DÁIL ÉIREANN

AN COMHCHOISTE UM CHUMARSÁID, GNÍOMHÚ AR SON NA HAERÁIDE AGUS COMHSHAOL

JOINT COMMITTEE ON COMMUNICATIONS, CLIMATE ACTION AND ENVIRONMENT

Dé Máirt, 20 Meitheamh 2017

Tuesday, 20 June 2017

Tháinig an Comhchoiste le chéile ag 5.10 p.m.

The Joint Committee met at 5.10 p.m.

Comhaltaí a bhí i láthair / Members present:

Teachtaí Dála / Deputies	Seanadóirí / Senators
Timmy Dooley,	Terry Leyden,
James Lawless,	Joe O'Reilly.
Eamon Ryan,	
Bríd Smith,	
Brian Stanley.	

Teachta / Deputy Hildegarde Naughton sa Chathaoir / in the Chair.

Business of Joint Committee

Chairman: I apologise for the delay in starting the meeting. Another committee met in the room before this meeting, which has resulted in a late start. I thank everyone for attending at such short notice. I remind members and witnesses to turn off their mobile phones as they interfere with the sound system.

It is proposed that the meeting will follow the following agenda. We will start in public session and there will be two separate public sessions. Session A is decarbonising transport, the key role of alternative fuels and technologies, including electric vehicles. That will be followed by a five-minute sos after which we will commence session B, which is the oversight of the Commission for Energy Regulation. That session will also be followed by a five-minute sos and then we will go into private session. On the conclusion of the private session the committee will adjourn until 5 p.m. on Tuesday, 4 July 2017. Is that agreed? Agreed.

Decarbonising Transport: Discussion

Chairman: We will now commence session A, decarbonising transport, the key role of alternative fuels and technologies, including electric vehicles, EVs. I welcome all the witnesses who have come here this evening, namely, officials from the Departments of Communications, Climate Action and Environment and Transport, Tourism and Sport; representatives of the Sustainable Energy Authority of Ireland; the Commission for Energy Regulation; the Electricity Supply Board, ESB; Gas Networks Ireland; the Society of the Irish Motor Industry; the Irish Road Haulage Association and the Irish EV Owners Association, IEVOA. Their opening statements and presentations will be circulated to the committee and will be published after the meeting.

I wish to draw witnesses' attention to the fact that by virtue of section 17(2)(*l*) of the Defamation Act 2009, witnesses are protected by absolute privilege in respect of their evidence to the committee. However, if they are directed by the Chairman to cease giving evidence on a particular matter and they continue to so do, they are entitled thereafter only to a qualified privilege in respect of their evidence. They are directed that only evidence connected with the subject matter of these proceedings is to be given and they are asked to respect the parliamentary practice to the effect that, where possible, they should not criticise or make charges against any person, persons or entity by name or in such a way as to make him, her or it identifiable. I also advise witnesses that any submissions or opening statements they have made to the committee will be published on its website after this meeting.

Members are reminded of the long-standing parliamentary practice to the effect that they should not comment on, criticise or make charges against a person outside the Houses or an official either by name or in such a way as to make him or her identifiable.

The joint committee has decided to review policy in this area. I thank the witnesses for their attendance this evening. I ask all speakers to speak for five minutes. The first witness is Ms Laura Behan from the Department of Transport, Tourism and Sport. She is head of the climate change unit and will speak on behalf of the Department.

Ms Laura Behan: I thank the Chair. Consideration by the committee today of the role of alternative fuels and technologies in decarbonising transport is timely. Our two Departments, namely, Communications, Climate Action and Environment and Transport, Tourism and Sport, work together on this agenda and a number of significant developments are being brought to fruition. My colleague, Mr. Confrey, and I co-chair the task force on low emission vehicles, LEVs, which is examining a range of measures and options to accelerate the deployment of LEVs here. A Programme for a Partnership Government committed to establishing the task force to enable Ireland to become leader in the uptake of LEVs. Transport and energy collaboration on this alternative fuels agenda has also underpinned both the development of the national policy framework on alternative fuels infrastructure and the development of transport measures for inclusion in the forthcoming national mitigation plan, which is the whole-of-Government decarbonisation roadmap.

Reflecting our respective roles, we propose to share the opening statement. I will outline the role of alternative fuels and technologies in transport emissions abatement, then will discuss briefly the national mitigation plan and finally will speak on the development of the national policy framework on alternative fuels infrastructure. From the energy perspective, Mr. Confrey will then outline the work of the LEV task force, the role of electric vehicles and biofuels in meeting renewable energy targets and the proposed changes envisaged in the new EU clean energy package.

There is no doubt about the scale of the challenge we face to achieve our national policy ambition of transition to a climate resilient low-carbon society by 2050. That is especially challenging for the transport sector, not only in Ireland but throughout the developed world. Our welcome return to economic growth brings with it increasing travel demand. Ireland is back on the move, presenting the transport sector with the challenge of reducing greenhouse gas emissions in an expanding sector without impeding social progress or economic recovery. Transport is not an end in itself; it is a means for access to jobs, markets, education, health services, cultural interaction and a range of other services and amenities that contribute to healthy and fulfilling lives.

Decarbonising by 2050 will require a transformation in how we travel, how we do business and, in particular, the types of fuel and technologies we employ. A range of complementary measures promoting lower carbon choices will also be key, such as more better-quality lower carbon public transport, more active travel and reducing the need to travel and journey distances.

The national climate change mitigation plan will set out both the challenges to meeting emissions reduction targets and a clear pathway towards Ireland's objective of transition to a low-carbon economy. The Minister for Communications, Climate Action and Environment and his Department have the lead role within Government in preparing the plan. In that, they work closely with the various key Departments, including Agriculture, Food and the Marine, ourselves in Transport, Tourism and Sport, Finance, Public Expenditure and Reform and Housing, Planning and Local Government. The responsibility for emissions reduction is a collective one and Ireland's emission reduction targets are national and not sectoral in nature. Transport will of course have to play its part. The measures we will set out will be wide-ranging and will focus primarily on modal shift particularly to public transport in urban areas, a movement to alternatively fuelled vehicles and targeted behavioural change. Major changes to our conventional fuel choices will be needed to effect this substantial reduction in overall transport emissions. Greater use of alternative fuels and technologies offers the most feasible and cost-effective solution to tackling this greenhouse gas challenge, as well as moving us towards meeting our renewable energy targets. In recognition of this and in support of EU-wide action to encourage the deployment of alternative fuels, Ireland's national policy framework for alternative fuels infrastructure for transport was recently published by the Minister for Transport, Tourism and Sport. It represents our first step in communicating the longer term national vision, a cornerstone of which is our ambition that, by 2030, all new cars and vans sold in Ireland will be zero emissions capable. The framework is intended to ensure access to refuelling or recharging infrastructure will not act as a barrier to the uptake of alternatively fuelled vehicles. It will achieve this by ensuring appropriate provision of refuelling infrastructure and setting common technical standards for EU-wide interoperability. In so doing it will provide a supportive, enabling environment for suppliers and consumers and increase confidence and reassurance in our national commitment to the emerging alternative fuels market.

I will hand over to my colleague from the Department of Communications, Climate Action and Environment.

