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To: [Wylfa Newydd](#)
Subject: RE: IACC Deadline 2 Submission : Local Impact Report - Economic Development - Local Employment (email 5)
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Pnawn Da/ *Good afternoon,*

Gweler ynghlwm cynrychiolaeth CSYM mewn perthynas â'r uchod / *Please see IACC's representation in respect of the above.*

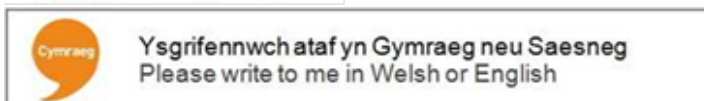
Bydd fersiwn Gymraeg yn cael ei ddarparu cyn gynted a phosib / *A Welsh version of the submission will be provided in due course.*

Cofion/ *Regards,*
Manon

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Mae cynnwys y neges e-bost hon yn cynrychioli sylwadau'r gyrrwr yn unig ac nid o angenrheidrwydd yn cynrychioli sylwadau Cyngor Sir Ynys Môn. Mae Cyngor Sir

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Energy Island and Enterprise Zone

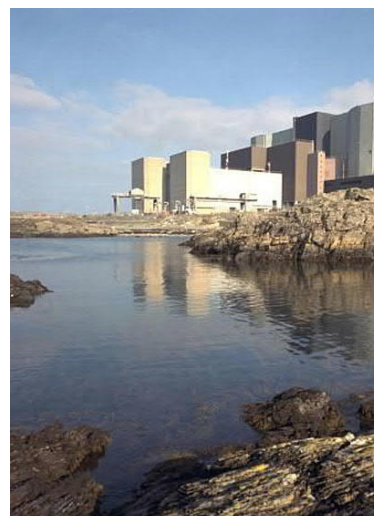
Reassessment of Legacy
targets, Benefits and
Outcomes

July 2012

46406008

Prepared for:
Isle of Anglesey County
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UNITED
KINGDOM &
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1

EXECUTIVE SUMMARY

The Isle of Anglesey County Council instructed URS and ESYS Consulting to undertake a review of the outcomes, impacts and targets associated with the Energy Island programme and Enterprise Zone. The purpose here was to:

- Understand the implications of the decision by RWE npower and E.ON not to proceed with the development of a new nuclear build at Wylfa
- Identify the ongoing impact of the recession on the economy and investment projects
- Run different economic scenarios to consider the implications and future direction of policy

The macro-economic environment has deteriorated with the UK entering a 'double dip' recession the first since 1975. Further, there is the danger of slipping into a deeper recession reflecting difficulties in the Eurozone around sovereign debt and the banking system.

These wider economic trends and investment decisions at the local level have exacerbated already challenging conditions in the Anglesey economy. These include an industrial structure strongly skewed to primary and production activities, low levels of entrepreneurship and fewer job opportunities and vacancies per job seeker. The working age population also has high levels of long term unemployment and there are concentrations of deprivation in both urban and remoter rural areas.

It is clear that with a new build at Wylfa and other Energy Island investments the employment situation on the Island would be greatly enhanced over time in the next five years assuming the best case scenario is realised. The work to revise the outcomes also highlights a number of key issues and recommendations including:

- The need to maximise the use of existing incentives and programmes, particularly the Enterprise Zone in the short term whilst there is ongoing uncertainty in relation to nuclear new build and future growth prospects in the wider UK economy
- The mismatch between skills demanded by Energy Island projects and the skills available in the current working age population. This means a subsequent requirement for investment in skills training and workforce development to maximise benefits locally.
- The need to closely monitor the performance of the economy, the decisions around key Energy Island investments including the potential nuclear new build and rigorously appraise new investment prospects. If there is continued evidence of low growth decline in the economy and reduced levels of investment there will be a pressing need for contingency planning to support the economy and help stimulate growth.

2

INTRODUCTION

The Isle of Anglesey County Council instructed URS and ESYS Consulting to review and re-assess the targets and outcomes of the Energy Island programme and Enterprise Zone. The instruction came following the decision by RWE npower and E.ON not to proceed with the development of a new nuclear power station at Wylfa through the joint venture, Horizon Nuclear Power (HNP).

Given this decision and resulting uncertainties there is a need to look at the implications on the Anglesey economy of a range of scenarios to inform future policy and decision making.

The revised projections and resulting outcomes will be used to prioritise activities and policy development based on a clear consideration of the likely future scenarios. In this way the resources and investments that are available will be used efficiently and to maximise impact for the benefit of the Anglesey and North Wales economy and residents.

The remainder of the report is structured as follows:

Section 2 covers the approach to the study

Section 3 sets out the wider context and previous work undertaken

Section 4 provides an overview of the wider macro-economic context

Section 5 provides an update on the most recent sub-regional trends

Section 6 details revised economic projections

Section 7 outlines a revised set of outcomes

Section 8 discusses some of the key findings and recommendations.

3

APPROACH

The approach to re-assessing the outcomes and targets involved the following:

Task 1: Model updates

The first stage of the work involved an update of the employment model with more recent BRES data for 2010 to ensure that the impact of the recession on the Anglesey economy is fully captured. We also reviewed the original economic impact modelling for the Energy Island potential opportunities study and Enterprise Zone to re-assess the impacts identified in the report and ensure consistency.

To inform the modelling and review work we then sought a view from the Council as to any recent job losses or proposed investments that had not been included in the existing model. At a broad level we then assessed the implications for the wider Energy Island programme of the recent decision on the timing and/or the magnitude of economic impacts.

Task 2: Macro-economic risks and implications

A brief review of the latest economic growth projections for the UK economy was undertaken. This will be used to inform any required re-calibration of the model as well as feeding into the wider risk analysis.

Task 3: Projections and Scenarios

A re-run of the employment projections including relevant scenarios was undertaken to understand the potential economic futures looking at the impact of a “no new build” and a range of scenarios with delays to the new build programme. The original assumptions on decommissioning would be discussed to confirm whether plans may have changed in light of Horizon’s recent decision.

Task 4: Re-evaluation of potential outcomes and impacts

In light of the analysis we would re-consider the original outcomes, focusing on the economic measures, to understand how they would change in light of the scenario re-runs. At the same time we would review the evidence base and assumptions developed for the Enterprise Zone to provide a revised analysis of the impacts of the zone.

Task 5: Reporting and policy recommendations

The final task would be the production of a succinct report with the main messages from the updated analysis. This would include a short summary of the revised impacts and outcomes. We would also interpret the findings and understand the policy implications for the Isle of Anglesey County Council and its partners.

4 CONTEXT

A number of pieces of work have been commissioned to understand the potential scale of impacts that could result from the Energy Island programme and more recently the Energy Island Enterprise Zone. The following section summarises the main pieces of work alongside the impacts, targets and outcomes identified.

4.1 Relevant background research

Energy Island programme: Potential outcomes and performance measures (2010)

The Energy Island Programme sets out a vision which has the potential to make a significant contribution to Welsh Energy policy, wider low carbon economy and provide economic growth for North Wales through the pursuit of the following objectives:

1. **Production** – Investing in low carbon energy production to help secure a stable energy future for Wales.
2. **Demonstration** – Establishing world-class facilities to place Anglesey as a leading location for low carbon energy innovation and demonstration.
3. **Servicing** – Ensuring that local companies and people benefit and take advantage of opportunities from new energy investments.

The programme has the potential to create 2,500 net additional jobs to 2025, alongside 6,000 construction jobs and a major contribution to Gross Value Added (GVA). This represents a contribution of £2.34 billion to Anglesey and the sub-regional economy in the period to 2025.

This includes investments such as the proposed new nuclear build at Wylfa, potential opportunities from the Round 3 offshore wind zone alongside earlier stage technologies including marine current technology and existing plans for a large scale biomass at the Anglesey Aluminium site.

Energy Island Programme – Potential Outcomes and Performance Measures (2011)

The overall purpose of the study was to ensure realistic and achievable targets and importantly ensure these were measurable. The study sets out employment scenarios for the programme to understand the potential scale of impact. Measures and outcomes to assess the progress of the programme are also specified (see below)¹.

