

DAFF Minister Phil Gawne outlined his vision of a sustainable future for Mannin in a lecture to the International Celtic Congress in Aberystwyth (July 2008). This includes being a net exporter of clean (non fossil) energy by 2020. It is another indication by a Minister that at last Government is recognising the need develop alternative energy sources. P A G welcomes this shift in attitude.

The Natural Environment - Towards a Sustainable Celtic Future?

The Isle of Man Government like most Government's I suppose is not prone to radical policy initiatives and is at its most comfortable when it is being led by the people in the right direction. It is fair to say that when it comes to delivering policies which are truly sustainable we have come to the table a little late in the day.

However, I hope during the course of this talk to demonstrate that now that Isle of Man Government has been bitten by the sustainable development bug it is embracing with enthusiasm the need to develop policies for a sustainable Manx future.

As a member of Tynwald for just over 5 years and Minister at the Department of Agriculture, Fisheries and Forestry for 3 years I have seen a massive turn around in approach from Government. This is perhaps driven by economic necessity and the sudden arrival of massive food and fuel price inflation; but it does allow me to more confidently predict a much more radically different future for the Isle of Man than might have been reasonable to expect even 18 months ago.

I am now strongly convinced that by 2020 the Isle of Man should, and I feel can, be:

1. a net exporter of clean (non fossil fuel) energy

Gawne's Green Vision

Written by PAG

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2. not only carbon neutral but actively soaking up carbon emissions
3. waste neutral i.e. recycling or reusing all our waste
4. a centre of excellence for clean technology development
5. a "Green" Finance Centre
6. a low carbon holiday destination acknowledged for experience based tourism
7. capable of feeding our people with high quality sustainably produced food;
8. and the majority of our housing stock should meet the German 'passivhaus' standard, i.e. so well insulated it only rarely needs heating.

While challenging, these goals are not only achievable but essential to reach if the Isle of Man is to survive in a world in which our oil based civilisation is becoming increasingly starved of its key resource - oil. Indeed most, if not all, of these worthy aims are both desirable and achievable for all our countries.

I'm a passionate follower of the view that peak oil is upon us - in other words the point at which demand for oil has begun to outstrip discoveries of new oil fields. Not convinced? Here are a few quotes from people better qualified than I to speak on the subject.

"The era of easy oil is over. What we do next will determine how well we meet the energy needs of the entire world in this century and beyond."

David J O Reilly, Chairman & CEO, Chevron Corporation

"A serious demand/supply discontinuity could lead to worldwide economic chaos."

U.S. Dept of Energy, Office of Naval Petroleum and Oil Shale Reserves

"Given the massive scale of the global energy system and the long lead times necessary to make significant changes, concerted actions are needed now ..."

National Petroleum Council Report, July 2007

"The global energy outlook has changed fundamentally and the challenges continue to grow. We must all act with resolve and urgency to get on a sustainable energy path."

Eamon Ryan, Irish Minister for Communications, Energy & Natural Resources

In effect it took us 125 years to use the first trillion barrels of oil and we'll use the next trillion in 30 years. To meet the increased demand from developing economies such as China and India we will need to find 4 more oil fields the size of Saudi Arabia's.

On a slightly more optimistic note Olafur Ragnar Grimsson, the Icelandic President explained - My country transformed its energy systems from being over 80% dependent on coal and oil into having all of its electricity and heating consumption produced by clean energy.

The Isle of Man currently imports about 96% of its energy with just 0.05% of our energy coming from a small hydro electric plant and 3 or 4 % from our 'energy from waste plant.

The Isle of Man recently invested in a state of the art gas powered electricity generating plant, supplied by a gas pipeline linking us to the UK and Eire, and an interconnector electricity cable linking us to the English electricity grid. So we can either generate all our own electricity needs (around 80 mws at peak times) or if the gas fails for some reason we can import electricity through the cable which has an operating capacity of just over 70 mw. This new infrastructure has resulted in a significant 30 - 40% reduction in carbon emissions and provides us with a relatively secure supply of electricity.