Mr. Eamonn Confrey: I will briefly set out the work of the low emissions vehicle, LEV, task force. As Ms Behan outlined, it is a commitment within the programme for Government and the task force has been established to consider the range of measures and options available to the Government to accelerate the deployment of low carbon technologies, especially electric vehicles. It is jointly chaired and comprises a steering group and three working groups. The work of the task force so far has been divided into two phases, with the first focusing solely on electric vehicles, both battery electric vehicles and plug-in hybrid electric vehicles, while the second will focus on other alternative fuels.

The first of the working groups deal with market growth stimuli and visibility and its objectives are to present a range of vehicle growth scenarios for the years 2020 to 2025, inclusive, and to examine a range of stimulus options and public leadership measures. Infrastructure, energy regulation and pricing are the focus of the second working group which has been tasked with devising a sustainable policy framework to ensure sufficient effective and efficient electric vehicle charging and fuelling infrastructure for LEVs. It is also considering the development of a sufficient network of refuelling points, providing an appropriate range of options for low-carbon alternatives. The third working group is dealing with planning legislation, building regulations and public leadership. It will examine building and planning legislation and how to facilitate charging and refuelling infrastructure and mobility for LEVs. It will set out, for example, to ensure simple measures such as the marking of appropriate free public parking locations for LEV users are implemented via the correct channels. Some key early findings from the task force are expected to be fed into the 2018 budgetary process later this summer.

Turning to electric vehicle targets, in 2008 the Government outlined plans of an initial target of 10% of the car fleet or approximately 230,000 cars to be electric by 2020. In 2014, however, it was decided to revise this target downwards to better reflect the prevailing macroeconomic climate and specifically the level of EV uptake which was lower than anticipated. Consequently, Ireland's third national energy efficiency action plan stated that approximately 50,000 electric vehicles could form part of the transport fleet in 2020. In the light of technology and fuel price evolution, this figure has been further revised, consequent on analysis underpinning the national policy framework for alternative fuels infrastructure which forecast that there could be in the region of 20,000 electric vehicles in Ireland by 2020.

Apart from economic considerations, technology advancement, affordability and consumer choice are the most important levers in triggering consumers to move from petrol and diesel to electric vehicles. Notwithstanding the substantial Exchequer support available, the reality of a halving of the price of oil and the pace of technology improvement has very significantly impacted on electric vehicle market penetration. Nevertheless, we have seen growing numbers of electric vehicles registered in Ireland, particularly from 2015 onwards, facilitated in part by the greater choice of models available.

The electric vehicle grants scheme provides grant aid of up to €5,000 towards the purchase of a new full battery electric vehicle or plug-in hybrid and is administered by the Sustainable Energy Authority of Ireland, SEAI. The scheme is kept under constant review and will continue throughout 2017, with an allocation of €5 million for that purpose. The grants are in addition to VRT relief of up to €5,000 that also applies. Budget 2017 extended VRT relief on plug-in hybrid vehicles to the end of 2018 and on battery electric vehicles to 2021. Over 2,000 electric vehicles have been supported to date, of which over 75% have been grant-aided since 2015. So far in 2017, just over 450 EV grants have been awarded, which represents growth of approximately 25% in sales this year.

Turning towards the 2009 renewable energy directive and specifically our renewable transport target, all member states have been set a binding target that at least 10% of their energy use in the transport sector be derived from renewable sources by 2020. This obviously works in tandem with the overall obligation of meeting 16% of our overall energy requirements from renewable sources by 2020. In common with other member states, Ireland has sought to meet its target in the transport sector primarily through the use of sustainable biofuels, alongside a contribution from electric vehicles. The biofuels obligation scheme is the principal mechanism being deployed to meet our renewable energy target in transport by 2020. The SEAI has calculated that 5.7% of transport energy requirements were met from renewable sources at the end of 2015, when the weightings for double certificates were accounted for as provided for under the directive.

Biofuels have played a significant role in trying to reduce Ireland greenhouse gas emissions in the non-emissions trading scheme sector. The introduction of the obligation scheme in 2010 has meant that road transport fuel suppliers have to ensure biofuels represent a certain percentage of national annual fuel sales. As and from January 2017, the obligation is that for every 92 litres of fossil fuel the relevant fuel supplier has placed on the market, it must hold 8 biofuel certificates, in other words, 8% by volume. The Department intends to publish a consultation paper later this year to examine the potential for further phased increases under the biofuels obligation scheme. Further increases could create an increasing demand for biofuels and opportunities for their production. Policy on biofuels has to take into account the requirements set out in the fuel quality directive and the provisions of the indirect land use change directive.

In November 2016, as part of the Clean Energy for All Europeans package, the European Commission proposed a new renewable energy directive to apply after 2020. The provisions build on the existing directive and provide a framework for renewable energy development to 2030. Under the proposals, food-based biofuels are to be phased out, chiefly owing to concerns about indirect land use change and other food versus fuel issues. The role of advanced biofuels has become increasingly important and a mandatory target of 6.8% has been proposed for transport fuel suppliers to provide for an increasing share of renewable and low-carbon fuels, including advanced biofuels, renewable transport fuels of non-biological origin, waste-based fuels and renewable electricity by 2030. The figure of 6.8% includes at least 3.6% for advanced biofuels from waste and residues. There is no proposal to maintain the existing national binding target for transport of 10% beyond 2020, although this will be subject to negotiation between the Council and the European Parliament.

The most important transformation in transport will be the replacement of conventional fossil fuel vehicles on the roads. The initial investment in alternative technologies is, admittedly, costly, but it can help Ireland to adapt more quickly to the transition away from conventional fuels. The costs are challenging and there is obviously a need to balance constrained investment resources against other key needs. There must be a robust assessment of the impact. It is clear, however, that the transition to alternative fuels and technologies most effectively sets Ireland on the right path towards decarbonisation and having cleaner air.

Mr. Jim Gannon: Transport accounts for a significant proportion of our non-emissions trading scheme, ETS, emissions. Approximately 75% of our transport emissions come from road transport which is dominated by passenger vehicles. We see this as being a significant area of focus where we can really have an impact in the coming years. Mr. Confrey has reflected on the targets set in 2008. It is also worth reflecting on some militating factors which we have sensed across our energy efficiency schemes. During the recession consumers were not making purchasing decisions at the same frequency they would previously have made them. Thus there were fewer opportunities for us to influence their decisions and bring them towards electric vehicles. There was not a turnover of purchases that could be influenced. Separately, there was also a lack of choice in the market. In 2008 and even up to 2011 there were just two vehicles available for purchase in this market, which was a constraint.

The grants programme commenced in 2011 and has supported the purchase of approximately 2,200 electric vehicles to date. The figure has been increasing in the past two years and there is a recovery in train. Approximately 670 electric vehicles have been imported directly from the United Kingdom, in addition to the 2,200. There is an active purchasing market. It is also worth noting that some jurisdictions such as the Netherlands only have 10% penetration of fully electric vehicles in their EV fleet, with 90% being hybrids using traditional fossil fuels alongside the battery. Not quite the inverse but close to it is true in Ireland, as 75% of electric vehicles are fully electric, with only 25% being plug-in hybrids. Per vehicle, there is a greater impact in that less fossil fuel will be used. That is a positive message coming from the incentivisation scheme and an important characteristic.