¹ The measures and targets have been amended from the original version to reflect the availability of published statistics to use in measuring impacts.

Indicator	Outcome / target
1. Vibrant Anglesey and NW Wales economy:	
1.1 GVA	Increase of 10-13% over and above base case to 2025
1.2 GVA per head	Gap in GVA per head relative to the UK measure is closed from the current position (2010)
1.3 Employment per head of population	Increase the number of jobs per head of population over the period to 2025
1.4 Retention of younger people	16-24 year olds as % of overall population stabilises at 10%
1.5 Working age population	Proportion 16-64 year increases to 61-62% of the population by 2025.
2. Increased Prosperity	
2.1 Earnings	Gap between Anglesey and Wales as a whole narrows over the period to 2025
2.2 Skills	At minimum a 3% increase in the proportion of the workforce (over 2008 levels) for the SOC 1-3
2.3 Unemployment	The proportion of Job Seekers Allowance (JSA) claimants reduces to that of Wales
2.4 Activity rates	Rise to at least 1% above that for Wales
2.5 Long term unemployment	Reduces to the average for Wales overall
3. Flourishing local culture	
3.1 Welsh language speakers	The proportion of Welsh language speakers is maintained at the current level, with between 60-65% of the population (aged 3+) able to speak Welsh
3.2 Housing need	Level of housing need as evidence by the Index of Multiple Deprivation (IMD) housing domain shows marked improvement relative to Wales
3.3 Vibrant housing market	Land Registry house price data shows sustained improvement relative to Wales
4. Enhanced environmental position	
4.1 Low carbon future	Carbon emissions reduce (11.3 in 2008) from above to below the average for Wales (10.8 in 2008)

Energy Island Enterprise Zone (2011-12)

URS were commissioned to produce a prospectus and evidence base document to inform the development of the Energy Island Enterprise Zone (EZ). The work built on the previous Energy Island commissions and was also informed by work on the Economic and employment land review for Anglesey and Gwynedd.

The Enterprise Zone prospectus and evidence base was produced over the latter part of 2011 and finalised in February 2012. The provisional outcomes and impacts identified within the prospectus were as follows:

Theme/Indicator	Outcome
Total area	250 hectares
Jobs potential	3,700 jobs (best case scenario over lifetime of zone – assumed as 25 years)
Gross Value Added	Increase by 10% over and above the “business as usual” scenario
Unemployment	Reduce unemployment and close the gap with the Welsh national average rate
Demographics	Reduce the out-migration of younger people by offering sustainable employment

These impacts were calculated using existing data relating to the Energy Island proposals, evidence from the economic and employment land review including projections from the ESYS model alongside further assumptions on the capacity, suitability and likelihood of further additional development on specific sites.

4.2 Recent developments

Since the Isle of Anglesey County Council developed its analysis of the impacts and outcomes arising from the Energy Island programme, several developments have taken place, namely:

- The decision in March taken by German utilities RWE and E.ON scrapping plans to develop two reactor sites in the UK, including one at Wylfa. Horizon's owners put the business on the market, citing doubts over financing the projects and costs associated with the German government's decision to abandon nuclear power in the wake of the Fukushima disaster.
- At the existing plant at Wylfa, Reactor 1 is to be allowed to operate until 2014, after being extended to use the remaining fuel. However Reactor 2 is being pulled off-line and stopped producing electricity on April 25th 2012, due to the limited fuel supply.
- Other investors from China, America and the Middle East have expressed interest in buying Horizon and proceeding with plans to build a new nuclear reactor on Anglesey following the decision to shelve the £8bn plan. Horizon is up for sale, with the possibility that plans for Anglesey and Oldbury in Gloucestershire could still be pushed forward under new owners.
- The macro-economic environment has deteriorated with the UK entering a 'double dip' recession the first since 1975. Further, there is the danger of slipping into a deeper recession reflecting difficulties in the Eurozone around sovereign debt and the banking system, with no sign of any lasting solution to the underlying problems of competitiveness facing the euro-periphery.
- Finally, other development proposals, although at an early stage of development, have come forward, notably the proposal by Land and Lakes for a leisure development and Lateral Power for a Biomass plant and Ecopark.

This report reviews and revises previous analysis in light of these developments, including previous economic projections and outcome indicators work. In discussion with the client, it has been agreed to **include** the Land and Lakes and Ecopark proposals, although it should be noted that these have not yet received outline planning permission. Additionally, in the current climate there may be additional funding constraints. Second, the prospect of a more protracted recession arising from 'contagion' effects spreading from the Eurozone have been **excluded**, although the Eurozone is facing a severe test and the possibility that it may 'break apart' cannot be ruled out.

5 MACRO ECONOMIC OUTLOOK

5.1 The international economy

Looking at Q1 2012, the year started quite positively. Data continued to point to a gradual but uneven, recovery in global growth. Second, the actions of the ECB (in terms of liquidity support to the Banks through the Long Term Refinancing Operation or LTRO) had a marked impact on sentiment and reduced risks, although this has turned out to be only temporary. There are now signs of a weakening in the pace of expansion in the global economy:

- The global PMI (Purchasing Managers Index) fell in April
- In the USA whilst GDP was estimated to have grown by 0.5% in the first quarter in line with expectations, activity indicators point to slightly weaker growth in the second quarter.
- The latest indicators highlight the weakness of activity in the Euro area. The PMI fell in April in both core and periphery countries and has continued to be weak. Business and consumer confidence indicators have deteriorated and unemployment has risen. A financial support package for Spanish banks also appears unlikely to offer any long term comfort to the markets.
- GDP growth in China had slowed, a little although authorities have responded by providing some monetary stimulus.

More positively, oil prices have fallen significantly and other commodity prices have fallen back a little, although this largely reflects weaker global growth prospects.

The **major concern** remains the Eurozone. There is speculation that Greece may yet leave the Euro area. Concerns have also increased about the Spanish government's ability to deliver the planned fiscal consolidation against a poor economic background and further sovereign and banking sector downgrades. The Euro area continues to face fundamental challenges - especially the need to reduce the indebtedness and improve the competitiveness of some member countries – to which there has been no long term plan developed.

As a result concern over the risk of a 'disorderly outcome' has increased; such an outcome could result in considerably lower output in the Euro area and **major disruption** to global banking and financial markets. The difficulties in the Eurozone will be transmitted to the UK through three mechanisms: confidence, contagion via the banking system; and trade. Hence there are considerable downside risks from Europe both to the UK economy and its constituent regions.

5.2 UK demand and output

According to the most recent ONS estimate, GDP fell by 0.3% in the fourth quarter of 2011, 0.1 percentage points weaker than reported in the second release. In the Bank of England's last Inflation Report Q1 was expected to show some increase and a double dip recession avoided. However, ONS data records a very significant contraction in construction output which has driven the UK economy officially into a double dip recession.

Uncertainty has increased with the onset of Q2 with the slowing in growth in the UK's main trading partners likely to have contributed to weaker exports. Also the headline level of GDP in the Q2 is likely to be affected by the effects of lost output due to the extra bank holiday associated with the Queen's Diamond Jubilee celebrations and the impact on North Sea oil and gas extraction of disruptions at the Elgin platform.

Confidence is draining from business and consumers with many firms concerned about events in the Eurozone and, tentatively, a reaction to the technical recession. Hence very weak underlying recovery is unlikely to build momentum in Q3 and weak growth is likely for much of the second half of the year, with overall output showing very little increase over the year.

With output having already contracted in the fourth quarter of 2011, official data is likely to show GDP falling for 3 successive quarters. Headline GDP will look poor therefore until much later in the year. This is reflected in more recent economic forecasts. For example, ITEM Club reporting growth of just 0.4% growth this year half the 0.8% expected by the OBR (Office of Budget Responsibility). Similarly, whilst the OBR forecast growth of 2% in 2013, Standard & Poor predict growth at just 1%.

