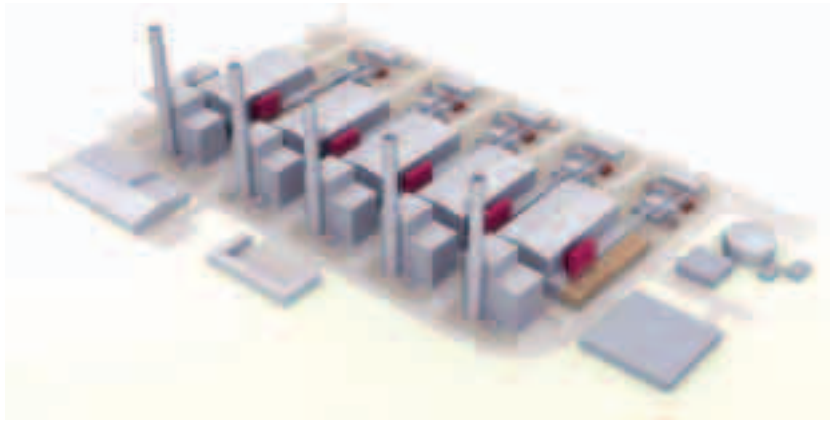


# npower in the community



## RWE npower yn ailddatgan eu hymrwymiad i Benfro

Ar 9 Awst 07, cyhoeddodd RWE npower ein bod wedi llofnodi contract gyda'r cwmni peirianeg Alstom i ddiogelu'r posibilrwydd o adeiladu gorsaf bŵer tyrbin nwy cylch cyfun (CCGT) newydd, tra effeithlon ar ein safle ym Mhenfro.

## RWE npower reaffirms commitment to Pembroke

On 9 August 07, RWE npower announced that we had signed a contract with engineering company Alstom to secure the potential construction of a new, highly efficient combined cycle gas turbine (CCGT) power station at our Pembroke site.

Rydym yn anelu i gael caniatâd er mwyn dechrau'r gwaith adeiladu yn 2008. Mae cael cymorth contractwr adeiladu yn gam hanfodol at sicrhau y gall yr adeiladu fynd yn ei flaen os ceir ganiatâd.

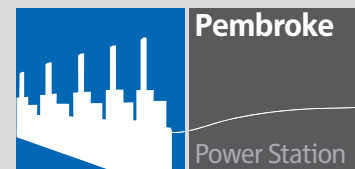
Ar ôl ei adeiladu, byddai gan yr orsaf bŵer CCGT newydd y gallu i gynhyrchu tua 2000MW - digon i gyflenwi tua thair miliwn o gartrefi. O'i chymharu â'r trydan fyddai'n cael ei gynhyrchu o orsafoedd pŵer glo sy'n bodoli eisoes, byddai'r orsaf newydd yn gostwng allyriadau CO<sub>2</sub> o ryw 8 miliwn tunnell bob blwyddyn, felly'n helpu RWE npower i fodloni'r ymrwymiad uchelgeisiol o ostwng treian ar ein hallyriadau CO<sub>2</sub> wrth gynhyrchu pŵer rhwng 2000 a 2015.

*We are aiming to achieve consent in order to start construction in 2008. However, having a construction contractor on board is a vital step in ensuring that construction can go ahead should consent be granted.*

*Once constructed, the new CCGT power station would have a capacity of around 2000MW - enough to supply around three million homes. In comparison to generating this electricity from existing coal-fired power stations, the new station would reduce CO<sub>2</sub> emissions by around 8 million tonnes every year, helping RWE npower meet the ambitious commitment of cutting our CO<sub>2</sub> emissions from power generation by a third between 2000 and 2015.*

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### Dod â buddsoddiad i'r ardal *Bringing investment to the area*

- byddai costau adeiladu'r orsaf bŵer oddeutu £800 miliwn  
*the power station would cost around £800 million to construct*
- byddai'r economi lleol yn buddio o ryw £10 miliwn y flwyddyn yn y tymor hir  
*it would bring a long term benefit to the local economy of around £10m each year*
- byddai'r cyfnod adeiladu yn creu hyd at 1,500 o swyddi  
*the construction phase would create up to 1,500 jobs*
- unwaith byddai'r orsaf yn gweithredu, byddai hyd at 100 o swyddi uchel eu hansawdd yn cael eu creu ar y safle  
*once operational, up to 100 long-term high quality jobs would be created at the plant*

## Gofalu am yr amgylchedd

Ym mis Gorffennaf fe wnaethom gymryd cam pwysig yn y broses gynllunio ar gyfer yr orsaf bŵer newydd drwy gyflwyno diweddariad o'r Datganiad Amgylcheddol (DA) i'r Adran Busnes, Menter a Diwygio Rheoleiddio (yr adran Fasnach a Diwydiant gynt).