The question many of us are now asking is how secure is our supply? The overwhelming majority of the Isle of Man's energy supplies are imported and, as has been amply demonstrated in the last 12 months, our suppliers have complete control over the price of that energy. This time last year oil was selling at \$70 a barrel - this year you wouldn't get much change out of double that.

Yet, like all our Celtic cousins the Isle of Man is surrounded by renewable energy sources - perhaps rather too much wind and water at times and too little solar power - but we are far from short of these resources. We have an endless supply of renewable energy and the capacity and technology to become significantly more energy efficient.

The Isle of Man's unique constitutional relationship with the UK significantly developed as a result of its low custom duties at a time when Liverpool was establishing itself as one of the UK's most important ports - of course all the shipping at the time when Liverpool was establishing itself as a major port used sustainable - wind - energy as its power source. In the latter half of the 19th century and early 20th century the Isle of Man came late to the table with its own industrial revolution, supplying massive quantities of the world's lead supplies. A large part of our mining industry was powered by a renewable energy resource - water power. So, far from being the untried technology of the future, renewable energy use is not a new concept to us.

I'm convinced that a significant element of the medium to long term sustainable solution to the Isle of Man's energy needs regularly hits us in the face and I'm delighted that IoM Government is now actively exploring the development of wind farms.

Recently the World Bank predicted that 33 countries are in danger of political destabilisation and conflict over food price inflation. Despite some circumstantial evidence to the contrary the EU recently clarified that it did not believe that biodiesel production was having a significant effect on food prices however even if the EU is correct there is little economic or environmental evidence to support much of our current biodiesel production.

Writing about biodiesel in 2006 in 'Heat - How to Stop the Planet Burning' George Monbiot suggested that running the UK's cars, buses and lorries on biodiesel would require 25.9 million hectares of arable land. The UK has 5.7 million hectares of arable land... and of course there are 800 million malnourished people in the world - we really need land to grow food not fuel!

Certainly for the foreseeable future the Isle of Man will not be following the EU down the biodiesel route. Perhaps when a more environmentally and economically sustainable production method is developed we will reconsider.

As Minister for Agriculture, Fisheries and Forestry I was pleased to be able to present to Tynwald in April this year a strategy to develop a reliable, sustainable and self-reliant Manx Food chain capable of feeding the Manx nation.

A simplistic overview of conventional Manx and I suppose European agri-economics is that consumers buy their meat, dairy and cereals at considerably less than the overall cost of production. Government then subsidises the cost of food production through production subsidies allowing farmers to break even or even make a small profit. This system has provided cheap food to consumers for many decades but has contributed to a continuing decline in farm incomes and a move away from the self sufficient agricultural system which used to operate in the Isle of Man before government began interfering in the market.

This interference in agricultural markets has broken the direct link between producer and consumer and it is now agreed by most agricultural policy makers and farmers that farm profitability cannot return until this link is re-established.

Food security is a concept which used to be the province of pessimists and doom-mongers, however, it is becoming an increasing imperative for responsible Governments, large and small. In March of this year countries in the Far-east banned the export of rice because there was a real risk that there would not be enough left to feed the people. Twelve months earlier Prosperity Raymond, Christian Aid's representative in Haiti visited the Isle of Man. In the following report posted in April on the BBC website he speaks of the food riots which were plunging his troubled nation into crisis.

"It is getting very serious now. The stores are all closed and my family is running out of food. Even my six-year-old daughter knows that people are being killed on the streets. She has heard the shots and the rioters breaking windows. Now the schools are closed, the markets are closed, and yesterday the airport closed for international flights - everyone is shut up at home. People are hungry and angry."

He continued..

"The staple foods in Haiti are rice and beans. We used to grow enough to feed ourselves, but most of our rice is imported from the US now and prices have shot beyond people's reach."

Elsewhere, at least two dozen deaths have been reported in riots sparked by a sharp increase in food and fuel prices around the world, most recently in Egypt, Senegal and Cameroon.

