

Cork Energy Conference – May 16th, 2019

‘Energy Security in a Low Carbon Future’

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Good morning...I am delighted to be present in Cork, the land of my father, who appropriately enough contributed to a previous energy revolution in Ireland as a young electrical engineer with the ESB...He was deployed on the frontline of the rural electrification scheme in the north west, and went on to work for a large transformer company known as ACEC for 40 years.

It was based in Waterford where we lived - and there was rarely an indication of his Cork accent until he was angry (which was rarely) or when Cork hurlers nudged ahead in a tight all-Ireland final (which was a little more frequent in those days) – a rebel roar would emerge from deep within him.

We are on the brink of another energy revolution in Ireland of immensely greater scale, fuelled by the imperative to pursue meaningful climate action - and quickly. All has changed in the past 2 years in terms of an engaged public...Just ask any current candidate standing in either the European or local elections.

That is not to say efficient and prompt decarbonisation is a shoe-in – Far from it, as Ireland has particular problems in that regard, and we are out of step with most of Europe. Political ‘row in’ has been slower because of the curse of short-termism.

Firstly, I want to stress I’m not an energy expert. I did a science degree but was biologically inclined. My perspective today is of an outsider looking in. My education in kilowatt hours, grids and the intricacies of carbon trading is a work in progress.

But I hope to give you my perspective coinciding with the world moving to a better understanding of climate disruption. The citizens have become acutely conscious of its proximity – of the encroaching shadow on global existence as we know it. I think it’s worth focussing on three elements: the political state of play; the distinctive systemic blockages to progress in Ireland that are becoming more glaring with each passing month, and the 7 risks – as I see it - that are out there for Ireland and its energy sector... including the emissions battleground that will prove hard to negotiate.

Where we stand on energy:

In many ways the energy story is the bright side of a coin (though it faces particular challenges on the demand front)... the other side being carbon emissions. That is especially true in the Irish context, notably in the adoption of renewables in power generation, and the building of an all-Ireland grid to accommodate a variety of energy resources.

What's more, progress over the past decade means we will go very close to meeting legally-binding 2020 targets. The emissions story, on the other hand, is bleak with indications things will get worse before they get better.

The spectre of missed 2020 targets making demanding 2030 targets even more arduous hangs over everything. We have...

- a transport system that roars on with little embracing of green technology and no sign of modal shift away from the fossil fuelled car on the horizon;
- an agriculture sector committed to decarbonisation but continues to embrace expansion in beef and milk production with no road map on how it makes the necessary contribution to decarbonisation;
- A heating sector dominated by the oil burner in domestic buildings...where fossil fuels still feature in new builds.

Stepping back from all that, we have to achieve much more demanding targets within a decade, compared to less onerous ones we have failed to achieve over the past 20 years. At least, Minister for Climate Action Richard Burton sent an emphatic message to the energy world in laying down a new target of 70 per cent renewables contribution to electricity generation by 2030.

In fairness, he has attempted to forge a cross-party consensus to build momentum, which culminated in the landmark Climate Action Committee report... and then committed to taking on board its recommendations in full – and to back them with legislation and sectoral targets.

On a more negative note, sentiment is no match for reality. On the '70 by 2030', Cornwall Insight Ireland analysis shows there is likely to be a shortfall of at least 20

terawatt hours, only part of which will be met by the Renewable Electricity Support Scheme.

In short, without any further action, there is likely to be a shortfall against that new ambition. On a happier note, it says, regardless of how much will need to be bridged, one thing is for certain: Ireland will be building a lot of renewable energy in the next decade if it wants to achieve 70 per cent by 2030; “a powerful signal for developers and investors alike”.

The Blockages:

So what are the systemic barriers to progress?

Some are blatantly obvious; others are insidious or complex and won't be easily overcome.

Guidelines:

The absence of clear-cut, uniform guidelines on wind development, notably for onshore and on solar development, stand out. The delay in providing them does no party any good – whether they are objector, local community or developer. What's more they endanger legitimate, well-located projects by adding to uncertainty on timings.

Essential legislation:

Adopting the Marine Area Foreshore Amendment Bill would rapidly unlock offshore development. Yes, it's a highly complex piece of legislation, but failure to get it over the line belies grandiose claims by the Government we are moving to become a climate leader and shake off the shackles of our reputation as a laggard.

Bottom line: There is an urgent need to align the foreshore consent process with the onshore planning system and to provide a coherent mechanism to facilitate and manage development activity in our maritime area including strategic infrastructure.

That RESS issue:

The RESS delay – now running to more than three years – is unacceptable in my view, and can no longer be conveniently blamed on State aid/EU approval issues. I wonder to what extent Brexit and the renewable heat scheme debacle in Northern Ireland has turned the launch process into an unnecessarily slow and tortuous one.

If auctions are not fully in place until 2020, the building cycle will be missed... and as John Mullins of Amarenco contended so persuasively in a recent piece on irishtimes.com... Some projects will fall by the wayside, the bill in terms of having to pay for statistical transfers from compliant EU member states mounts and those 2030 targets become even more onerous.