In response to this further deterioration in the economic outlook the Bank of England has recently launched a credit easing scheme to be operated in conjunction with the banks. The Government's response constrained by implementation of the austerity programme, which to date has kept credit agencies at bay. The Bank of England's Monetary Policy Committee (MPC) has voted to keep interest rates unchanged at 0.5 per cent and quantitative easing (QE) has not been extended.

The International Monetary Fund (IMF) suggested that authorities should consider additional rounds of QE and cutting interest rates even further to 0.25 per cent to encourage growth in the UK's weak economy. Further rounds of QE are widely anticipated, underlining the difficulties facing the UK economy.

5.3 Implications for the projections

It is almost impossible to factor in the impacts associated with a disorderly outcome to the Eurozone crisis. However, the potential for a second deep recession cannot be ruled out. Assuming a solution that satisfies the markets can be found, in the interim there are for some time likely to be effects on confidence and credit availability as wholesale funding costs rise. Even without a deep recession this makes it **less likely** that funding for new major development schemes will be forthcoming, not least as many banks are already over-exposed to the property sector. Overall, it further suggests that the **risks** are clearly to the downside.

6 RECENT TRENDS

6.1 The Anglesey economy – long term challenges

Previous research has identified the following underlying characteristics of the Anglesey economy and challenges it faces, namely:

- Industrial structure strongly skewed to primary and production activities
- Low levels of entrepreneurship
- Fewer job opportunities (relatively low job density) & limited vacancies per job seeker
- More people 'forced' into self employment and a significant number of lifestyle businesses
- High levels of long term unemployment
- Concentrations of deprivation in remote areas

6.2 Impact of the Recession

Whilst Anglesey faces many long term challenges - with the underlying economic and social problems reflecting significant 'market failures' arising from its peripheral location – the recession has tended to exacerbate these difficulties. During the recession:

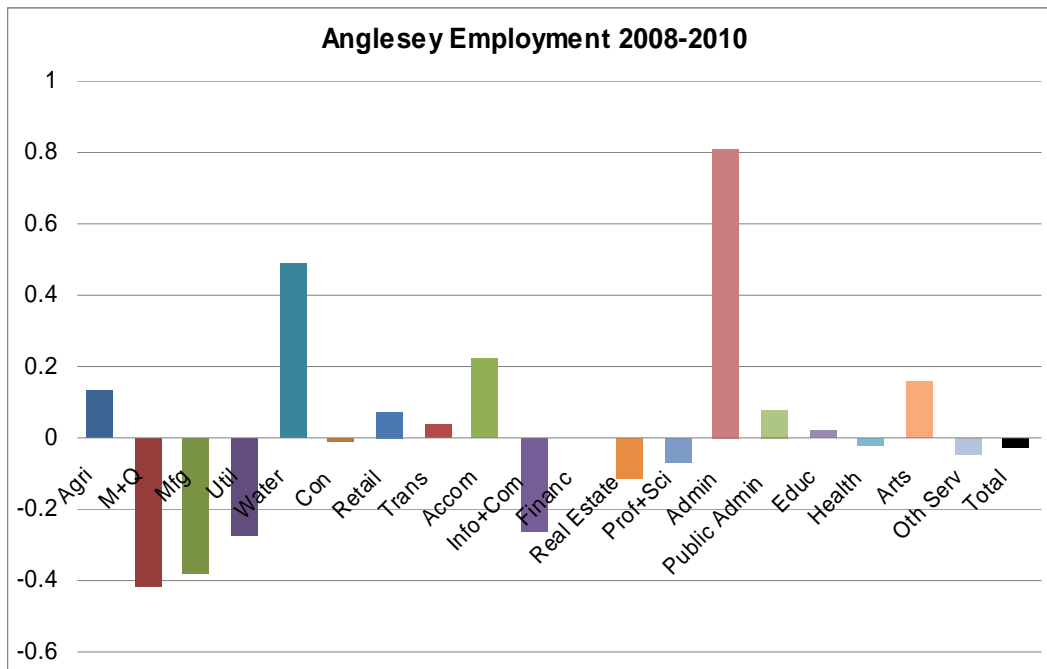
- Regional disparities tend to increase as more peripheral, remote regions with lower value added tend to be more significantly affected
- Structural changes are accelerated as less profitable/lower value activities are forced out of business.

Moreover, prospects for recovery are hampered by the weak macro-economic outlook and tight credit constraints. The lack of confidence is also playing a role in restricting investment and of course employment growth.

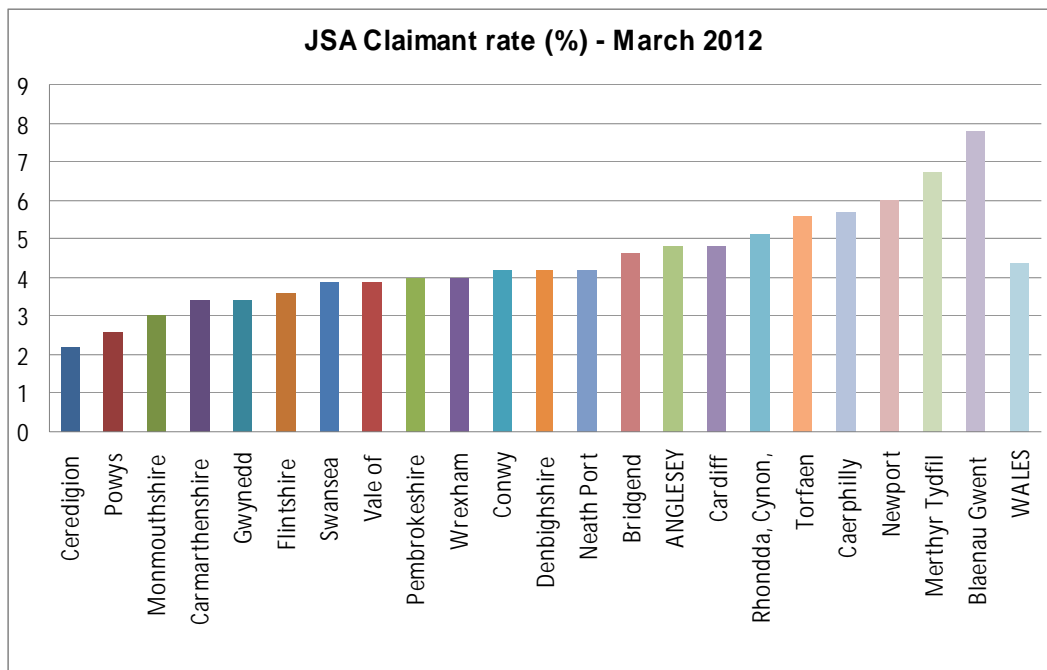
This contributes to a picture of a relatively moribund economy sharply impacted by recession. This is underlined in recently published ONS data. In particular, the latest GVA (gross value added) data shows that at a regional level, Wales had the lowest GVA (£15,145). Significantly, at a NUTS3 local area level for 2009 (the latest data currently available) there were only two other authorities with a lower GVA per head than Anglesey (£11,441). GVA per head in Anglesey is just 57.2% of the UK average (£20,000).

Whilst this figure is low it also fell from 2008 to 2009 (as it did in most areas), but is likely to fall again in 2010 reflecting the closure of Anglesey Aluminium in 2009, with the closure of reactors in 2012 and then 2014 providing further shocks.

As the chart below indicates, the recession has led to a small economy contracting even further. Moreover, whilst the jobs lost have been in higher value manufacturing and utilities, significant offsetting growth has been in low value areas notably administration.



The Claimant rates remain high and more in line with the older urban areas of South Wales.



Residents of Anglesey earn more on average than those that work on the Island, suggesting that many residents out-commute to seek employment in higher paid jobs. However, both resident and workplace average earnings are below the national average level with the gap between Anglesey and Wales increasing over the period on both measures.

