOP and Electricity Supplier so you can get meters installed in advance of the system energisation
- Keep chasing legal: wayleaves, easements and internal legal department
- Follow up changes with project Manager, Planning and DNO

Opening the Solar Farm

- The Legacy Solar farm was officially opened by Wrexham Councils Mayoress on the 17th June 2015
- The scheme will provide the Council with an income stream (£2.5M) for the next 25 years and is projected to generate over 57m kWh green electricity





Welcome to the Wrexham Legacy Solar Farm

This farm generates clean electricity which feeds into the National Grid to power the equivalent of 700 homes.

System size:	2.64MWp
No. of solar panels:	8,880
Elec. Generation/year:	2,342 MWh
CO ₂ emission/year savings:	1,272 tonnes

It started to generate green electricity in May 2015. It is the first solar farm owned by Wrexham County Borough Council and the first in Wales to be owned and operated by a local authority.

The farm was installed by British Gas

Croeso i Wrecsam Etifeddiaeth Solar Fferm

Mae'r fferm yn cynhyrchu trydan glân sy'n bwydo i mewn Grid Cenedlaethol i bweru gyfwerth â 700 o gartrefi.

Maint y system:	2.64MWp
Nifer y paneli solar:	8,880
Trydan canhedlaeth / bliwyddyn:	2,342 MWh
Arbedion CO ₂ :	1,272 tunelli

Mae wedi dechrau i gynhyrchu trydan gwyrdd Mai 2015 ac roedd y fferm solar cyntaf eiddo ac a weithredir gan Awdurdod Lleol yng Nghymru.

Mae'r fferm solar yn eiddo ac a weithredir gan Wrecsam Roedd Cyngor Bwrdeistref Sirol a'u gosod gan Nwy Prydain.