Over-dependence on imported food is a key factor in these cases and while I'm not suggesting we'll have food riots on the streets of Douglas it is clear that a sustainable, self reliant capacity to feed our own people should be a minimum requirement for any country's agriculture policy.

This last 12 months has seen significant increases in global commodity prices for wheat and dairy products and while increased production may limit future price increases, 30 – 40% increases in fuel and fertiliser costs last year mean the pressure for increased food prices will continue.

As I mentioned earlier most oil companies are now predicting a peak in oil production, sooner rather than later, which with an ever increasing demand for oil, will result in continuing high fuel prices. As much of our food sector is heavily reliant on oil, particularly for imports, it is at least prudent for Governments to consider ways in which we can ensure that our food sector is as self-reliant and sustainable as possible. It is worthy of note that whereas we in the Isle of Man have the capacity to produce more than enough food to feed our people, the UK imports about a third of its food.

In essence what I am saying here is that for the first time in many generations the Celtic nations must think seriously about where their food will come from. Europe's wine lakes have dried up, its butter mountains melted away and only a month's supply of wheat remains in its barns. This is why I believe that all our countries should endeavour to meet the strategic objective of ensuring that they retain a sustainable and self reliant food production industry capable of feeding our people.

Without wishing to go too far into the political philosophy behind the development of a sustainable and self reliant food chain I think it is important that I touch briefly on the ethical and environmental aspects of the global food market in which we are active players.

This system allows us to buy beef from South America which may have grazed pastures which only a few years earlier were virgin rain forest; has had its growth increased by use of hormones and antibiotics; has been fed on GM crops; and has poor certification of origin to show whether or not it came from disease free herds. This beef, even when exported half way round the world is cheaper than our home produced beef which by law must meet minimum standards on traceability, environmental protection, use of agri-chemicals and disease control.

To accompany this South American beef, we could buy potatoes from Cyprus and peas from Africa. Now setting aside any concerns we might have about knowing how these vegetables have been produced – for example the use of pesticides, labour conditions, environmental standards - we need also to consider the carbon foot print created by their epic journeys.

It is true that for some in our community, climate change is still viewed either as little more than a theory or someone else's problem, despite the strong circumstantial evidence provided by the Met Office showing our recent past to be the hottest on record. To be specific the Isle of Man Met Office reported last year was the warmest on record; the past 15 years have seen the warmest 10 years ever recorded and average temperatures in the Isle of Man have risen by 1.5 degrees centigrade in the past 20 years.

It is also fair to say that our imported food's carbon footprint is relatively insignificant in global terms, however, global food miles do have a significant impact on carbon emissions and it is likely that action will be taken at least in the medium term to reduce this impact. Perhaps then we will find that peas from Patrick and potatoes from Port Erin will be able to provide a competitive living for Manx farmers or maybe we will have to wait until oil reaches 200 dollars a barrel or more before the market balance tips again strongly in favour of local produce.

Replacing my environmental hat with my economic one the value of a self-reliant and sustainable food chain is potentially higher for our countries' economies than the current high volume, low margin export market which relies heavily on imported fertiliser and fuel.

The current support system operating in the Isle of Man requires our farmers to continue to produce at high levels if they wish to receive the subsidy payments which they rely on to either break even or even make a modest profit. We can not use all we produce on the Isle of Man, so around 60% of our meat and dairy produce is exported for sale in the UK and Europe.

Due to protocol 3 - our constitutional link with the EU (IoM isn't a member) - and our need to export our subsidy driven surpluses into the EU, we are obliged to follow European guidance on the level of subsidy our farmers receive. The EU represents the UK and IoM at the WTO and it is primarily WTO agreements which have required the EU and its Members States to reduce and possibly to eventually remove all agricultural production support.

So there is little if any prospect of the Isle of Man being able to negotiate with the WTO – China, India and America and the like - a special arrangement whereby we can be unique in the world and continue to increase our production support at the same time as competing in global food markets. This brings great relief to the Isle of Man Treasury, as clearly if we were to keep pace with increases in production costs we would be looking to increase our production support budget by 30 – 40% (or £2.5 - £3 million) for this year alone.