Rhaid i unrhyw gwmni sy'n ceisio caniatâd i adeiladu gorsaf bŵer fawr, ymchwilio'n drwyadl i'w effeithiau posibl ar yr amgylchedd ac mae'r DA yn darparu manylion yr astudiaethau hyn a'u casgliadau. Fe wnaethom gyflwyno DA gyda'n cais cynllunio gwreiddiol yn 2005, fodd bynnag, ers hynny, rydym wedi cynnal ymgynghoriad manwl ac arolygon amgylcheddol pellach felly'n ei gwneud hi'n angenrheidiol i ddiweddarau ein datganiad a chyfuno'r wybodaeth newydd â'r

wybodaeth sydd wedi ei gynnwys eisoes yn y DA gwreiddiol.

Mae diweddariad o'r DA yn canolbwyntio ar ddau faes allweddol yn bennaf:

- Ers 2005 sefydlwyd set o Amcanion Cadwraeth ar gyfer Ardal Gadwraeth Arbennig Forol Sir Benfro ac erbyn hyn rydym wedi asesu sut mae ein cynigion yn cwrdd â gofynion yr amcanion hyn.
- Ymatebion i geisiadau penodol am wybodaeth bellach gan Asiantaeth yr



Montage ffotograffig o'r orsaf arfaethedig o safle ar ben Pwynt Pennar

**“Rydym o'r farn bod y DA yn dangos na fyddai'r orsaf bŵer arfaethedig yn creu effaith sylweddol ar yr amgylchedd”**

Amgylchedd a Chyngor Cefn Gwlad Cymru, yn canolbwyntio'n benodol ar yr arolwg morwrol cyfredol yr ydym wedi ei gynnal.

Rydym o'r farn bod y DA yn dangos na fyddai'r orsaf bŵer arfaethedig yn creu arraith sylweddol ar yr amgylchedd, ac ni fyddai'n niweidio tiriogaeth Ardal Gadwraeth Arbennig Forol Sir Benfro. Rydym yn parhau'n ymrwymedig i weithio'n agos gyda'r awdurdodau cydsyniol i sicrhau datblygiad prosiect cynaliadwy ym Mhenfro.

## Profi'r ddaear



Rig ddrilio safonol

Er mwyn sicrhau cyflenwad nwy i'r orsaf bŵer newydd byddai angen pibell. Mae llwybr y bibell arfaethedig yn rhedeg o dan ddyfrffordd Aberdaugleddau. Fel rhan o'r paratodau ar gyfer y bibell, roedd rhaid i ni gynnal rhai astudiaethau gofalus islaw gwely'r môr. Roedd hyn yn golygu drilio dan y Cleddau i ddarganfod natur y graig a chynllunio ar gyfer adeiladu'r bibell yn y dyfodol.

Fe wnaethom ddrilio twll 16eg modfedd o led a thu dau gilomedr o hyd, o leiaf 30 metr islaw gwely'r môr, o safle ger lan y Gogledd, yn Blackbridge. Dewiswyd y dull astudio'n benodol i leihau'r effaith ar y ddyfrffordd sensitif.

Roedd y drilio yn llwyddiannus iawn a chafwyd gwybodaeth werthfawr ynghylch daeareg gymhleth yr ardal a'r mathau o greigiau a geir mewn dyfnder o'r fath. Caiff y data a gasglwyd yn ystod y drilio, ei ddefnyddio i gwblhau cynllun y bibell arfaethedig.