In 2015 approximately 0.5% of car purchases in Ireland were of electric vehicles. In the Netherlands the figure was 9.7%, a significant figure, while in Denmark it was just over 2% and in Germany, just 0.1%, one fifth of what we have achieved. It is worth contextualising these figures. Looking at uptake and digging more into the data, we performed a qualitative analysis just before Christmas 2016, involving electric vehicle owners, those who were considering purchasing an electric vehicle and a number of interested parties and stakeholders. There were three key findings with approximately the same weighting as each other. The first was that there was greater consumer awareness of and confidence in the technology. The second concerned the retention or, perhaps, improvement of the incentives and mechanisms that addressed the price parity point, which is connected to the fact that electric vehicles still have a price premium attached to them. The third finding concerned the importance of widespread and robust charging infrastructure to address the issue of range anxiety. It is important to put it in place.

We are developing a three-year demonstrator programme focusing on three key areas of activity geared specifically towards increasing consumer confidence and awareness. The first part will be a trip-based car use programme analogous to the Dublin Bikes scheme which will be available in the urban environment. The second will be an EV test drive campaign that will bring test driving to festivals, county towns, third level institutions or other large centres of enterprise and employment where people can try the vehicles. The third is a commercial fleet trial, in which we will assist commercial enterprises, from SMEs to large industries, to plug in electric vehicles and test them against their traditional usage patterns to see what benefits they might bring. From this demonstrator programme, we are seeking a much greater consumer insight derived from surveys, driver reports and other exercises, as well as a robust technical data set for driver behaviour, use patterns and fuel and carbon savings from cars and light goods vehicles.

A number of emerging trends are worth exploring briefly. Battery costs are generally one third of overall vehicle costs and have dropped by about 65% in the past five years. With mainstream manufacturers also putting a lot more electric vehicles into their fleets, we anticipate that the cost will come down. We see the price parity point being reached within five to ten years and I hope within five. If that is the case, the need for incentivisation or grants schemes could decrease over time. In respect of range anxiety, the improvement in the range of electric vehicles means that, at the high end, we are in the 600 km technical range. Soon we will see an Ireland-scale battery coming into being. This is a small country of a certain geographical extent. If a vehicle's range can take it from one point to another, the type of charging infrastructure needed changes. With price parity in train and the need for charging infrastructure changing, we chose to focus on the consumer awareness and confidence piece.

Biogas and natural gas offer lower emission alternatives to traditional fuels. It is perhaps more likely that they will have a greater impact in the case of heavier transport vehicles. Our recent biogas report addresses that fact in much greater detail and I invite committee members to read it. We will continue to work independently, with the two Departments and the low emissions vehicle steering group to explore more efficient and impactful ways of reducing energy use in, and decarbonising, the transport fleet.

Chairman: I thank Mr. Gannon. We now move to the Commission for Energy Regulation. I invite the commissioner, Mr. Blaney, to make his opening remarks.

Mr. Garrett Blaney: I will hand over to my colleague, Mr. Melvin, who is director of networks within the organisation to talk about the history of what we have done on infrastructure, including the supportive infrastructure, in the CER. I will then come back in to talk about the future of regulatory treatment.

Mr. John Melvin: In March 2014 the commission issued a decision on the ESB Networks electric vehicle pilot scheme. The decision approved a research and demonstration project designed to assess and report on the impact of electric vehicles on the Irish electricity distribution system. As part of the decision, ESB Networks was allowed to recover up to €25 million through distribution use of system, DUOS, charges, which are for use of the electricity system. Following on from this, in October 2016, the CER issued a consultation paper on the results of the pilot scheme and the associated assets, including the chargers we can see in public spaces on the side of the road. In the consultation process views were sought on the ESB's eCars proposal on the continuing ownership of these assets. The options proposed to the commission were that the assets become part of the regulated asset base, meaning that they would continue to be considered part of the ESB Networks system and supported and remunerated through the distribution use of system charges; that the assets be sold to a third party via public tender in a single lot or multiple lots, essentially, a disposal of the assets to another interested party or parties; and that there be continuing ESB eCars ownership and operation of the assets. The ESB eCars proposal highlighted that while the €25 million was the amount the CER allowed ESB Networks to recover through DUOS charges, there was additional expenditure of approximately €6.1 million on the installation and continued operation and maintenance of the system.

The pilot project was designed to assess and report on the impact of multiple electric vehicle charging points on the distribution system. In October 2016 the report compiled by ESB Networks as part of the project was published. It covers elements of the CER's interaction with the electric vehicle infrastructure on the electricity side. On the gas side, I note that in the past five years, under price control for Gas Networks Ireland, the Commission for Energy Regulation has allowed an €8 million fund for innovative natural gas projects. Approximately €4 million of that sum was spent on compressed natural gas infrastructure. As Mr. Gannon pointed out, the majority of the infrastructure and usage was targeted at heavy goods vehicles such as buses and trucks in the haulage sector. As part of the latest price control for Gas Networks Ireland, the consultation paper on which was published on Friday, there was a proposal to allow €17.5 million in the next period for similar innovation, approximately €12.5 million of which Gas Networks Ireland has already earmarked for what is called the causeway project which involves 17 compressed natural gas fuelling points at strategic locations throughout the core transport infrastructure in Ireland. This addresses the CER's role in the provision of electricity infrastructure to support electric vehicles and recent interactions we have had on the compressed natural gas fuelling points.

Mr. Garrett Blaney: I wish to share with the committee the fact that we still have a decision to make, as Mr. Melvin mentioned. We have a consultation process and have received responses on the future particularly of electric vehicles and EV infrastructure.

I wish to refer to some of the developments at European level. The committee met in February to talk about the Clean Energy for All Europeans package. There is a specific reference in Article 33 of the package to the treatment of electricity infrastructure for electric vehicles. It states the European Commission does not see it as fitting in with the regulatory asset bases, as Mr. Melvin explained, and that it should only be done on a very exceptional basis. We will have to keep this in mind. I also refer to the transport policy issued by both Departments but particularly the Department of Transport, Tourism and Sport which states it should be done on a commercial basis. This is a decision we have yet to make, but I am trying to explain to the committee and share with it our current thinking. It was clear in the responses we had received that there was a range of views from the owners and that they clearly wanted to make sure a proper mechanism was in place for continuing to charge vehicles on a reasonable basis. Views were split on whether the assets should form part of the asset base - clearly not foreseen at a European level - or whether ownership should be on a commercial basis by ESB eCars. There was also a clear view from the respondents in the consultation process that there should be continuing support for the maintenance of existing assets. We can understand why there is this view.

Regarding the CER's primary objective, as set out in legislation, it is also clear that our job is to protect the distribution system and set the cost for it. We need to be very careful that there is no cross-subsidisation of one specific user of the electricity distribution system for the overall distribution system users. I wish to share with the committee our current thinking, that we do not see a basis in legislation for us to continue to pay for what is a research and development project, as Mr. Melvin set out, that has achieved its objectives and the results of which have been published, but I cannot foresee our decision until we have made it. We will work closely with the Departments to ensure as much as possible that whatever our decision is, we will not frustrate but support Government policy.

Chairman: The ESB is represented by Mr. Mulvaney and Mr. O'Leary.