So to recap on the current system, farmers have to produce to get subsidy which they need to make profits, production costs are spiralling, over half of our produce is exported and we cannot increase our production support budgets even if we wanted to – indeed we are probably obliged under WTO agreement to reduce production support anyway. I feel it is therefore fair to conclude that unless we see substantial i.e. 30 – 40% increases in food prices on an annual basis to meet spiralling production costs, our farmers would be very quickly forced out of business if we had retained our current support system.

The economics of a decoupled support system allow farmers to break out of the production driven system so that they can produce what the market wants, what best suits their farm business and potentially reduce costs by using a lower input more extensive and sustainable production system which could lead to reduced production and higher margin products.

The potential move to more extensive production systems would most likely result in increased farm business profitability but a reduction in overall food production. Bearing in mind that the Isle of Man currently exports 60% of its produce this may be okay for us but in the European food economy this 'decreased supply' is putting pressure on food prices to increase.

As you will probably by now have guessed this is a subject which I have a great passion for and enjoy speaking about extensively. I am, however, aware that not everyone shares my endless enthusiasm for this topic so I will leave this discussion on sustainable food production having

hopefully convinced you of the need for self reliance in food production in each of the Celtic nations.

To expand a little on my opening optimism that the Isle of Man Government is now delivering sustainable development projects and enthusiastic to deliver more perhaps I should now give some examples. In a recent paper to Government it was noted "that the island is vulnerable to energy price volatility and hence the strategic importance, economic importance and the viability of renewable electricity generation becomes increasingly attractive. It is therefore appropriate that the government moves with some urgency to establish the generation of electricity from renewable sources."

The Government Strategic Plan recognises the need to consider Renewable Energy use - it states:

"That in order to provide for growing energy needs, which allows economic growth whilst minimising environmental impacts"

we:

- Aim to reduce our reliance on energy imports
- Explore options for alternative energy sources
- Review planning policies and financial support systems for the introduction of alternative energy installations
- The Government's Energy Policy agreed in October 2006 gives further support for renewable energy use.

Following a Tynwald resolution which I moved in July 2004 an Officer Steering Group for sustainable development and environmental awareness was established in February 2005. As a result of this resolution Council of Ministers agreed that:

One or more senior officers from each Department/Board should have responsibility within that Department/Board for sustainable development and environment for current and proposed activities. Their role has been to ensure that the principles of sustainable development, are

taken into account in administrative practice, in the formulation of policy and legislation. The senior officers serve on a corporate Sustainable Development Steering Group which is tasked with:

- Raising awareness of sustainable issues through development of a training programme for all officers,
- Embedding sustainable principles into government business planning by scrutinising emerging business plans and departmental policy against sustainable development principles,
- Working with public and voluntary agencies on joint sustainable issues and recommend commissioning of new projects.

Crucial to the role of the designated officers and the Steering Group is an understanding that there are three aspects of sustainable development- economic, social and environment.

Projects progressed by this group include; increased grants for energy efficiency projects; energy audits made available to small businesses, farms, manufacturing and finance companies; resource efficiency clubs; development of a carbon reinvest scheme; a car share scheme, advice to developers on reducing energy requirements of proposed high energy buildings; power saving from new IT systems; rocket composters for schools for food waste; fast track energy audits for government departments; use of waste heat from power station to heat swimming pool and National Sports Centre; 'green' tourism projects; and an eco-schools programme. This list is far from comprehensive and the projects listed have largely been initiated in the last 12 months.

Clearly significant progress has been made which is resulting in major new initiatives being announced on almost a weekly basis. These include a plan to build a £6m eco - HQ for my Department which will provide an environmentally sensitive, low impact building through the use of, where possible, local labour and materials and natural products from sustainable sources, thereby minimising: travel miles, CO2 emissions and water, waste and power usage.

The building specifically incorporates design principles with particular emphasis on "engineering out" heavy energy consuming components and replacing these with more passive sustainable systems. In particular, the building will:

- maximise the use of natural light;

- maximise the use of natural ventilation with no requirement for air conditioning; and
- have sensor controlled lighting, thereby reducing power consumption.