Earnings: Resident analysis median gross weekly pay (£) for full time employment

Date	Anglesey	Wales	Difference
2009	436.7	444.6	+7.9
2010	439.5	456.4	+16.9
2011	433.8	460.0	+27.3

Source: ONS Annual Survey of Hours and Earnings

Earnings – Workplace analysis median gross weekly pay (£) for full time employment

Date	Anglesey	Wales	Difference
2009	441.2	440.4	-.8
2010	430.3	451.1	+20.8
2011	425.2	454.4	+29.2

Source: ONS Annual Survey of Hours and Earnings

Employment rates are higher for Anglesey residents than they are for Wales as a whole with nearly 70% of residents in employment. As noted previously the level of self employment is much higher on the Island than in comparison to the wider area, with the overall lower density of jobs available being a major factor in terms of forcing residents to pursue self employment, particularly in lifestyle businesses.

Employment: Resident analysis, 2011

Status	Anglesey (number)	Anglesey (%)*	Wales (%)
In employment	30,000	69.5	66.2
Employees	25,500	60	57.3
Self employed	4,100	8.9	8.3

Source: ONS Annual Population Survey*% figures are a proportion of the working age population aged 16-64 years

In summary, Anglesey is a small peripheral economy that has been adversely affected by a number of different trends and decisions. This is at a time of turmoil in global markets which is hampering investment, credit availability and employment growth and public sector funding is reducing.

7 PROJECTIONS AND SCENARIOS

7.1 Introduction

Consideration has been given to the trends outlined above and accordingly the projection assumptions and scenarios revised. The analysis presented updates that undertaken for Anglesey County Council and URS in March 2012 in various ways, namely:

- Double Dip recession was a possible scenario in the March model. It has since become a reality hence the growth/decline rates used for this version of the model reflect that in the new base case.
- The base BRES data used has been updated from 2009 to 2010.
- Amendments to the decommissioning timetable at Wylfa have been built in. Here the job losses associated with decommissioning will be more gradual compared to Trawsfydd.
- The potential new build figures at Wylfa have been updated to agree with the recent Cogent report, which assumes a three unit (previously we assumed a two unit) build and hence has potentially more associated jobs.
- Delays to the Biomass project within the Energy Island programme have been reflected in this version.
- At the request of the client, we have included jobs from two 'potential' developments: 'Land and Lakes' and Lateral Power's 'Ecopark' proposals.
- The possible effects of another major hit on growth rates (from the fallout of the Eurozone crisis) have NOT been included, although are a possibility.
- Further detail on the employment assumptions are outlined in appendix A.

7.2 Overview of scenarios

The following scenarios have been modelled:

1. Base case – No new build at Wylfa
2. New three unit build at Wylfa, commencing build in 2015, jobs as per the Cogent Report of December 2011 (see appendix):
3. New three unit build at Wylfa, commencing build in 2018. Thus all jobs shifted back 3 years from the 2015 scenario above.

At the request of the client, all three scenarios above include the following (see appendix A):

- A. Revised timetable for Energy Island Biomass jobs (delayed 18 months)

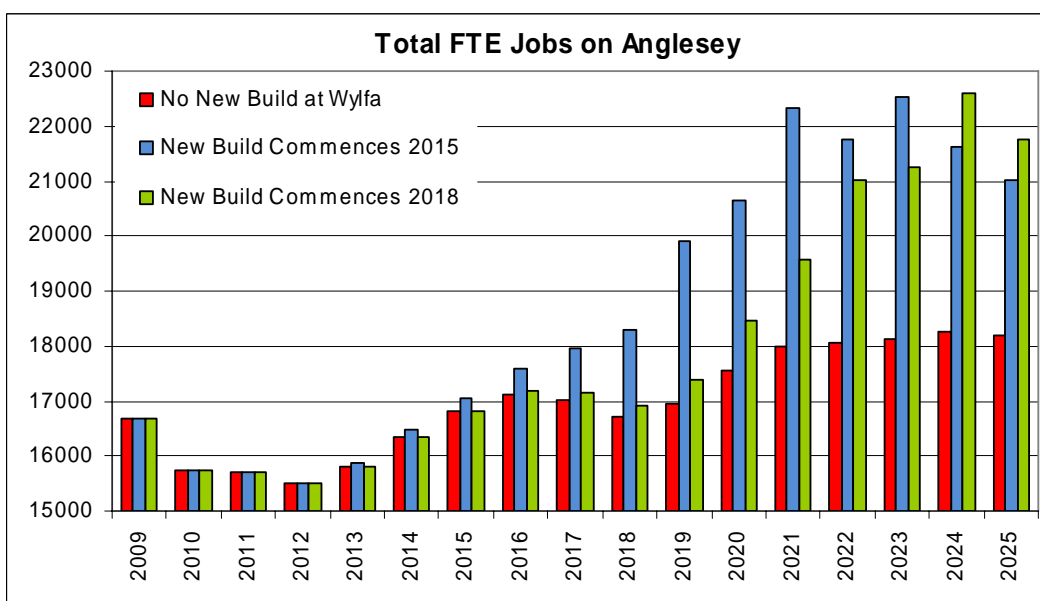
- B. Land & Lakes employment estimates from Regeneris report on the Land and Lakes scheme (March 2012)
- C. Ecopark jobs, based on discussion with Lateral Power May 2012. Assumed from 2016

As noted above employment assumptions for the above projects are outlined in appendix A. The Land and Lakes and Ecopark developments do not yet have planning permission or funding packages agreed. This needs to be borne in mind given the significant proposed scale of the developments.

In addition, the possible impacts of another severe growth constriction in 2012/2013, resulting from the fallout from the Eurozone crisis, have NOT been included in the scenarios above. This again could be causing some overstatement in the job number projections (possibly by as much as 1,000 FTEs).

7.3 Scenarios: Summary of projections

The chart below illustrates the different potential employment levels on Anglesey over time, for the three scenarios:



It is clear that with a new build at Wylfa, the employment situation on the Island would be greatly enhanced over time and that if the new build commenced in 2015 (the optimistic side of expectations), this would provide a much needed boost to employment opportunities in the next five plus years. If commencement is delayed by three years, impacts from a replacement build at Wylfa will not really be felt until 2019/20 onwards.

Whichever new build option were to occur, in the long term (post 2029 when all temporary construction jobs associated with the project have ceased in both 2015 and 2018 scenarios), the Island can expect 1,550 permanent FTE jobs over and above the no-new-build scenario, or a total job level of around 19,900 FTEs. (In the chart above at 2025, there are still 1,425/2,300 temporary construction jobs for the 2015 and 2018 New Build scenarios respectively).

It should be noted that if Land and Lakes and Ecopark projects do not proceed/add the number of jobs projected, all three of these scenarios could be overstated by some 1,300 jobs in the long term.

7.4 Scenarios: Sector projections

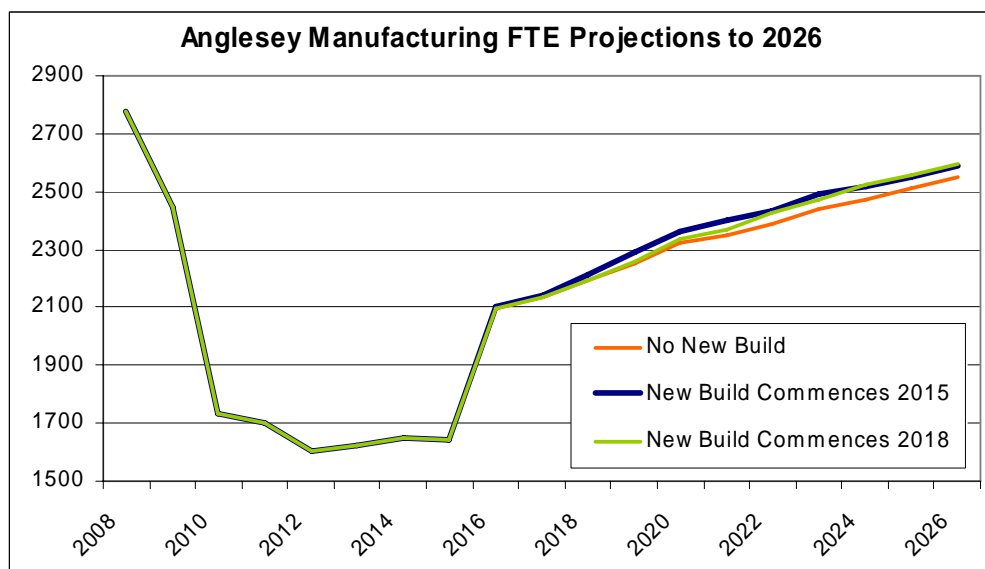
The key sectors impacted by the Wylfa, Biomass, Ecopark and Land and Lakes projects are:

- C: Manufacturing (which would include the bulk of the Ecopark jobs in food processing)
- D: Electricity generation (operational jobs from both Wylfa and the Biomass project)
- F: Construction
- I: Hotels etc, which would include the operational jobs from Land and Lakes.