Mr. Denis O'Leary: I will cover electric vehicles from the ESB's point of view.

Climate change is a significant threat facing society. Ireland has committed to an 80% to 95% reduction, when compared with 1990 levels, in emissions from the energy system by 2050. For it to meet this goal which is a European Union obligation, the decarbonisation of the heat and transport sectors needs to proceed rapidly. Greenhouse gas emissions are increasing as more and more journeys are taken by car. Ireland needs to reduce emissions without interfering with the competitiveness of the economy. Even at present, when using electricity generated from the current mix of fuels, electric vehicles are far more carbon-efficient than internal combustion engines and can play a huge part in reducing greenhouse gas emissions. With zero tailpipe emissions, electric vehicles also reduce air pollution which is a major health issue in urban areas. Four major capital cities - Paris, Mexico City, Madrid and Athens - are to ban diesel vehicles by 2025 for air quality reasons. Electric vehicles, because they can use energy generated from renewable sources such as wind and solar power, will allow Ireland to strengthen its fuel security and reduce dependence on imported fossil fuels. A further major benefit of electric vehicles is the ability to recharge at home using cheap night-rate electricity, thus cutting motoring costs.

Since 2010, the ESB has been deploying and operating Ireland's world-class national EV infrastructure. The provision of nationwide and publicly available charging services to EV drivers is a multi-faceted task that requires the following interrelated and interdependent components: a national network of physical charge points, each having its own operating software; ensuring continuous "always on" telecoms connectivity to and from these charge points; a charge point management system; customer support services - for example, a call centre and online access; operations and maintenance systems and contractors to respond to and prevent outages; the provision of digital tools to provide real time charger status data for drivers; secure customer billing and payments systems; and education and marketing. The Irish charging infrastructure of almost 1,000 charge points enables EV drivers to travel nationwide. With a presence in almost every community with more than 1,500 inhabitants and fast charger coverage every 60 km on Ireland's main arterial routes, the network provides a highly visible signal for potential buyers of electric vehicles that they will be able to use a robust network of charging points across Ireland. This is a necessary precursor to the widespread adoption of electric vehicles.

While the infrastructure roll-out was initiated by the ESB with some funding from the European Union, the bulk of support for the network, as Mr. Melvin said, has come from the Commission for Energy Regulation which supported the research and development in order to understand the long-term impact the mass adoption of electric vehicles would have on the electricity grid. The pilot phase, as Mr. Melvin and Mr. Blaney said, was completed with the production by the ESB of a 600-page report covering both the technical and economic aspects of electric transportation. The work detailed findings and recommendations across 43 areas, grouped into seven work packages. The project will assist the future planning of the Irish electricity transmission and distribution networks to accommodate electric transportation. This work has been recognised internationally as being at the cutting edge and components of it are already being referenced by the likes of the Electric Power Research Institute in the United States. However, since completion of the pilot phase, the ESB has been funding the network's operation and maintenance from its own resources. At the request of the CER, in late 2015 the ESB suspended the introduction of driver fees for use of the infrastructure and it remains free for users. The future ownership and regulatory and funding model for this national EV infrastructure also remain uncertain, pending the completion of the aforementioned public consultation process. The process closed in November 2016, but the lack of a determination on ownership is creating great uncertainty which impedes future investment plans for the network, including its operation and maintenance. Given the limited number of electric vehicles in use in Ireland, the continued operation of the EV charging network is not viable on a commercial basis at this stage.

There are more than 4,500 battery electric vehicles and plug-in hybrids across Ireland, North and South, with 2,800 in the Republic. In addition, the choice and range of electric vehicles have expanded greatly. More than 15 EV models are now available in Ireland. However, like any new technology, consumer acceptance takes time. That is why Government intervention is necessary to kick-start the market. Infrastructure is a necessary but not sufficient condition to drive EV uptake. In countries that have achieved much greater uptake of electric vehicles, for example, Norway with 140,000, the United Kingdom with more than 100,000 and the Netherlands with more than 110,000, a greater range of policy incentives has been employed. The Dutch, for example, have indicated that they will ban the sale of internal combustion engine cars in 2025. However, these measures do not necessarily have to be particularly expensive or in place for a long time. A three-year period with free parking while charging and free or reduced tolls coupled with an information campaign on the benefits of electric vehicles could potentially have a dramatic impact on EV sales. These policy changes, coupled with the rapid advancement in battery and car technology, could drive a major shift in consumer behaviour. Given that the average car journey distance in Ireland is 26.4 km per day, according to CSO figures from 2014, and the distances between cities are quite short, electric vehicles are perfectly suitable for the majority of people.

While there are a number of incentives already in place, as mentioned, to support the adoption of electric vehicles, there are a number of additional incentives which could be very helpful in increasing electric vehicle sales in Ireland and they have worked well in other jurisdictions. These might include free tolls on Government-owned roads - the M50, port tunnel and East Link in Dublin - either for a period of three years or until we have an EV fleet of more than 30,000 cars in Ireland; instituting a grant programme for EV home charges similar to that available in the United Kingdom; the creation of a stable regulatory and funding model to support investment in public EV infrastructure; zero emissions leading to zero road tax - there is currently reduced road tax of €120 but that could be further reduced; and CO2 benefit in kind taxation for company vehicles with a reduced rate for EV as is employed in the UK.

ESB believes that the electrification of transport using clean indigenous energy will be a part of tackling climate change as well as meeting other societal needs. International experience shows that the mass adoption of EVs can be achieved if appropriate supportive public policies are put in place. However, confidence at consumer and industry level is critical. A robust and extensive national public EV charging network is necessary but by itself will not be sufficient to achieve a long-term transformation. Working with other stakeholders such as the Commission for Energy Regulation, CER, ESB has put in place an advanced nationwide network that can provide one of the foundations for EV adoption and it is continuing to operate and provide service on this network on a short-term basis. However, a sustainable business model that covers the costs of running the network is needed. This will necessarily include some combination of user subscription and public funding underpinning its operations. The current situation is not sustainable and it is critical that appropriate arrangements are put in place in a timely manner that will support investment and innovation and, in so doing, allow Ireland to maintain its pioneering position in this area.

Chairman: We will now move on to Gas Networks Ireland, represented by Mr. Denis O'Sullivan, head of commercial, and Mr. Daniel FitzPatrick, commercialisation manager.

Mr. Denis O'Sullivan: I thank members for the opportunity to brief the committee on the work that Gas Networks Ireland is doing to decarbonise Ireland's transport sector, in particular in the area of commercial transport and public service vehicles. Gas Networks Ireland is creating a new transport network in Ireland in the form of a 70-station network for refuelling compressed natural gas, CNG, vehicles to meet the needs of Ireland's public and private commercial transport operators.

As members know, natural gas is the cleanest of fossil fuels. In the context of transport, a CNG vehicle produces 22% less CO2, 70% less nitrogen oxide, 80% less sulphur dioxide and 99% less particulate matter and operates much more quietly than the diesel equivalent. Natural gas is used in over 2 million vehicles in Europe, comprising mainly commercial vehicles. The fuel is used in the form of compressed natural gas or CNG as it is more commonly known. While Ireland does not have an established history of using CNG, this technology is well established around the world.