**“Roedd hi'n hanfodol ein bod yn cynnal rhai astudiaethau gofalus islaw gwely'r môr”**

# Cyfarfod a'r tîm

## Cyfweliad â Tim Calver, Cyfarwyddwr Prosiect Adeiladu Newydd CCGT



Tim Calver

### Beth yw eich rôl ym Mhenfro?

Cyfarwyddwr prosiect RWE npower ydw i, gyda chyfrifoldeb cyffredinol am ddatblygu gorsaf bŵer CCGT newydd ar ein safle ym Mhenfro. Rhan allweddol o'r rôl sydd gan fy nhîm yw gweithio'n agos gyda'r gymuned leol a'i gynrychiolwyr etholedig i sicrhau ein bod yn deall ac yn ystyried eu pryderon a'u barn yn ystod y broses gynllunio.

### Paham fod angen datblygu gorsaf bŵer sy'n llosgi nwy, ar y safle ym Mhenfro?

Mae Deddfwriaeth Ewropeaidd (Cyfarwydddeb Peiriannau Tanio Mawr) yn golygu y bydd sawl safle sy'n llosgi glo yn cau erbyn diwedd 2015. Yn ogystal â hynny, bydd y mwyafrif o'r safleoedd niwclear yn debygol o gau erbyn 2020 wrth iddynt ddod i ddiwedd eu cyfnodau gweithredu. Mae angen modd newydd o gynhyrchu i bontio'r bwlch hwn, ac, yn y tymor canolig, gorsafoddedd pŵer sy'n llosgi nwy yw'r opsiwn gorau i wneud hyn, wrth ostwng allyriadau CO<sub>2</sub>.

### Pa mor ecogyfeillgar fyddai hyn?

Mae gorsafoddedd pŵer nwy, modern yn gyfleusterau glân a chryno. Mae creu trydan o nwy yn fwy effeithlon na thanwydd ffosil eraill ac mae nwy hefyd yn cynnwys llai o garbon na glo. O ganlyniad i'r ddau ffactor hyn, mae pŵer sy'n llosgi nwy yn cynhyrchu llai na hanner yr allyriadau CO<sub>2</sub> o'i gymharu â thrydan a gynhyrchir o'r gorsafoddedd pŵer sydd eisoes yn llosgi glo. Y cynnyrch pennaf wrth hylosgi yw dŵr - does yna ddim lludw na llwch a phrin iawn y ceir sylffwr mewn nwy.

Rydym wedi ymrwmo i adeiladu a gweithredu ein safleoedd pŵer mewn ffordd gynaliadwy o safbwynt yr amgylchedd a byddwn yn parhau i weithio'n agos gydag

Asiantaeth yr Amgylchedd a Chyngor Cefn Gwlad Cymru tuag at y nod hwn.

Rydym o'r farn bod y DA diweddaraf yn dangos na fyddai'r orsaf bŵer arfaethedig yn amharu'n sylweddol ar yr amgylchedd lleol, ac ni fyddai'n niweidio tiriogaeth Ardal Gadwraeth Arbennig Forol Sir Benfro. Fel rhan o'n cais cynllunio, gwnaethom hefyd gynnal asesiad drafnidiaeth a ddangosodd y byddai modd defnyddio glanfa bresennol ar y safle, i dderbyn llwythi mawr ar y dyr.

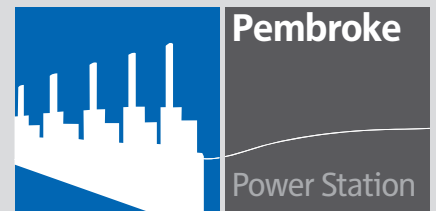
### Am ba reswm ydych chi wedi penodi contractwr cyn diogelu caniatâd cynllunio?

Mae penodi contractwr yn gam hanfodol wrth gynllunio gorsaf bŵer newydd, a dyma'r arfer cyffredin i brosiectau mawr sydd â'r potensial o gymryd amser hir. Mae yna alw sylweddol am waith pŵer newydd o gwmpas y byd ac mae'r ddêl hon yn sicrhau y gall adeiladu ym Mhenfro ddigwydd mewn cyfnod o amser sy'n gyson ag anghenion ynni'r DU. Mae Alstom, y gwneuthurwr o'n dewis yn arweinydd blaenllaw ym myd trafndiaeth ac isadeiledd ynni gydag oddeutu 65,000 o gyflogeion mewn 70 o wledydd.