In short, we are putting money in the pockets of others when we have the solution at home. Moreover, money spent here could lift many rural areas, when an economic downturn is a distinct possibility.

The Risks:

1. Energy Security:

For a small island economy, energy security has to be a constant concern, especially in the transition period to a decarbonised world. My single engineering gene, which I probably inherited from my father, says gas will have to be part of the mix though that view prompts ire among climate NGOs.

The climate and ethical arguments against new extraction will rage on, and become more vocal, I predict, especially now that as a state we have declared a national climate emergency - and in spite of the fact that imported fossil fuels cause greater emissions than indigenous fuels.

Green Party Eamon Ryan on the other hand doesn't see a downside for the State in banning exploration licences...when the odds on a find are remote and current technology is probably means any resulting gas/oil is likely to be sent directly to Rotterdam rather than piped ashore.

Fundamentally, he contends you cannot declare “a climate emergency” – as the Dail did last week – and in the next breath issue exploration licences. By the way, I think he’s right to say offshore energy is a much better bet.

Climate researcher Joseph Curtin has highlighted there’s enough known global fossil fuel reserves to smash through the 4 degrees barrier... and finding and bringing ANY new reserves into production almost certainly will lead to increased future cumulative global emissions.

As usual, MaREI analysis is pertinent: Integrating renewables into the grid, notably wind and solar, is especially challenging, so large scale dispatchable electricity plants play a key role - and low carbon options including natural gas with carbon capture and storage, biomass power plants and biomass with CCS have to be part of the mix.

Prof Brian O Gallachoir encapsulated a particular Irish difficulty in a tweet when he said: it’s not only windless winters we have to contend with - we had 3 months of nearly no wind in Ireland last summer. No way of charging the batteries then even if we had GWs of Solar. Gas backup will be needed.”

Given 90 per cent of our current energy use is from fossil fuels, with so much of it is imported - and the Corrib field will be exhausted in about 11 years – natural gas has to be part of the short-term mix.

Needless to say many interconnectors to the UK and mainland Europe will be needed to ensure energy stability. Brexit should not be allowed to imperil that imperative.

Separately MaREI’s modelling of Ireland's energy transition, of HOW we can reduce fossil fuels through energy efficiency, demand reduction and increased renewable energy is cause for much optimism – especially confirmation economic growth can be maintained in Ireland while rapidly decarbonising the energy system.

But its warning that immediate increased decarbonisation is necessary over the next 3 to 5 years is critical to achieve the Paris Agreement goals is worrying, given we have yet to see tangible indication of scaled-up ambition.

2. Those Penalties:

It is clear Ireland faces a big bill for non compliance in the coming decade. The exact figure for statistical transfers from good performing states remains to be seen. The critical issue from my perspective is the practice is politically fraught. The recurring nature of the penalties could dramatically ratchet up at a time when there may be that economic downturn.

Can you imagine a government having to contend with the public outcry when it runs to hundreds of millions when we still have a housing crisis and a dysfunctional health system?

3. Just Transition:

A failure to enable a just transition for those workers and communities directly impacted by decarbonisation, would be fatal to ensuring that difficult process is as smooth as possible. Having recently observed on location what is envisaged for Bord na Mona workers and communities who benefited from peat extraction for many decades, I fear the State's response will fall short of what's needed. The issue of transitioning Moneypoint will follow very quickly.

4. The question mark over the sustainability of gas and biomass:

I foresee this as one of the big battlegrounds; whether we are genuinely embracing sustainability in light of approaching climate catastrophe. The line of attack will be: How can their use be justified given the immense levels of CO₂ that have to be taken out of the system by mid century, and the risk of lock-in? Some pragmatism will be needed, as I don't see for example how we could jump immediately to large-scale hydrogen production.

It will apply to CNG, biomass replacing peat in power generation, biogas injected into the grid, and LNG in particular despite rapid growth in the global market. Predictions that LNG supply will jump by 33 million metric tons this year, reaching a record level as the big players... the US, Gulf Coast, Australia and Russia... commission or expand export facilities will not help matters.

For those in the energy business, especially the big high-profile producers, I'm afraid you will have to demonstrate your sustainability credentials in a transparent way in the face of an unrelenting onslaught, and have a robust roadmap you are pursuing to get to net-zero emissions, even if it's over a long time period.

And the threat of climate litigation will never be far away – specifically legal actions that attempt to hold companies responsible for the impacts of climate change. What they *knew* about their contributions to global warming are likely to be the key focus of litigants.

5. Consumers on the cusp of change in their lifestyles BUT:

They want to decarbonise in their daily lives...

But they don't know how...this is about more than ending single-use plastic.

For some, it's too much bother...

For others, this climate thing is cause for despair...and simply overwhelming. That is why getting away from Climate Apocalypse talk is critical, in spite of a very narrow window of opportunity that is closing fast.

The lessons of behavioural economics apply, of which you will hear more today...that essential need for opportunity, capability and motivation to convert sentiment into action – reinforced by narratives from the early movers or those who see tangible improvements in their lives.

A big implementation gap exists. Lack of proper engagement on this front will fatally undermine the national climate action message.