In terms of transport targets, the main efforts to date have been in relation to biofuels and EVs. The biofuel obligation scheme has played a major role in the progress that has been made on our 2020 targets. While progress on EVs has been slower than some would have hoped, the work done by our colleagues in the ESB will yield significant dividends in the years to come for the private car market. Gas Networks Ireland is focusing its efforts on larger vehicles such as light and heavy goods vehicles and public transport. These vehicles generally operate for long periods, carry heavy loads and have a high operating range, making them particularly suited to CNG. While they make up just 3% of the total number of vehicles on the road, they account for 20% of emissions. By concentrating our efforts on changing the habits of this relatively small group of decision makers, we can have a very significant impact on our overall aim of decarbonising our transport sector.

As I mentioned at the outset, Gas Networks Ireland is currently developing a network of CNG filling stations across Ireland. The network of 70 stations will comprise both public and private filling stations. The first public station will open in Dublin Port this summer, with the backbone of the network rolling out in the next three years. The first private refuelling point has recently become operational at Clean Ireland Recycling, a waste management company in Shannon, County Clare.

In addition to building the network infrastructure, Gas Networks Ireland, with support from the Innovation and Network Executive Agency, INEA, through the Connecting Europe Facility, CEF, has opened a funding initiative to fill the relatively small gap in cost that still exists between conventional and CNG vehicles. The initiative is proving extremely popular and the first CNG-powered vehicles have arrived in Ireland and are operational.

I have outlined the significant environmental savings of CNG vehicles. These benefits will be further improved with the arrival of renewable gas. Gas Networks Ireland is currently working with a number of partners to bring renewable gas into the Irish network in early 2018. Renewable gas, which is generated from feedstocks such as food waste, agricultural waste and grass, is identical in composition to natural gas but is completely renewable and carbon neutral and requires no modification to the network or downstream equipment. Gas Networks Ireland is targeting 20% renewable gas on the Irish system by 2030, a figure supported by a recent SEAI report which indicated a potential for 25% of gas on the Irish system to be renewable by 2030.

It is important, from a business perspective, to note that the benefits of CNG are not solely environmental ones. CNG offers a significant fuel cost saving over diesel. Based on today's diesel prices, CNG offers a 40% reduction in fuel cost. In the highly competitive world in which our exporters operate, in particular in the current climate, reducing logistics costs is a very attractive proposition. In terms of performance, leading manufacturers such as Iveco and Scania have invested heavily in creating a new generation of vehicles which offer even greater performance than before. The modern CNG vehicle offers a direct competitive challenge to its diesel alternatives in terms of cost, performance, range and maintenance.

We welcome the recent publication by the Department of the national policy framework for alternative fuels infrastructure for transport in Ireland which focuses on decarbonising transport in Ireland. As noted in the framework, CNG, unlike other options considered, is a mature and proven technology for public transport. When taken with the imminent introduction of renewable gas, it is the logical and obvious choice for Ireland's bus networks. CNG buses are commonplace in cities throughout the world. Gas Networks Ireland and Bus Éireann have already successfully trialled CNG buses in Cork and we look forward to engaging with the NTA and Transport Infrastructure Ireland to deliver the next generation of Ireland's public transport fleet.

CNG is a technology that has been adopted across the world for many years. Ireland is a little late on the uptake. However, in doing so we have the benefit of adopting a mature technology at competitive cost. I thank the committee for its ongoing interest and efforts to drive forward the sustainability agenda in Ireland. I am happy to take questions members may have.

Chairman: We will now move on to the Society of the Irish Motor Industry, SIMI, represented by Mr. Alan Nolan, Mr. Brian Cooke and Mr. Tom Cullen.

Mr. Alan Nolan: SIMI and the motor industry it represents strongly support the development of considered and balanced environmental strategies that can help deliver lower CO2, better air quality and more sustainable transport. It is worth underlining that this is a crucial project for our industry because, for us, a sustainable future is the only future for transport. As the potential deliverers of technological solutions and, beyond the technological aspect of our role, our understanding of consumer behaviour and the potential impact of fiscal and other measures on vehicle purchase or usage decisions should be of assistance in the development of strategies that can deliver the desired results while reducing the potential for damaging or unhelpful unintended consequences of strategies developed.

Sometimes we beat ourselves up that we are bad at things. However, the 2008 VRT road tax changes focused solely on CO2. In many ways, we should see that as a success in its prompting successfully engaged consumers to make very much better environmental choices in buying their cars, thus delivering a huge reduction in the average CO2 per car on the road from 167 g per km in 2007 to 112 g per km in 2016. We have made a great start and, rather than seeing it as a failure because the only focus was CO2 rather than NOx and particulates, we should consider building on that achievement and learning from and tweaking it to deliver in the future in other areas. That has been more successful than similar schemes in many other countries in Europe.

Much of the focus going forward will be on alternative fuels and the SIMI has always proposed supporting the widest range of technology. It is good to hear of different technologies because we do not know which options will deliver the best solutions in the various areas. We need to keep a wide view of the technologies that could serve us well. Electric vehicles and hybrids are an important stepping stone to full electric vehicles while hydrogen fuel cell and compressed and liquid natural gas, leading to compressed biogas, have made huge progress in Italy in the area of passenger cars as well as goods vehicles. They may be worth looking at. They are based on proven diesel technology and we have a lot of diesel cars in Ireland so there would not be any great change.

The roll-out of fully electric cars has been slow, though the State and other stakeholders have put a huge amount into it in the form of advertising, setting up dealerships and technology, etc. Some 2,200 fully electric cars have been registered, including this year's cars, and there are 17,500 hybrid cars, close to 1% of the fleet. We have a huge amount of work to do to deliver our objective. So far this year, 559 fully electric cars have been registered, which is a tiny number but represents some progress compared with 454 for the whole of last year, though some are used, imported electric cars. We are significantly ahead of last year but the numbers are still very poor.

We are at a particularly important point where we need to push this a big step forward. We are very close and we can take advantage of the CO2 taxation provisions, which show that consumers react when there are incentives to go in a certain direction. Consumers are far more accepting of the electric car as a solution to their normal driving needs than in the past and we should look at the experience of countries which have had success in adding significant numbers of electric cars to their fleets. One message we get is that no one single measure works in isolation.

Norway has been the most successful country, delivering 23.5% of new car sales in 2016, and we would love to see such numbers. It delivered 37% in the month of January 2017 and is making huge strides. Although Norway is a very wealthy country with significant oil revenues to invest in this strategy, nobody in Ireland would say the incentives from Government were the problem. We need to understand consumers and why they make choices. It is clearly about identifying both the strengths of electric cars, which are that they are environmental, have cost benefits and are an enjoyable driving experience. There are, however, potential resistance factors such as anxieties on range, future value, replacement battery cost and potential obsolescence. These may not all be real but they have to be looked at as resistors. We should seek to increase the perceived value proposition for the consumer relative to the cost of the car through a mix of fiscal and softer incentives from urban authorities to make the offering very attractive.