### Beth sy'n digwydd nesaf?

Byddwn yn parhau i weithio'n agos gyda'r awdurdodau cydsyniol gan obeithio ennill caniatâd mewn amser i ddechrau adeiladu yn 2008. Rydym wedi ymrwmo'n llwyr i hysbysu'r gymuned ynghylch ein cynnydd, ac, ar adeg briodol byddwn yn cynnal arddangosfeydd cyhoeddus yn yr ardal leol. Yn ei dro byddwn yn hysbysebu'r arddangosfeydd ymhellach, gan gynnig manylion ynghylch dyddiadau a lleoliadau penodol, a gobeithiwn y bydd gymaint o bobl â phosib yn medru dod i'n cyfarfod.

Yn rhifyn nesaf y daflen newyddion byddwn yn amlgu'r camau a gymerwyd i sicrhau a dangos y bydd yr orsaf bŵer arfaethedig yn ddiogel, lân, a heb unrhyw effaith sylweddol ar ansawdd yr aer. Dengys ein modelu y bydd ansawdd yr aer yn rhanbarth yr orsaf bŵer yn parhau i fod ymhell o fewn y safonau ansawdd aer cenedlaethol ac Ewropeaidd llym ar gyfer diogelu iechyd dynol a llystyfiant.



## Ffeithiau a Ffigurau

Os diogelir caniatâd cynllunio, byddai'r orsaf bŵer tyrbin nwy cylch cyfun newydd ar ein safle ym Mhenfro yn:

- defnyddio nwy naturiol yn unig fel tanwydd
- cynnwys pum uned cynhyrchu o thua 400MW yr un
- darparu o gwmpas tri y chant o allu'r DU i gynhyrchu pŵer
- cynhyrchu digon o ynni ar gyfer tua thair miliwn o gartrefi
- ynghyd â gorsafoddedd pŵer eraill sy'n bodoli eisoes, yn cadw Cymru'n hunangynhaliol o ran trydan
- cymryd tua thair blynedd i'w hadeiladu

## Y newyddion diweddaraf

Cyn hir cychwynnir ar y gwaith o symud offer diangen o'r is-orsaf Grid Cenedlaethol ar ein safle.

Yn dilyn hyn byddwn yn gosod offer newydd i gysylltu'r orsaf bŵer arfaethedig i'r grid.

Cynhelir y gwaith yn gyfnodol yn ystod y deuddeg mis nesaf a ni ddisgwylir iddo achosi unrhyw aflonyddwch.

# Meet the team

## An interview with Tim Calver, New Build CCGT Project Director



Tim Calver

### **What is your role at Pembroke?**

I am RWE npower's project director with overall responsibility for developing a new CCGT power station at our Pembroke site. A key part of my team's role is working closely with the local community and its elected representatives to ensure their concerns and opinions are understood and considered during the planning process.

### **Why is there a need to develop a gas fired power station at the Pembroke site?**

European Legislation (Large Combustion Plant Directive) means that many existing coal fired plants will close by the end of 2015. In addition, the majority of nuclear plants are likely to close by 2020 as they reach the end of their operational lives. New capacity is required to bridge this gap and, in the medium term, gas fired power stations are the best option for doing this whilst reducing UK CO<sub>2</sub> emissions.

### **How environmentally friendly would it be?**

Modern gas fired power stations are clean and compact facilities. Generating electricity from gas is more efficient than other fossil fuels and gas also contains less carbon than coal. These two factors result in gas fired power generation producing less than half the CO<sub>2</sub> emissions when compared to electricity generated from existing coal fired power stations. The other main product of combustion is water – there is no ash or dust and gas contains virtually no sulphur.

We are committed to conducting the construction and operation of our power plants in an environmentally sustainable

way and we will continue to work closely with the Environment Agency and Countryside Council for Wales towards this goal.

We believe the updated ES demonstrates that the proposed power station would not have a significant adverse effect on the local environment and would not harm the integrity of the Pembrokeshire Marine Special Area of Conservation. As part of our planning application, we also conducted a transport assessment which showed that an existing jetty at the site could be used to receive larger loads by water.

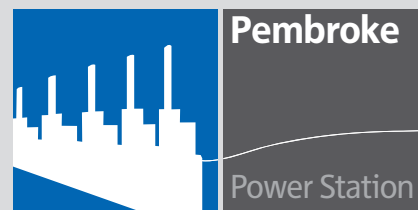
### **Why have you appointed a contractor before securing planning consent?**

Having a contractor on board is a vital step in planning a new power station and is common practice on large projects with potentially long lead times. There is significant demand for new power plants around the world and this deal ensures that construction at Pembroke can occur in a timeframe consistent with the UK's energy requirements. Our chosen contractor, Alstom, is a world leader in transport and energy infrastructure with around 65,000 employees in 70 countries.