A review of how these sectors are impacted in the three different scenarios is provided below.

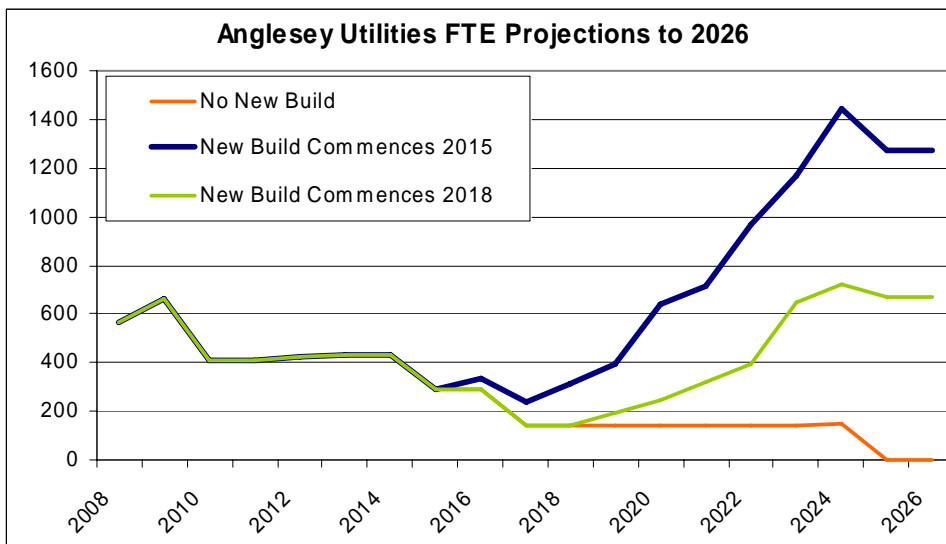
Manufacturing

It can be seen that the different scenarios have little impact on the number of manufacturing jobs on the Island. The circa 430 jobs added by the Ecopark project in food processing is included in all scenarios. The fluctuations below reflect more growth/decline trends than anything to do with the different scenarios, although there may be a slight impact from indirect employment associated with nuclear build.



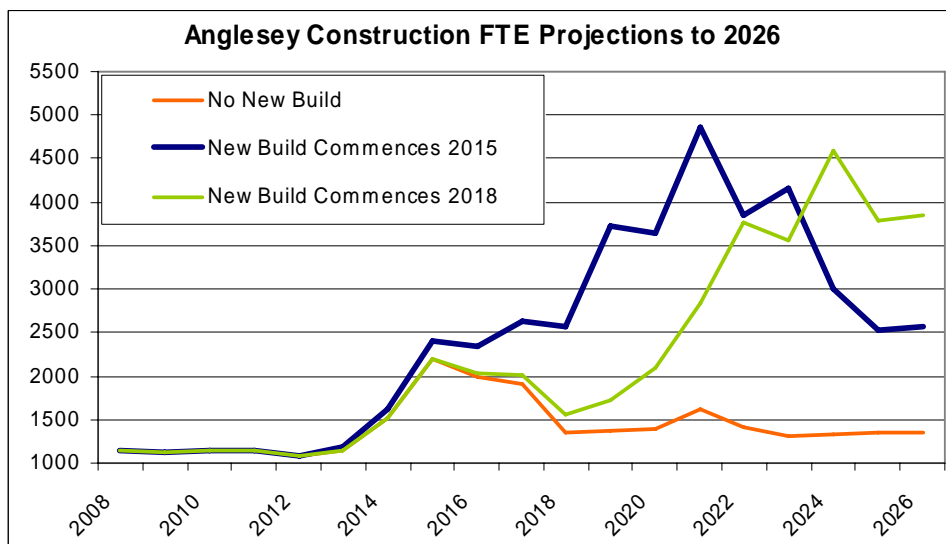
Electricity Generation

This sector is significantly impacted by which of the three nuclear scenarios is modelled, although in the long term (post 2029) the 2015 and 2018 commencement scenarios would converge. The earlier start provides a boost to employment on the Island in the short to medium term.



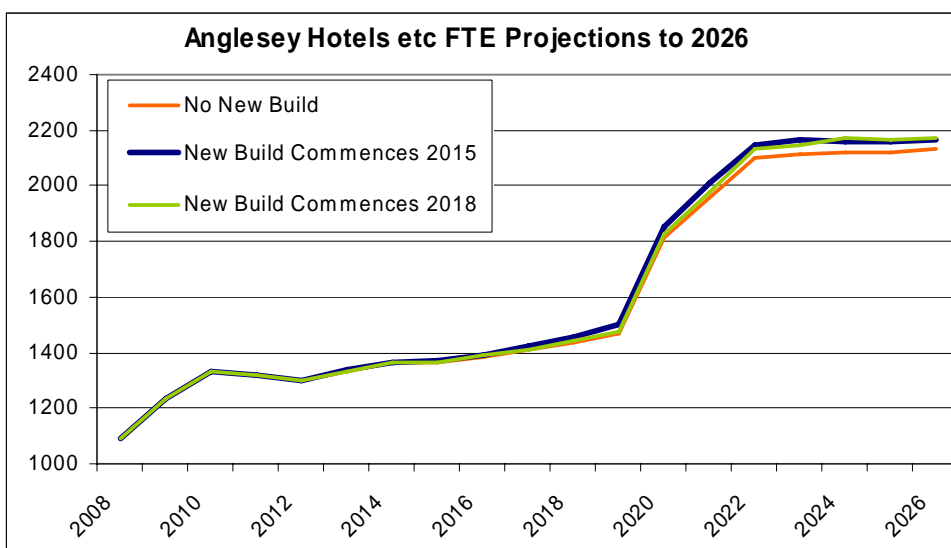
Construction

The additional construction jobs from the nuclear build scenarios are temporary but would provide a sizeable short-medium/medium-long term boost to the Island's employment (depending on whether the 2015 or 2018 commencement occurred). This temporary employment could play a vital part in helping the Island's economy recover post recession. There is also potential for migrant construction workers to relocate permanently to Anglesey and North Wales.



Hotels & Leisure Industries

It can be seen that, as with manufacturing jobs, the different scenarios have little impact on the number of hotel/leisure jobs on the Island. The circa 600 jobs added by the potential Land and Lakes project, is included in all scenarios (and reflected in the jump in level to 2022). There may be a slight impact from indirect employment associated with nuclear build.



7.5

Summary

Energy Island has the potential to make a significant positive impact on Anglesey and North West Wales with significant employment resulting from the new nuclear build at Wylfa. If the new build goes ahead under the best case scenario (2015 commencement of build programme) there will be a significant positive impact in the short term and longer terms which will aid the recovery of the local economy following a period of recession/low growth.

The employment model predicts that the outcomes for the manufacturing and hotel/leisure industries will not be significantly affected by the Energy Island programme relative to the base case scenario. The more obvious impacts will be in the utilities and construction sectors given the scale of the build programme for new nuclear alongside other projects including the biomass power station and Eco park proposals on the Anglesey Aluminium site.

These construction and operational jobs in the utilities sector and supply chain offer a significant opportunity to the local labour force if the appropriate skills are available or can be made available through investment in appropriate training and workforce development programmes over the short term. This is an essential element of the effort to maximise benefits at the local level, particularly given the skills mismatch issues identified in section 7.17 below.