The role of supportive local authorities cannot be overstated for without their support in relation to free parking, free tolls, access to restricted traffic areas and the use of bus lanes, where possible and appropriate, electric vehicles, EVs, would not have seen the rate of growth that they have experienced in Norway, where they are seen as a smart choice. In our more detailed submission we have outlined a range of measures, some fiscal but many soft incentives which are not too costly. We agree with the support measures outlined by the ESB as we do the car-sharing scheme for EVs. It is important to have landmark or marquee projects to give a bit of excitement and interest, such as zero benefit-in-kind for an electric company car, similar to the provision for the car-sharing scheme. This would get people really interested and would help normalise the electric car in the marketplace.

We are very excited about his project but this is about decarbonisation of the fleet. We also need to keep an eye on the day job, so to speak, of the rest of the fleet, which comprises 2 million cars. This year we will register some 130,000 new cars, 6% of the fleet. It would take approximately 16 years to replace the whole fleet and some of the cars would be 16 years old at that time. If we increase the current level of electric vehicle registrations 100-fold, it would take 38 years to replace all the cars in the fleet. We should not give up on this just because it is difficult but we need to see the size of the problem. We need to watch the rest of the vehicle fleet while we are moving. It will go faster but decarbonising means continuing to replace the worst offending vehicles on the road while we carry on with our project.

Mr. Jerry Kiersey: I speak as a practical user of the end result of all the technical offerings from the experts. Professor King of the University of Aston delivered a lecture in the Mansion House in 2011 under the auspices of the EPA in which she said everything counted. Some 70% of CO2 emissions are from cars and light vans, and not from trucks. There is a huge difference between what can be achieved in the case of urban trucks as distinct from long-distance trucks. Long-distance trucks are responsible for 90% of Ireland's exports and it is extremely important that nothing is done to increase the cost base for them by adding in unrealistic options. I am not a technician but I have an issue with the difference between LNG and compressed natural gas, CNG, which has a much shorter range in a truck than LNG. Refuelling stations for gas in the UK are LNG so, while CNG would work extremely well in the local urban environment and over some longer distances within Ireland, it will not work on other longer distances.

We see the urban environment being used for the alternatives that are available. I learned to drive in a 1916 electric bread van. Where have they gone? We have been required since 2014 to buy Euro 6 trucks and when I first got them the only thing that concerned us were the technical difficulties, such as the increased running costs etc. However, we have learned that they have huge amounts of technology on board that can be used extremely usefully, as long as the driver is made aware of them and trained accordingly. We have talked to the RSA about this and the European Commission is now talking about requiring all HGV drivers to have a HGV driver's certificate of professional competence, CPC. The current course is almost irrelevant but there is talk of drivers being trained in the new technology. Most of the owners of Euro 6 trucks are oblivious to what is available on board and it takes some time to learn it. Indeed, local dealers usually do not know what is on board these trucks coming from Sweden or wherever they are made.

We use a SEAI-sponsored course to train our drivers at a company in Dublin. The SEAI pays for it and has run these courses before. I have sent information to the committee on the training available to drivers and the results that can be achieved, which are quite significant. There is a 15% to 20% fuel gain available if the technology is used correctly.

It is extremely important that there is a broader spread and the RSA has a significant role to play in terms of driver training. Indeed, all of us in the industry have a significant role to play in that regard. I have forwarded a paper to the committee secretariat from the *Financial Times* on the state of the market in Norway for electric vehicles and hybrids. It is an extremely important read for this committee in terms of understanding what is happening there, particularly with regard to the huge financial incentives being provided for electric vehicles. The market is very divided on the end results but Norway is way ahead of us.

Finally, most of our trucks were running on rape seed oil, an Irish produced, natural biofuel. As the charts I have provided show, rape seed oil is one of the lowest sources of emissions. We moved to rape seed oil under an initiative begun by the former Minister Noel Dempsey, namely the Motor Oil Tax Relief, MOTR, schemes, known as MOTR 1 and MOTR 2. We converted 60% of our trucks to run on Irish rape seed oil but that was finished completely in the 2008 budget. We are overlooking opportunities that are available in Ireland for an Irish-grown fuel that has every reason to be supported into the future. I am not sure if it will work in the newer trucks but there are lots of older trucks in Ireland that could be running on it. As Professor King said earlier, everything counts. The targets that this country and Europe must meet are serious and it will take enormous effort.

What has been omitted completely in all of the discussions is effective traffic management. That does not exist in Ireland. We have a hodge-podge of different people doing different things. The most basic point about traffic light systems is that they increase pollution. Ineffective systems increase the level of pollution. There is an onus on the local authorities to ensure that the introduction of any traffic management system is preceded by an environmental impact study. Further, before we decide to ban this or promote that, a proper impact study must be done if we are to really reduce our emissions.

Chairman: Thank you. We will now move on to the Irish Electric Vehicle Owners Association, IEVOA, represented by Mr. Frank Barr, chairman and Mr. Dave McCabe, secretary.

Mr. Frank Barr: Thank you, Chairman. I will start and Mr. McCabe will finish our presentation. We welcome this opportunity to address the committee. We represent end users of electric vehicles so a lot of what has been said is very relevant to us. I am sure that the committee wants to hear our views, based on our experience of using electric vehicles. Our association is the only organisation for electric vehicle owners in the country. We currently have 200 registered members and a Facebook page with over 900 members. We represent a huge proportion of the electric vehicle owners in Ireland.

We organise events to promote electric vehicle use. We explain to the general public what it is like to use electric vehicles and try to assuage their fears. We try to explain what is happening with electric vehicles in Ireland and our experience of them. Given Ireland's desire to meet its climate change obligations and the important part that transport plays in emissions, it is clear that Ireland needs to aggressively promote and encourage electric vehicles, especially battery electric vehicles. While hybrids have their place, they are a transition technology. Eventually, we are all going to move to fully electric vehicles.

There are just over 2,000 electric vehicles on the State's roads at present but given that the target is 20,000, we have lot of work to do. Previous speakers have referred to incentives that have been provided in other countries, particularly in Norway, which worked. In Ireland, incentives are clearly necessary to encourage growth in electric vehicle use. The current incentives to encourage the purchase of electric vehicles are a key decider for a lot of people. The grant that is given towards the purchase price is good and the installation of the home chargers by the ESB is also important They both need to be continued for a substantial amount of time. Current incentives such as free or low-cost charging should be guaranteed for a defined period. I know that the ESB said earlier that at some point vehicle charging will have to be commercialised. Two or three years ago it was going to commercialise it with a price structure that would have destroyed sales of electric vehicles in Ireland. The cost would have been roughly the same as diesel. At the moment there are lots of disincentives to driving electric vehicles, including range anxiety and so forth.

We have had a lot of problems in recent years in driving electric vehicles. The infrastructure took its time to develop. I purchased my car in 2012 and to get from point A to point B, if point B was a long way away, required a lot of planning. Long journeys were difficult enough but that situation has improved a lot. One can get around most of the country relatively easily now. The infrastructure, broadly speaking, does work. It is new technology but broadly speaking, it works. The biggest problem we had was with parking spaces but SI 325 allows local authorities to designate electric vehicle charging areas. Not all local authorities have fully adopted that but it is fundamentally important. I presume most members of the committee do not drive electric vehicles so I ask them to imagine arriving at a petrol station to find a car parked in front of the petrol pump, blocking access to the fuel. How happy would they be about that? That was the situation we faced for a number of years and it was quite frustrating. It is not the situation now. In most counties, one can be certain of one's ability to charge one's vehicle now.

