

Enterprise and Learning Committee

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Purpose

To consider evidence provided by the Institution of Civil Engineers as part of the inquiry into Generating Jobs in the Green Economy.

Background

1. The current recession has had a particularly great impact in jobs in the construction industry. The slow down in investment in Infrastructure, both maintenance and new provisions has had a dramatic effect on the Civil Engineering sector. Whilst the greatest impact has been on housing, other areas have also been hit e.g. commercial and industrial development.
2. Many Civil Engineering companies in Wales have been forced into part time working, redundancies and closures. Some long standing Civil Engineering companies in Wales have closed their Welsh Offices and retracted to a UK National base. Some have even moved work overseas.
3. Some Civil Engineering sectors are still buoyant and benefiting from continued investment e.g. rail infrastructure/safety work, flood defence, and some highway works. European investment is continuing for example and will provide grant aid to facilitate over £65m works on coastal and inland flooding alleviation schemes (via Convergence and Regional Competitiveness and Employment Programme funding) across all Wales.
4. The least impact is in larger companies who can diversify and share the load.
5. Considering the Green Economy, Wales is taking the lead in setting targets and this can give opportunities in Low Carbon Infrastructure. Our quality of life depends on Infrastructure and there would be little economic activity without energy generation and distribution, water supply and waste water disposal, transportation by rail, road, sea and air, and waste management.
6. The Institution of Civil Engineers has recognised the importance of the challenges that we are facing across the globe and has produced a "State of the National Briefing Sheet" on "Low Carbon Infrastructure". The main recommendations are:

Government must create an environment in which the life cycle carbon impact of infrastructure assets is key to decision making.

Infrastructure owners/clients should focus on energy efficiency and demand management measures, rolling out proven low carbon technologies.

Engineers and other built environment professions must develop a systems approach to managing carbon impact - changing the way we design and deliver infrastructure.

7. Considering the opportunities in each sector.

7.1 Energy

7.1.1 In order to meet the target of 3% year on year decrease in energy, there are great opportunities for green jobs. These would range from tidal power (which has a great potential for energy production and associated jobs), and wind farms - both off coast and on land as well as energy reduction schemes and projects within the housing and business environment. Examples would include making buildings more energy efficient to installation of renewable energy, technology. Examples of innovative new measures can be found in street lighting and even green roofs.

7.1.2 The Nuclear Industry is worthy of separate consideration in view of the size of the investment required and the impact both locally and politically. However, proposals for continued investment in this form of energy production are supported by the Institution of Civil Engineers - provided that the public purse alone does not bear the major burden in the future.

7.2 Transport

The development of more sustainable forms of transport, particularly walking and cycling will lead to further opportunities. Whilst reductions in investment in new highways will have an impact, works to create more cycleways and improvements to footpaths and footways will give opportunities. However, we need to continue with the investment into maintenance of the highway stock to avoid a continued serious back log of repair works. Advances in sustainable forms of highway works / materials will continue. Examples range from use of recycled aggregates, use of glass and rubber products in pavement materials to the development of thinner more efficient surfacing materials with added benefits e.g. noise reduction and less spray.

7.3 Water

Improvements to water and waste water infrastructure will give opportunities for jobs, although great concern must be raised about the decision to relocate jobs in this sector to "out of UK design call centres".

7.4 Waste

Opportunities exist in meeting the stringent targets set for waste management. These will lead to new forms of technologies, and closer liaison and co-operation in the public sector. As a consequence, there is a dichotomy; this could either lead more opportunities or fewer jobs through co-operative working.

8. Procurement

8.1 With the Green Economy there are many challenges relating to procurement. Whilst there are many benefits from EU Procurement regulations, it does mean that local companies have to compete across a wider sector with consequential losses. In addition, the green sector is very specialised at the leading edge. For example, I am unaware of a local or even UK supplier of Wind Farm Turbines; clearly a missed opportunity considering the growth in this area.

8.2 Investment in new technology can prove a challenge, particularly in the current climate where money is already difficult to source. Fortunately, most engineers are enlightened and are keen to be innovative. There are ICE schemes and awards for sustainability that are available for small and large engineering projects e.g. CEEQUAL - Civil Engineering Environmental Quality Assessment and Award Scheme - awarded for improving sustainability in civil engineering and the public realm projects.

9. Investment in Infrastructure

9.1 It is recognised that in the Public Sector there are many conflicting demands on the public purse. Often finance on Infrastructure has to compete with Educational and Social Services with the demands on carrying out work more efficiently e.g. Gershon efficiency savings mean that there will inevitably be less funds available.

9.2 In the private sector, it is recognised that this area has been particularly affected by the recession, but ICE Wales Cymru wishes to encourage investment in sustainable/green areas.

10. Summary/Recommendations

10.1 In summary, the Institution of Civil Engineers Wales Cymru is seeking to work with all sectors and partners to help the economy out of the current recession.

10.2 Professional skills take a great deal of time to grow, it takes many years to train professional Civil Engineers of all grades - Chartered, Incorporated and Engineering Technicians. If they are lost it is likely that they will be lost to the sector altogether and when the recession is over we will be faced again with a professional skills shortage.

10.3 The value of professional qualifications is increasingly being recognised. This is evidenced by increased numbers at colleges and university. This is not all due to the lack of available opportunities in industry. Continued support for further learning from the Welsh Assembly Government is requested.

10.4

The Institution of Civil Engineers Wales Cymru is calling upon all clients including the Welsh Assembly Government to source additional funds for Infrastructure, particularly the Green Economy as this will achieve a number of objectives:

Give a much needed boost to the construction industry

Alleviate redundancies and short time working

Provide a sustainable approach for the future with minimal impact on future generations.

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