### **What happens next?**

We will continue to work closely with the consenting authorities and hope to obtain consent in time to start construction in 2008. We are committed to keeping the local community fully informed about our progress and at an appropriate time we will hold public exhibitions in the local area. In due course we will publicise the exhibitions further, giving details of specific dates and locations and we hope as many local people as possible will be able to come and meet us.

In the next issue of the newsletter we will be highlighting the steps we have taken to ensure and demonstrate that the proposed power station will be safe, clean and have no significant impact on air quality. Our modelling shows that air quality in the region of the power station will remain well within strict European and national air quality standards for the protection of both human health and vegetation.



## Facts and Figures

*If planning consent is secured, the new combined cycle gas turbine power station at our Pembroke site would:*

- use only natural gas for fuel
- have five generating units of around 400MW each
- provide around three per cent of the UK's power generation capacity
- produce enough energy for around three million homes
- along with existing power stations, keep Wales self sufficient in electricity
- take approximately three years to construct

## News update

**Work will shortly begin to remove some redundant equipment from the National Grid substation at our site.**

*This will be followed by the installation of new equipment needed to connect the proposed power station to the grid.*

*The work will be carried out periodically over the next twelve months and is not expected to cause any local disruption.*

## Taking care of the environment

In July we took another important step forward in the planning process for the new power station by submitting an updated Environmental Statement (ES) to the Department for Business, Enterprise and Regulatory Reform (formerly the Department for Trade and Industry).

Any company seeking planning consent to build a large power station must thoroughly investigate the possible effects of its proposals on the environment and the ES provides details of these investigations and their conclusions. We submitted an ES with our original planning application in 2005, however we have since carried out further detailed consultation and environmental surveys making it necessary to update our statement and consolidate the new information with that of the original ES.

In particular, our updated ES focuses on two key areas:

- Since 2005 a set of Conservation Objectives for the Pembrokeshire Marine Special Area of Conservation has been established and we have assessed how our proposals measure up against these objectives.
- Responses to specific requests for further information from the Environment Agency and the Countryside Council for Wales focusing particularly on the on-going marine survey work we've carried out.

***"We believe the ES demonstrates that the proposed power station would not have a significant impact on the environment"***

We believe the ES demonstrates that the proposed power station would not have a significant impact on the environment and that it would not harm the integrity of the Pembrokeshire Marine Special Area of Conservation. We remain committed to working closely with the consenting authorities to ensure the development of a sustainable project at Pembroke.



Photomontage of the proposed station from the top of Pennar Point

## Testing the ground



Standard drilling rig

In order to supply gas to the new power station a new pipeline would be required. The route of the proposed pipeline runs under the Milford Haven waterway. As part of the preparation for the pipeline, it was essential for us to carry out some careful investigations below the sea bed. This involved carrying out test drilling under the Haven to discover the nature of the rock and to plan for the future construction of the pipeline.

We drilled a hole 16 inches wide and around two kilometres long, at least 30 metres below the seabed, from a site on the North shore at Blackbridge. This investigation method was specifically chosen to minimise any impact on the sensitive waterway.

The test drilling was very successful and provided valuable information about the complex geology of the area and types of rock found at this depth. The data we collected during the test drill will be used to finalise the design of the proposed pipeline.

***"It was essential for us to carry out some careful investigations below the sea bed"***

# npower – gweithio gyda'r gymuned

## npower – working with the community

### Bore Coffi Mwyaf y Byd

#### The World's Biggest Coffee Morning

Roedd hi'n bleser gennym gefnogi bore coffi Macmillan a gynhaliwyd yn Neuadd y Dref, Penfro ar yr 28ain o Fedi, a braf oedd gweld gymaint o bobl yn ymuno â ni am baned o goffi. Rhoddwyd cyfraniad o £770 gan Npower i hwyluso'r sesiwn codi arian, roedd hyn yn cyfateb â'r arian a godwyd adeg y bore coffi a gynhaliwyd y llynedd.