It will also:

- be super insulated, thereby reducing the heating requirements;
- be heated using a district heating system fuelled by wood chippings using Sawmill waste product and timber sourced from the Department's sustainable plantations and chipped at the Department's Sawmill, which adjoins the HQ site; and
- use timber products produced by the Department's Sawmill wherever possible.

Also part of the building will have a mono pitch roof covered with a sedum blanket (approx. 375m²). This will filter out pollutants from the air, absorbing CO₂ and provide a productive ecological habitat. It also requires minimal maintenance.

While such a building is not new to the world, it represents a significant step forward in the Isle of Man where no buildings of such a scale and high sustainability value have yet been built. Also this development will help us develop the use of wood chip fuel which should be sufficient to heat a significant part of Government's buildings and public sector housing. Importantly of course woodchip is a sustainable, renewable energy source which can readily be supplied by my Department's productive commercial timber plantations.

Another exciting recent announcement is the proposal to hold an eco TT or TTxGP as it is to be titled. This will be the world's first Clean Emissions Grand Prix race and it is proposed to run it in 2009 over the Isle of Man TT circuit.

Speaking about this announcement the British Motorcyclists Federation, which normally concerns itself with the road riding aspects of motorcycling, acknowledged the environmental impact of traditionally fuelled vehicles. While constantly stressing the environmental benefits of wider motorcycle and scooter use, it nevertheless sees cleaner propulsion methods as essential in promoting wider use of the motorcycle or scooter.

The BMF's Government Relations Executive Chris Hodder said:

"The BMF's aim is to promote, protect and safeguard the future interests of motorcyclists. Events like the TTxGP stimulate and provide an exciting test-bed for clean-technologies that could enter the mainstream market. As such, the BMF is proud to be involved in the TTxGP, a venture that will ultimately enable motorcycle enthusiasts to continue to enjoy riding without the associated environmental concerns and without dependency on limited fuel supplies. We can't think of a better venue than the historic Isle of Man TT circuit for this world first spectacle that will introduce the future to riders of today."

In many parts of the world, zero-emissions areas are already being proposed so the future is clear - clean is the way to go. Major manufacturers too are working on fuel-cell and electric motorcycles and it is likely that their prototypes will be entered in the TTxGP.

The planned TTxGP will showcase a diverse range of vehicles capable of reaching Grand Prix race speeds. Racing teams are likely to be backed by international corporations, universities and high tech institutions, all eager to prove their credentials in the brave new world of clean emission transportation.

TTxGP founder, Azhar Hussain said:

"The TTxGP is gathering momentum globally and winning the support of both racing enthusiasts and those concerned with the environment." He is delighted that Isle of Man Government shares his vision of creating an event that begins a new chapter motor racing history."

The Technical Director of TTxGP explained that

"the TTxGP is an enormously exciting prospect from an engineering perspective. It comes at a time when we are reaching a tipping point in the search for and acceptance of alternative energy sources. The TTxGP provides a fantastic way of promoting and popularising these new technologies, serving to inspire young engineering professionals to turn their skills to tackling the pressing energy issues of the modern world."

Clearly if this is successful the Isle of Man will be leading the field in sustainable transport development but I think most importantly it cements the position of sustainability issues in mainstream Manx politics.

I hope that I have demonstrated in this introduction to sustainable development in the Isle of Man that we have a lot to be excited about. I haven't even mention Transition Isle of Man, a rapidly growing grass roots movement of about 100 activists, which is trying to demonstrate positive oil free solutions which will lead to a sustainable future for the Isle of Man.

All of the initiatives mentioned above rely on us showing respect for and a proper understanding of our natural environment. The Isle of Man is certainly seeking to rekindle the close working relationship it once had with its natural environment and I'm sure our experiences will be echoed across all the Celtic Nations. As generally less populated countries with more than adequate natural resources, a Sustainable Celtic Future is a very real prospect.