The association believes that incentives will be necessary for a number of years. Consideration should be given to a reduction in benefit-in-kind, BIK, for company electric vehicles and there should be grant aid to encourage the installation of chargers in business premises. Norway, which was mentioned by others, has had the most effective conversion to electric vehicles which it achieved through various incentives. There were practically no purchase taxes or VAT on electric vehicles for a defined period. In Ireland consideration should be given to fiscal prudence in removing as many purchase taxes as possible to promote electric vehicle use. Incentives are never in place permanently - they are usually in place for a defined period. We need that at the moment to really kick start electric vehicles. Mention was made of the increase in numbers of electric vehicles this year. We can see that on the road. The economy is getting a little bit better and people are more inclined to make the slightly more expensive purchase of an electric car but we would emphasise the importance of continuing with the incentives for a period of time.

The question of the use of bus lanes is controversial but that certainly worked in Norway. In Norway, the incentives have been so successful that they have started to remove some of them. They really worked.

Chairman: I must ask Mr. Barr to wrap up as we are running out of time.

Mr. Frank Barr: I will ask Mr. McCabe to finish up.

Mr. Dave McCabe: I would like to address the public charging infrastructure, particularly the process in which the CER is involved. The feedback from drivers of electric vehicles is that while they appreciate the public charger network as it currently stands, there are significant issues in terms of reliability. There are significant single points of failure, that is, one charger in one location. There is also evidence of significant queuing in Dublin because of the arrival of a large number of second-hand electric vehicles. The public charging infrastructure needs to be viewed as a strategic asset in the adoption of electric vehicles and not simply a method of creating another fuelling network. We have to look beyond the provision of electricity as somehow an alternative to diesel. The idea is to get electric vehicles on the road. How we fuel them and how we make money from that is really not relevant in terms of getting there. There will be no charging infrastructure if there are no electric vehicles. Sometimes we forget that the charging infrastructure does not stand on its own two feet.

Our association does not approve of the unregulated transfer of the public charging network to the ESB. It accepts that the ESB is a competent body to manage the charging network but it does not agree with any unregulated transfer. It does not agree, for example, with the decision to charge for electricity at these chargers by way of time or access. Imagine if one paid for fuel on the basis of the duration spent in front of the pump rather than how much fuel one received. It is a theme for both parties, ESB and the Commission for Energy Regulation, CER, that electricity should be charged by access or by time, which differentiates against different forms of EV drivers. We make the point strongly that this is a national asset. Unlike other countries where the networks have been developed as a combination of commercial and *ad hoc* relationships from state-funded systems, Ireland is unique in the fact it has a single entity network, one smart card to access all charges. In France, one needs six smart cards and in England, one needs three smart cards and one must put money into each of those accounts. It is an absolute mess. In fact, in the UK, Ecotricity is re-evaluating its charging systems. We cannot look around us and simply say it is being done here, there and everywhere. Ireland has a larger proportion of battery electrical vehicles over hybrids and that is purely down to the fact that the incentives are low running costs. It is not a purchase incentive, because second-hand vehicles have been imported into the State in significant numbers which do not entitle the buyer to benefit from the purchase incentives but they benefit from the low running costs, that is, night rate electricity and current free charging at public chargers. We would say there is a place for the commercialisation of public chargers. No driver expects to get his or her electricity for nothing but we would say there is a time and place for commercialisation. We have seen that the abortive attempt by ESB to introduce a charging regime in 2015, which would have made electricity dearer than diesel, had an enormous effect, if one views the sales of EVs in that month.

Chairman: There is a phone interfering with the sound system.

Mr. Dave McCabe: We would encourage both the State and the Commission for Energy Regulation, CER, to view the network as purely an incentive for the adoption of EVs. The time will come when the commercialisation of the network is appropriate. Nobody disputes that but we are a long way from that time with over 2,000 battery electric vehicles on the system. We have to look at what our goal is, which is to increase the number of electric vehicles. We will then worry about how we make some money from the electricity that might go into them. There are other ways to recover charges for car usage, including road pricing and other methods that can be used. However, we would strongly encourage the State to encourage the growth of electric vehicles usage to generate policy around that and to regard the charger network as a strategic asset.

I thank the Chairman and members.

Chairman: I thank all the witnesses for their contributions. I will bring in members in groups of three, so the witnesses might take note of the questions as Deputies and Senators ask them. The members may address a specific question to one group, and if the group wants to come in on that, it should indicate to me and I will let the group in after the three members have asked their questions.

My first question is addressed to the Commission for Energy Regulation, CER, on the consultation paper on the ESB eCars proposal on the ownership of the electric vehicle charging assets. I know CER is still considering that but when will a decision be made, as it would create more certainty for customers who currently have electric vehicles? I have heard anecdotally from those who have EVs that there are very few charging points in Galway and there is a concern about when the decision will be made and further investment will be made in vehicle charging assets.

I understand the average vehicle cost in Ireland is €28,500. Some 16 out of the 19 available EVs or plug-in hybrid vehicles are above that price point. Considering the concerns about the range and the charging capacity with regard to pure EV and the slow development of it, is the hybrid vehicle a better option in the short term if we are looking at meeting our targets?

I call Deputy Dooley who will be followed by Deputy Stanley. I ask the witnesses to bank the questions.

Deputy Timmy Dooley: I thank the Chairman and all the witnesses for their presence. We may be a bit guilty of cramming too many groups of witnesses into this session and we might reflect on this because there has been a great deal of information imparted and perhaps we should have had an opportunity to hear the witnesses over a longer period of time and go into more detail with them.

The reason we are discussing this issue is that we are all aware of Ireland's commitments under the 2020 targets that must be achieved. While we pride ourselves, to some extent, on what we have done with electricity generation, we are way behind on transport and home heat. Various speakers have spoken about the expectation we had for electric vehicles at the start. We are probably at about 1% of where we had intended to be when we started. All of us around the table, the witnesses and politicians, have failed abysmally to make any meaningful impact on achieving climate change targets in the transport sector.

What we need is a phenomenal level of disruption in the cosiness that we have all effectively been part of. It is very clear to me as I listen to all the witnesses, who are very well briefed in their own areas and undoubtedly working very hard from their own perspective, that nobody is in charge. There is no central driver of this. This is not reflective of Mr. Confrey from the Department of Communications, Climate Action and Environment or Ms Bean from the Department of Transport, Tourism and Sport, as I have seen it when I have tried to question the line Minister with responsibility for the area I shadow, the Minister for Communications, Climate Action and Environment, Deputy Denis Naughten. When I challenge him, as I do on a regular basis, about our targets in this area, his response is that it is not all his problem, that the Department of Transport, Tourism and Sport is involved as well. When I ask him whether the Department of Transport, Tourism and Sport is the lead Department, he says it is not. There is no lead Department, or Minister who is taking the lead. There is no driver to make this happen. If we have learned anything from today's exercise, it is just that. There is nobody in charge, or effectively driving the car, the bus or the truck, but all the groups are doing great work in their own area.