Fel rhan o ddigwyddiadau codi arian mwyaf y DU – bydd yr arian a godwyd adeg 'Bore Coffi Mwyaf y Byd' Macmillan ym Mhenfro yn cael ei ddefnyddio gan yr elusen i ddarparu cymorth ariannol ac emosiynol i bobl sy'n dioddef o ganser, ynghyd â'u teuluoedd.

**WE ARE  
MACMILLAN.  
CANCER SUPPORT**

*We were delighted to support the Macmillan coffee morning in Pembroke Town Hall on 28 September and were pleased so many people were able to join us for a cup of coffee. npower gave the fundraising a boost with a donation of £770, matching the money raised at last year's coffee morning.*

*As part of one of the UK's biggest fundraising events – Macmillan's 'World's Biggest Coffee Morning', money raised by the Pembroke coffee morning will be used by the charity to provide financial and emotional support to people living with cancer and their families.*



*RWE npower is committed to working closely with local people to ensure we play as positive a role in the community as possible and, over the last few months, we've been delighted to support four community projects in and around Pembroke.*

*We're proud to be involved in the Foundry House Community Centre project – a three year programme to renovate a former local amenity centre that was sold by Pembrokeshire County Council earlier this year. Once the building work is completed, it will provide Pembroke with a state of the art, environmentally sustainable building that will be a focus for the whole community.*

Mae RWE npower wedi ymrwymo i weithio'n agos gyda phobl leol i sicrhau ein bod yn chwarae rôl mor bositif â phosib yn y gymuned ac yn ystod yr ychydig fisoedd diwethaf, bu'n bleser gennym gefnogi pedwar prosiect cymunedol o fewn, ac o gwmpas Penfro.

Rydym yn falch o fod yn gysylltiedig â phrosiect Canolfan Gymunedol Foundry House - rhaglen tair blynedd i adnewyddu canolfan amwynder lleol gynt. Unwaith bydd y gwaith adeiladu ar ben, bydd gan Benfro adeilad newydd sbon, cynaliadwy o safbwynt yr amgylchedd, a fydd yn ganolbwynt ar gyfer y gymuned gyfan.

Yn ystod yr haf, fe wnaethom noddi dwy ŵyl leol - ym Mhenfro a Doc Penfro. Fe wnaeth y ddwy ŵyl chwarae rôl bwysig yn y gymuned leol drwy annog pobl i gymryd rhan yn yr amrywiol ddigwyddiadau a gweithgareddau. Roeddynt hefyd yn fudd mawr i'r economi leol drwy ddenu mwy o bobl i'r ardal.

Cawsom lwyddiant ysgubol wrth helpu i gloi'r tymor drwy noddi Cystadleuaeth "Pencampwr y Pencampwr" Tân Gwyllt Blynyddol Dyfrffordd Sir Benfro. Gobaith trefnwyr y strafagansa deuddydd oedd y byddai'r digwyddiad yn creu'r hwb angenrheidiol i'r economi leol wrth i'r prif dymor twristiaid ddod i ben.

*During the summer, we sponsored two local festivals – in Pembroke and Pembroke Dock. The festivals played an important role for the local community by encouraging people to get involved in the various events and activities. They also provided real benefits to the local economy by bringing more people to the area.*

*We also helped to close the season with a bang by supporting the Pembrokeshire Waterway Annual Fireworks Competition "Championship of Champions". The organisers of the two day extravaganza hoped the event would bring a much needed boost to the local economy as the main tourist season came to an end.*

### Cysylltwch â ni...

Drwy gydol y broses o ddatblygu gorsaf bŵer newydd ar ein safle ym Mhenfro, mae RWE npower yn ymroddedig i hysbysu pobl leol ac ystyried eu barn.

Os oes gennych unrhyw gwestiynau, bryderon neu sylwadau, neu os hoffech ddwyn rhywbeth at ein sylw, yna cysylltwch â ni.

### Contact us...

*Throughout the process of developing a new power station at our Pembroke site, RWE npower is committed to keeping local people informed and taking their opinions into consideration.*

*If you have any questions, concerns, comments, or there is anything that you would like us to be aware of, then please contact us.*

Danfongwch e-bost atom yn [pembroke@rwenpower.com](mailto:pembroke@rwenpower.com) neu ffoniwch linell wybodaeth Penfro ar 0845 136 0102

Email us at [pembroke@rwenpower.com](mailto:pembroke@rwenpower.com) or call the Pembroke information line on 0845 136 0102