8 REVISED OUTCOMES

Previous research (see section 3, p.6-8) established a range of outcomes which are reviewed further below in relation to selected scenarios modelled in the previous section, namely:

- Base Case: no new Nuclear build (the most pessimistic of the scenarios)
- Scenario 1: anew three unit Nuclear build, starting 2015 (the most optimistic of the scenarios)

8.1 Energy Island Programme – Potential Outcomes

The original outcomes for the **vibrant Anglesey and NW Wales** economy theme were:

Indicator	Outcome / target
GVA	Increase of 10-13% over and above base case to 2025
GVA per head	Gap in GVA per head relative to the UK measure is closed from the current position
Employment per head of population	Increase the number of jobs per head of population over the period to 2025
Retention of younger people	16-24 year olds as % of overall population stabilises at 10%
Working age population	Proportion 16-64 year increases to 61-62% of the population by 2025.

8.1.1 Gross Value Added

The Energy Island economic modeling shows a maximum potential to add 2,000/4,800 jobs to the Anglesey economy by 2025 (Base Case/ Scenario 1 respectively), an increase of around 13%/30% (22.5% average) respectively based on 2008 numbers. However, if we exclude job numbers from potential Land and Lakes and Ecopark projects, these increases fall to 4%/22% (13% average) respectively.

Hence it would seem reasonable to have a cautious target of 10 – 13% increase in absolute GVA over 2008 levels by 2025. This underlying GVA growth which would be most appropriately benchmarked in relation to GVA growth under the Base Case **and** GVA growth for Wales over the same time period i.e., this level of growth would be over and above / net additional to the comparators identified.

8.1.2 GVA per head

It should be noted that in **relative** terms, the improvement will be less visible as other comparator areas will also be increasing their GVA. Hence, overall improvements in GVA per head would be more limited. GVA in absolute terms would be expected to increase over and

above trends in the Welsh economy. However, expressed as an index, the figure is not expected to markedly change from the current level of around 57%. However, this figure should NOT deteriorate from this level. This assumes that whilst there is an increase in levels of output, to some extent this is offset – in terms of the overall level per head – by more people moving into the area.

8.1.3 **Employment creation**

Another key measure would be number of FTE jobs created in the Anglesey economy. Here targets could be informed by the modeling which indicates an additional 2,800 jobs by 2025 over and above the base case if scenario 1 occurs. It should be noted that over 1400 of these jobs in 2025 will still be temporary construction jobs. Jobs created could be monitored through planning applications, discussions with employers and BRES data.

8.1.4 **Retention of younger people**

ONS figures suggest that for 16 to 24 year olds the proportion is broadly static. The overall working age population is also broadly static. Looking forward, the developments are not expected to directly significantly impact this outcome – although out-migration may well have continued at a faster pace under the Base Case.

Hence under the Energy Island scenario Anglesey is expected to retain the current proportion of young people in this age cohort. There is some possibility that with increased participation in further education plus take up of indirect jobs created that there may be some small impact but not exceeding 12% of the working age population by 2025.

Anglesey mid-year population estimates (ONS)

Date	Total	Aged 10 - 14 years	Aged 15 - 19 years	Aged 20 - 24 years	16 to 24	% 16-24
2005	68,500	4,500	4,300	3,100	6540	9.55%
2006	68,600	4,400	4,300	3,300	6740	9.83%
2007	68,800	4,200	4,400	3,400	6920	10.06%
2008	68,800	4,100	4,400	3,600	7120	10.35%
2009	68,800	4,000	4,200	3,700	7060	10.26%

8.1.5 **Working age population growth**

New employment opportunities of the scale envisaged in the new build scenarios are likely to attract migrant labour with subsequent impacts on the housing market. Hence the proportion of 16-64 year olds having fallen to 56% in 2009 is expected to increase to around 61-62% of the population by 2015. This is a recovery back to the levels seen in 2005, which illustrates that although the proportion of 16-64 year olds has remained fairly constant, at around 61-62% of the population, it has dipped in the past few years.

The following outcomes were identified under the **Increased prosperity** theme:

Indicator	Outcome / target
Earnings	Gap between Anglesey and Wales as a whole narrows over the period to 2025
Skills	At minimum a 3% increase in the proportion of the workforce (over 2008 levels) for the SOC 1-3
Unemployment	The proportion of Job Seekers Allowance (JSA) claimants reduces to that of Wales
Activity rates	Rise to at least 1% above that for Wales
Long term unemployment	Reduces to the average for Wales overall

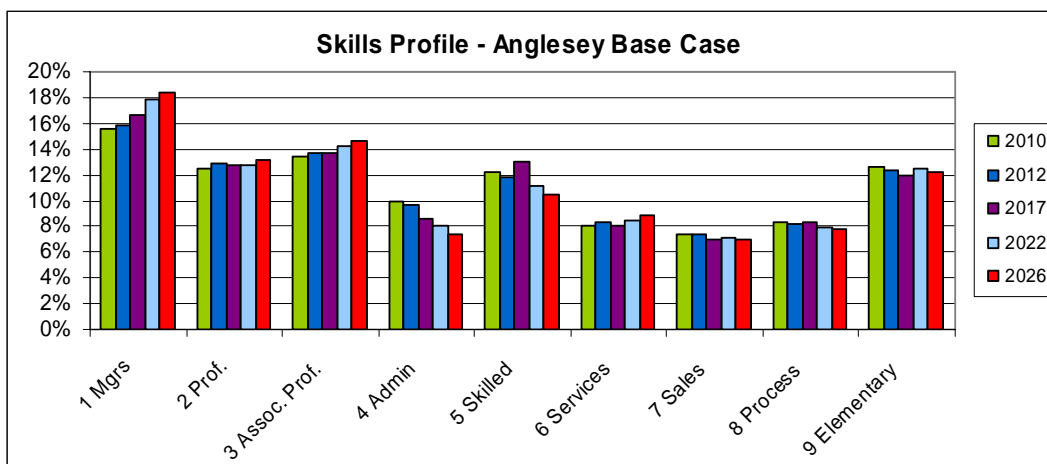
8.1.6 Average earnings

Energy Island should see an up-skilling in the jobs provided – and a corollary of this should be that the average wages should start to converge with Welsh averages overall. The trend over time is illustrated in the graph overleaf. It is difficult to be precise here, but again the expectation would be that wage rate will start to converge with – and possibly exceed – the rate for Wales.

8.1.7 Increasing skill levels – demand (workforce based)

It is beyond the scope of this project to completely revise the detailed labour market analysis carried out in the ESYS report for IACC in August 2011. However, pertinent skills results will be updated here in light of the revised employment modelling.

The chart below illustrates the changing profile of skills required for jobs on Anglesey in the Base Case. It clearly illustrates demand for higher skilled groups rising whilst demand for lower skilled workers declines:



This underlines not just the significance of the employment created but also the quality of jobs and role in up-skilling the labour force. This has associated benefits both in terms of earnings but also levels of gross value added per employee achieved. The chart below shows the supply-side gaps and surpluses for the different skill sets when comparing the makeup of 2010's workforce to 2026 demand.

It is clear that if the makeup of the workforce does not change (in relation to skills levels and numbers) by 2026, that there will be shortages of higher skilled and service occupations in all scenarios, but more exaggeratedly so for the Energy Island scenarios. The shortages of elementary and process level workers are far less extreme.

This is **important** because it suggests in the absence of considerable up-skilling, the new employment created might not impact on inactivity rates and unemployment in the local labour market as much as might be expected. It underlines the extent to which there is potentially a significant skills mismatch between labour force skills on Anglesey and those required. **Hence, the impacts will tend to be in relation to economic outcomes (e.g. GVA, employment creation), as opposed to regeneration/social outcomes (e.g. unemployment, inactivity).**

The net additional labour market impacts are quantified in the table below. This shows that skills mismatches in the nuclear scenarios are especially marked for skilled workers, (reflecting the demand for a significant number of construction workers) and for professionals, managers and senior officials (for operational roles in the new developments) – very much the higher level occupations.