6. The leadership deficit:

One of Ireland's great climate advocates, Cork's own Dr Tara Shine, highlighted this week the need for a new type of carbon leadership. Interestingly, she recommended the rural electrification model to ensure a meaningful dialogue on climate. The key audiences were farmers, rural communities and women. They worked through existing groups on the ground and trusted influencers, backed with solid messages.

Decisive and inspiring political leadership will be vital too. Sometimes I worry that will not come easily. Taoiseach Leo Varadar gets climate risk but is prone to loose talk on the issue. His implication that declaring a climate emergency is largely symbolic, suggests he and Fine Gael don't get the gravity of what is facing the country. Pedantically, he said on Tuesday that additional powers are only afforded to the Government when a security emergency is declared – when many would contend that the Climate Emergency is the greatest security threat to Ireland today. As Eamon Ryan remarked. “The security of our food and energy supply are fundamentally at risk and inaction now represents a profound failure of leadership and an abdication of responsibility.”

I worry too about the ability of politicians to take hard climate decisions, to endorse massive funding for projects such as retrofitting that bring huge upfront costs and when benefits only come in the long-term.

Members of the Committee on Climate Action was forensic in their examination of experts who appeared before them in compiling their report. But some reverted to type as soon as they met behind closed doors to complete the report:

There were declarations that carbon taxes don't work, others insisted they do but we can't pursue a rising trajectory just yet. In one instance, detailed analysis from the ESRI was rejected out of hand. Looking over the shoulder at how the other crowd were lining up was all too evident.

And yet a remarkable document got over the line so the necessary leadership infused with urgency may be realised – The Timmy Dooley factor was a major positive.

Lack of leadership, new thinking and rigorous implementation of policy will mean we continue to be a wealthy country not living up to our climate responsibilities.

The one standout benchmark that will signal intent should be how much carbon will be reduced with each policy/infrastructural project...answering the question, what will it do for our annual emissions in a world where the least carbon option takes precedence over the least costly option?

7. Meeting Growing Demand

Some startling figures keep surfacing about rising energy demand in Ireland over coming decades. Then you look at data centre projections and you question if the country will have the capacity to deliver.

The figures are awesome: Inward investment from the data centre industry into Ireland since 2009 is expected to top €10bn by 2022, according to the latest figures from [Host In Ireland](#).

There are now 53 active data centres in Ireland and 29 in development. Last year alone, 16 data centre halls came online.

The proven ability of the electricity industry to do the heavy lifting, notably Eirgrid and the ESB, is however reassuring. What's more the sector is on a trajectory towards full decarbonisation, which is so critically important to ensure future proofed energy solutions.

However, the system's ability to take on new Energy Communities that are so essential in a decarbonised Ireland, has yet to be properly addressed. It is vital to have the public sensing tangible benefits emerging; in all sections of society – urban and rural.

I leave you with a note about carbon footprint, and a little bit of future gazing:

We are entering an era of obsession about carbon footprint – not necessarily a bad thing.

In the past year I have stopped burning coal and peat in my home, I still use gas for central heating. I have bought a hybrid car to boost my environmental credentials. I consume next to no petrol in the city, too much on longer journeys, I suspect. I have six different bins for recycling. I have reduced food waste significantly. I dread having to confront the issue of retrofitting my old house built after the second world war to make it energy efficient.

Hands up...I'm coming late to the game, I'm still a carbon sinner. But seriously what's your company's carbon footprint? How is it calculated? Is it independently verified? Is it reducing? And by the way, what is your personal carbon footprint?

Finally... A Prediction, a Hunch and a Wish which I hope injects some optimism into today's proceedings

My prediction: Ireland will succeed in achieving net-zero emissions *before* 2050 though the forthcoming decade will be torrid, as we desperately try to force the rising emissions curve downwards, and attempt to trade our way out of penalties – those damnable statistical transfers.

Some things will work... others won't. Richard Bruton's plan for regular review will weed out the duds...Innovation and smart technologies yet to be realised will emerge. I'm sure some Irish ingenuity will fire up the mix.

My hunch: A multilateral approach to climate actions and to the adoption and utilisation of renewable energy will soon become the great antidote to 21st century populism, hard nationalism, Trumpery and those who continue to obsess about GDP - and fail to adopt indicators that show the wellbeing of the planet and its citizens...It will see off those in the "ah but we still need fossil fuels" school of delusionary energy economics.

What's more, the energy revolution will be the most tangible indication that such co-operation works as the world decarbonises quicker than anticipated. Just look at the UK rapid exit from coal.

My hope: Yes we all must play our part as we have contributed to a warming world. But what if the mega carbon polluters - China, India and Russia - get together and say "we are going to solve the world's emissions problems".

Now that would generate the necessary global momentum for transformational change. Those who attended the UN COP24 meeting in Poland last December would say that is not a crazy proposition.

Ah I know the sharp observers in the room are saying ‘what about the US, historically the world’s worst offender?’ In the short-term, including them would in that mix is pie-in-the-sky thinking. That catalyst will have to be held in reserve until we can say: “Good bye Mr Trump – you’re fired!”

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