Anglesey Skills Surpluses/Gaps - 2026 compared to 2010

	Scenario		
	BC	S1	S2
1 Managers & senior officials	-934	-1,394	-1,539
2 Professional	-458	-735	-752
3 Assoc. Prof & Tech	-571	-849	-871
4 Admin & Secretarial	203	-76	-60
5 Skilled	-2	-773	-1,285
6 Services	-355	-428	-422
7 Sales	-118	-262	-242
8 Process	-101	-403	-460
9 Elementary	-247	-494	-549
All	-2,585	-5,413	-6,178

The previous estimates in August 2011 showed marked shortages of high skilled roles and surpluses of lower skilled roles. This is due to marked increases in overall job numbers from adding in Lakes and Land; Ecopark and the increased size of the Nuclear rebuild (should it happen) to 3 units. Comparing this to the present workforce size has the effect of putting all roles in to the shortage category (except admin).

Mid and long term surpluses/gaps painted different pictures in the August 2011 version but are similar in shape (if not extent) in this version – hence we have only presented 2010 to 2026 change. This is probably due to delays in kick off of some projects.

It is important to recognize the above projections are **demand** based estimates and make no assumption around changing supply.

8.1.8 **Economic activity levels**

Labour market outcomes will show less impact than economic outcomes. Over time it IS anticipated that the differentials between local and GB rates will reduce in Anglesey's favour. However, in light of the uncertainties surrounding the current economic outlook it is not possible to forecast with any certainty what these rates might be. Improvements would be expected in a range of labour market indicators including: unemployment, activity/inactivity rates and long term unemployment. However, skills mismatches as identified above may limit local impacts.

8.2 **Energy Island enterprise zone impacts**

The work to develop the Enterprise Zone (EZ) prospectus and evidence base provided a view on the potential of the shortlisted EZ sites to deliver new jobs and investment. This was based on:

- A review of existing development proposals, their estimated impacts and overall progress
- Physical capacity available on shortlisted sites
- Further demand evidence from the economic and employment land study
- Assumptions on the type and mix of development possible on selected sites

This identified the following outcomes:

Theme/Indicator	Outcome
Total zone area	250 hectares
Jobs potential	3,700 jobs (best case scenario over lifetime of zone – assumed as 25 years)
Gross Value Added	Increase by 10% over and above the “business as usual” scenario
Unemployment	Reduce unemployment and close the gap with the Welsh national average rate
Demographics	Reduce the out-migration of younger people by offering sustainable employment

Taking into account the conditions assumed in the best case scenario (2015 new build commencement) and revising the jobs outcome to a time frame consistent with the modelling we would estimate that the EZ could deliver approximately 1300 FTE jobs to 2025. This is around 33% of the overall FTE employment growth predicted for the scenario in the period 2012 to 2025 after discounting the temporary construction jobs.

This is a conservative estimate and could be increased if some of the other longer term sites/opportunities can be realised in this period. However this is a reduction on the estimates provided in the original prospectus due to the further deterioration in economic conditions and double dip recession in the UK.

These figures rely on the ability of the Lateral Power proposals to be realised, Land at Parc Cybi to be successfully marketed and developed to capture supply chain opportunities from Energy Island projects and additional development at the Port of Holyhead and Bryn Cefni industrial estate. The Land and Lakes job impacts have not been included in this figure due to the site being classified as a “reserve site” in the EZ prospectus and evidence base.

Whilst the Enterprise Zone can provide incentives to attract and facilitate investment on the Island the zone by itself will not be able to deliver these economic outcomes in isolation. Given current conditions in the UK economy and the presence of a range of competing locations across the UK for this type of investment there is a need to co-ordinate a range of different resources and finance to deliver the Enterprise Zone and Energy Island vision.

8.3 Summary

Under the Vibrant Anglesey and NW Wales theme the key outcomes include Gross Value Added and overall employment growth. Based on the revised scenarios the 10-13% increase in absolute GVA over and above the base case is still a reasonable and conservative estimate if the 2015 scenario plays out.

The modelling shows that there is a maximum potential to add 2000/4,800 jobs (BASE CASE/2015 scenario) to the economy by 2025. If the 2015 scenario plays out this would mean an increase of 2800 over and above the base case by 2025. This would include some temporary construction jobs at this point in time.

The Enterprise Zone sites can play a significant role in helping to achieve these figures by capturing direct and supply chain opportunities from Energy Island, however further support is needed to realise the ambition of the Energy Island programme and zone.

The Energy Island scenario is predicted to stabilise the proportion of younger people as a share of the total population. At the same time the new employment opportunities created will attract migrant labour and have a subsequent impact on the overall share of the population accounted for by people of working age (16-64 years).

The Increased prosperity theme considers outcomes relating to skills, earnings and economic activity levels. The key message here is the pressing need to up-skill the population in all three scenarios to ensure that the labour supply and skills within it match the employment demand side. This issue is of heightened importance for both the Energy Island scenarios given the demand for higher levels skills.

If this issue is addressed through investment in skills development and workforce training for the current working age population in the NW Wales area there will be a corresponding improvement in terms of earnings and GVA per employee achieved. However the issue also highlights the risk that if this investment doesn't occur there is the potential for inactivity levels, unemployment and resulting social issues to remain as the local workforce is unable to compete effectively for the jobs available.

9 KEY FINDINGS AND RECOMMENDATIONS

The following section summarises the key findings from the analysis for the base case (no new build) and current best case scenario (new build commencing in 2015). The final section then goes on to make a series of recommendations for policy in light of the key messages.

9.1 Base case

The key conclusions from this analysis are quite stark in the absence of a replacement nuclear plant. Although there are some significant development proposals these remain uncertain in terms of their funding, planning and delivery. In the absence of such investment the key messages are as follows:

- Whilst past employment growth has been heavily focused on **retail, property and public sectors there will be little growth in these sectors going forward**. This reflects continuing contraction in public sector spending which of course has a major impact on the property sector
- **Employment growth prospects in other sectors of the economy looks weak**, reflecting a mix of historic low growth, uncertainty & regulatory change
- This raises concerns around **social inequalities and currently high levels of youth unemployment**, especially as regeneration funding falls.
- **Economic malaise may well accentuate falls in population and pose fresh challenges to viability of many services** – especially in remoter communities where they are more costly to provide. This is particularly the case in the face of tight constraints on public sector budgets.
- **Local authority costs may therefore be expected to increase** on balance as funding may fall should population continue to decline. The wider implications of economic decline in terms of the impact on demographic change are very significant and probably worthy of closer consideration.
- The recent review of employment land also points to **a lack of speculative development** due to limited demand and low property values. One of the key players in the property market in recent years has been the Welsh Government. These issues indicate a lack of private sector activity and the critical need for the public sector to use its assets and the tools available, including the EZ status, to lever in development and businesses.

9.2 Best case: New build commencing 2015

If the Energy Island programme is realised there is the potential for significant positive impacts on the NW Wales economy and its residents. These include:

- An increase of 2800 jobs over and above the base case by 2025 (best case scenario)
- Over 10% increase in absolute GVA over and above the base case to 2025
- Increase in the share of the population who are of working age
- Reduction in the level of economic inactivity and unemployment (assuming targeted skills and workforce training programmes are successfully delivered)
- Supply chain opportunities resulting from project investments

To achieve this there is a need to help support the Energy island projects and secure the nuclear new build. Given the breadth and complexity of the projects and organisations involved this requires action at all levels and effective co-ordination between the different actors.

To this end the Energy Island Enterprise zone has the potential to make a positive contribution by providing incentives for new investment but this will not be the solution by itself. Further investment and support from a range of sources is required to facilitate development and ensure that the benefits are realised at the local level. Of particular note here are the following key issues which the analysis has highlighted

- There is a significant **mismatch between local skills available and those demanded by new development** – this is an issue even in the base case scenario and an area where the public sector can make a significant impact. In the event of the new build and other energy island projects progressing the situation is even more pronounced
- Linked to the above **a need to invest in significant skills development and workforce training** initiatives if the existing working age population, both in and out of employment, is to benefit from the additional employment. Success here will result in both improved economic outcomes (e.g. GVA/employment rates) and a contribution toward regeneration and social outcomes (e.g. reducing inactivity levels)
- It needs to be borne in mind that even if a replacement reactor goes ahead it may only have a limited impact in addressing the loss of other jobs over the course of the recession which has considerably weakened the Anglesey economy.

9.3 Policy recommendations

The following section sets out a series of recommendations for policy and intervention in relation to the different scenarios and in order to address the ongoing uncertainty in the short term.

1. Managing uncertainty – actions in the short term

In the short term there is a need to deal with on-going uncertainty around whether the new build will proceed or not. Relevant activity should involve:

- Further analysis / action planning :
- Economic intelligence / evidence base work to monitor the situation
- Further development of actions around specific issues e.g. skills development and workforce training
- Forecasting and scenario development
- Policy analysis / cross impact analysis
- Enterprise Zone -Deliver positive economic outcomes in the short to medium term to help address some of the effects of the recession on Anglesey and North Wales
 - Effective promotion and co-ordination of Energy Island and the Enterprise Zone by actors including the Isle of Anglesey County Council, Welsh Government with support from UKTI. This is particularly important when it comes to the promotion and marketing of the EZ (and other EZs in Wales). Ensuring that there is a clear proposition/message and range of co-ordinated incentives and resources to attract and assist investors is essential in this highly competitive environment. What is unique to the Energy Island proposition is the presence of a range of proven, near market and early stage energy technologies in one location.
 - Consideration of use of Local Development Orders (LDO) with the aim of fast tracking the planning process on relevant EZ sites to facilitate new investment.
 - Review of additional infrastructure requirements for EZ sites
 - Securing further Welsh Government support for the EZ programme specifically for the above measures and through on-going advice from relevant departments

2. Delayed Start / Slow Growth – building on new opportunities

Assuming the economy continues to recover slowly and the new build starts in 2015 or sooner then the broad policy stance can be continued. In this scenario the steep growth may raise issues in terms of capacity - although the longer time period will have some advantages in terms of strategy planning. Areas to consider are as follows:

- The issue of **investment in skills development for the existing workforce** is critical both here and in the base case scenario; however given the skills mismatches predicted for the 2015 best case scenario investment here should be prioritised.
- Similarly in the light of previous evidence on the impact of incentives within EZs there is a need to ensure that **appropriate support for skills development, training and employment growth is provided to companies attracted to the EZ**. Critical here is that any support provided does not over burden businesses with extra red tape.
- For the EZ firms **packaging these types of programmes and support with relevant financial incentives** provide a greater possibility that benefits, particularly new jobs created, can be captured by the local workforce. Here it is important to use existing teams, resources and organisations knowledge to maximise the use of local labour through tailored one stop support to EZ businesses.
- There are other **mechanisms and structures that could be used to capture benefits for the local community and help to finance Energy Island projects**. There is potentially merit in looking at approaches from elsewhere in the UK to understand the potential here.

There is clearly the possibility of a replacement reactor going ahead but the start may be delayed and/or in the context of much slower growth. This may be because of further difficulties in the Eurozone impacting on growth or because the developments included within the projections (Land and Lakes and Eco-Park), are either delayed or do not proceed. Hence the need, as set out above, for close on-going monitoring of activity, including the need **for robust assessment of development proposals** that do come forward. The latter would include a close look at funding, feasibility and deliverability as well as likely economic benefit.

In these circumstances where there is much slower growth than predicted, loss of investment projects and a further delay to the new build (2018 scenario) there may well be a need to consider some form of economic stimulus package focused on key growth areas including:

- Farming & food
- Financial support to SMEs
- Energy related activity

- Manufacturing
- Leisure & tourism
- Distribution & transport
- Inward investment

In all of this there is a need to align existing resources from Government at the national and European levels to help drive growth. To this end there already some good opportunities including the next round of European funding and Welsh Government programmes which prioritise areas where Energy Island can make a significant contribution. These include:

- Raising productivity
- Investment in energy efficiency and renewable energy development,
- Support for small and medium sized businesses and
- Targeting resources at the regions poorest communities

3. Contingency plans – no replacement reactor

Should a replacement reactor not be commissioned **and** uncertainties continue to surround other potential developments there is a need to develop at an early stage as possible some form of contingency plan including:

- Early root & branch review with key stakeholders
- Socio-economic impact analysis covering areas including:
 - Demographic change and migration patterns
 - Unemployment and employment
 - Housing and planning
 - Social and educational services
 - Exclusion and disadvantage
 - Cultural implications
- A review of the costs implications for service delivery and local authority budgets
- Integrated policy analysis and assessment

In this scenario there may also be the potential to expand the remit of the Enterprise Zone to encourage investment form other sectors of the economy.

Assumed Nuclear new build jobs as per Cogent report of December 2011

	2013	2014	2015	2016	2017	2018	2019	2020
Wylfa New Build 3 Unit								
Horizon Generation jobs	0	0	0	50	100	175	250	500
Construction jobs	50	100	200	350	700	1200	2325	2175
Total	50	100	200	400	800	1375	2575	2675
	2021	2022	2023	2024	2025	2026	2027	2028
Horizon Generation jobs	575	825	1025	1300	1425	1450	1525	1550
Construction jobs	3150	2300	2675	1450	950	275	0	0
Total	3725	3125	3700	2750	2375	1725	1525	1550

Revised timetable for Energy Island Biomass jobs (delayed 18 months)

Biomass Project	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
CONSTRUCTION																
Direct Jobs (Anglesey)	1	52	85	4	4	5	5	6	6	7	7	8	8	9	9	10
Indirect Jobs (Anglesey)	0	10	17	1	1	1	1	1	1	1	1	2	2	2	2	2
Total Net Addl Jobs (Anglesey)	1	62	102	4	5	6	6	7	7	8	8	9	10	11	11	12
Indirect Jobs (NWW Excl Ang.)	3	149	244	10	12	13	15	16	18	19	20	22	24	26	27	29
Total Net Addl Indirect Jobs	3	159	261	11	13	14	16	17	19	21	22	24	26	27	29	31
Total Net addl Jobs	5	211	346	15	17	19	21	23	25	27	29	32	34	36	39	41
Indirect Jobs on Anglesey	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
OPERATION																
Direct Jobs (Anglesey)	15	22	21	129	130	131	132	133	134	135	136	136	137	138	139	141
Indirect Jobs (Anglesey)	1	2	2	13	13	13	13	13	13	13	14	14	14	14	14	14
Total Net Addl Jobs (Anglesey)	16	24	23	142	143	144	145	146	147	148	149	150	151	152	153	155
Indirect Jobs (NWW Excl Ang.)	4	6	6	37	37	37	38	38	38	38	39	39	39	39	40	40
Total Net Addl Indirect Jobs	6	8	8	50	50	50	51	51	51	52	52	53	53	53	54	54
Total Net addl Jobs	21	30	29	179	180	181	183	184	185	186	188	189	190	192	193	195
Indirect Jobs on Anglesey	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%	26%

Land & Lakes Estimates from Regeneris report on the Land and Lakes scheme (March 2012)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CONSTRUCTION										
Cae Glass (init nuclear worker facilities & infras)	104	104	104							
Cae Glass Lodges & Hotels - build & refurb	226	226						226		
Kingsland residential		125	125	125	125	125	125	125	125	
Penrhos centre		156	156	156						
Penrhos lodges		440	440	440						
Sector F Jobs:	330	1051	825	721	125	125	125	351	125	0
OPERATIONAL:										
Sector I - Hotels etc							334	468	602	602
Indirect		5	10	15	21	27	98	134	170	170

Ecopark jobs, based on discussion with Lateral Power May 2012. Assumed from 2016

Ecopark project element	Employment
Hydroponics	160
Aquaculture	120
Packaging plant	100
Cold storage/processing	50
Total jobs (assumed as Sector C: Food Processing/Manufacturing)	430