The argument on who will own the infrastructure does not really matter right now. We are way behind on our target. Somebody should be working in the background on those issues, but we need somebody at Government level who has a clear goal and will develop a strategy that will ultimately make that happen. If we think we can go from our present position, which is 1% of what we really wanted to reach to the target of 230,000 vehicles in 2030, versus 2020, there is not a hope in hell with the slow level of progress. It will demand far more than incentives. It is about getting the mindset to change. The vehicles are coming on stream and the marketplace is developing but we are still way behind. We have an opportunity to catch up if we can get a coherent voice from Government.

It will take money and investment by the State but I still get the sense that the dead hand of the Department of Finance will be very slow to give up the moneys that come from vehicle registration tax and other taxes. It is the cash cow and bears a resemblance to the tobacco industry. It is very slow to move away from that influx of cash. We have to find other ways to raise cash if we are to move consumers to a point where they are prepared to make that shift. Anxiety about the range of the electric vehicles will disappear if one makes it worthwhile for the consumer. All the issues the witnesses have raised will fade away very quickly if it makes financial sense to the hard-pressed commuter. The only way we can do that is to introduce incentives that are not comparable with diesel or petrol but will make the initial stages of the lifespan of the car really competitive. If one makes it 15% to 20% cheaper to drive an electric vehicle for five years, one will shift the dial. One will get consumers to buy into the electric vehicle. Irish consumers are very good at understanding value. We have seen it in the retail sector - for example, in the grocery sector with Lidl and Aldi. People will go to stores when the price is right. It is important we move towards having a single Department with responsibility for this area, which I am sure would make the lives of all of the witnesses here today, and others, a lot easier.

Deputy Brian Stanley: I thank the delegates for their attendance. I agree with Deputy

Dooley that in terms of witnesses we are a little overloaded today but it is good to have everybody involved in this area here at the same time. I agree also that there is a need for greater ambition and leadership. Currently, there is a lot of passing the parcel and little focus on the issue.

Some 37% of our CO2 emissions come from the transport sector and we have a lot of catching up to do. We have had an industrial revolution and a few other revolutions in this country but if we are to achieve our targets in this area, we need a revolution in the energy and transport areas. In 2008, the then Government target was to have 10% of all vehicles in the transport fleet powered by electricity by 2020. If I am correct, Deputy Eamon Ryan was the Minister at that point. It is good to set targets. However, as outlined earlier, the Department's targets have changed and the target now is to have 20,000 vehicles powered by electricity by 2020. I do not think that target will be achieved. At the current rate of progress, it would take us 3,800 years to replace the fleet with electric vehicles. We need to get into revolution gear in this area. What other measures are being considered by the Department to accelerate this process? As stated, to date only 1,942 vehicles have been purchased under the electric grants scheme. What is the total number of charging points available? This is a great scheme and I compliment all those involved in it.

In regard to the ESB, everything has to be paid for by someone. I can see the need for the roll-out of free schemes but, at the end of the day, the ESB is a commercial company. How does it see this scheme panning out into the future? Will the charging network be self-funded or will it be funded from another source? As for the generation of electricity from fossil fuel sources, if I choose to charge my car at a charging point in Portlaoise or even at home, will that electricity be generated to an increasing extent from dirty fossil fuels such as coal, oil and so on?

Perhaps the departmental officials will outline the implications for land use. We have a growing world population, although that is being beaten by Japan, which has turned things around the other way. There is huge pressure on land use in terms of population growth and increased demand for food in the developing world. What are the implications in this regard in terms of land use? In the context of Harvest 2020 and the many other targets being used to encourage farmers to increase production, what are the implications for land use? There is not that much wasted land across the country. Farmers are ploughing up to ditches these days and there is little head land remaining.

Deputy Eamon Ryan: I agree with a lot of what Deputy Dooley said. I believe we should concentrate on the electric vehicle issue. While there are also big issues in the gas network and biofuels areas, we need to concentrate our focus in this regard. Deputy Dooley is correct that there is no one in charge. This is incredible at a time when other countries are ramping up ambition. The German target is to have 1 million electric vehicles by 2020. It proposes to invest €500 million in its network. As we heard, Holland proposes to ban combustion engines by 2025. We are faffing around and decreasing our targets. We have already lowered the target from 200,000 to 50,000 and last week it was announced that this is to be reduced further to 20,000. The problem is not only that there is nobody in charge but that there is no ambition. We need to have another meeting with the CER and the Department because official government needs to answer for this. The reason we set high ambitious targets in 2008 is that there is a public good involved. Every year 3,000 people die prematurely because of air pollution. This is one of the ways we can save lives.

In regard to the consumer, there is a massive saving to the consumer in terms of lower maintenance charges. Electric vehicles are better and cheaper to maintain. We can save our consumers money by promoting electric vehicles. We import €6 billion of fossil fuel. If we go gangbusters on electric vehicles, we can cut back a good chunk of that. When setting the target in 2008 we were asked why it was being set at 10%. We worked out at that time that if we shaved off 10% of the electricity demand cycle by 400 megawatts at peak we could back-fill the trough by 400 million. That is worth billions of euro to this country and it is use of our own natural resources. There is public good if we deliver on this ambition. There is no reason we cannot do it. We need to be as ambitious as Norway. We are not that different from the Norwegians or Northern Ireland, where there are almost as many electric vehicles as in the South. This is not a behavioural issue. We are not different human beings. We need ambition.

I agree with the Chairman that if we do not get an answer today on when a decision will be made on the charges issue then we will have to come back to this issue. That decision must be taken from the viewpoint that this is a public good. There is huge public gain involved. This should not be viewed as a commercial investment for five years. The ESB research and investment should be increased from €25 million to €250 million and the decision on commercial application should be postponed. The €250 million investment will result in savings on imported fuel bills. We will also have better air quality and lives will be saved.

In terms of carbon emissions, our national climate change strategy is in tatters and in disgrace because we do not have the solutions that can deliver low carbon. We now have a viable solution in terms of the stance of motor companies and other countries on this issue. We need decisions at Department and regulatory level to ensure quick action and action of scale. We need a massive increase in ambition and, as stated by Deputy Dooley, we need someone to take charge. This committee has a job to represent the pioneering drivers in this area and to help them to overcome the difficulties they have. The key is in the regulatory decisions. I do not think the European Union will block us but we can discuss with the European Parliament representatives when we meet them next Friday what is allowed for under the winter package. I cannot believe that the European Commission or the new directive will block us if we are willing to make innovative regulatory decisions. We need to start making decisions. We need to start making investments and we need to have ambition. We need to reverse the decision made last week to reduce the target from 50,000 to 20,000 and we need to start doing what other countries are doing, such as impose a ban on combustion engines by 2025, as is being done by the Dutch. We would be the beneficiaries of this, with a renewable resource that needs this sort of balancing use of demand. It is a perfect fit for this country. We started well. The ESB was one of the leading companies in this area but that was on the back of leadership five or six years ago. In the absence of that leadership in the past five years we have fallen behind. We need to catch up again.

Chairman: There are many questions for the witnesses. I invite Mr. Blaney to respond first to the issues relating to the CER.

Mr. Garrett Blaney: On the question regarding when we intend to make the decision, the intention is to make it over the summer. We do not propose to defer it. We will try, as much as possible, to do it in conjunction with the Department. What we want is joined-up thinking on this issue.

From a CER point of view, regardless of the decision, we will have an ongoing interest in electric vehicles and the implication for networks. I take what Deputy Eamon Ryan has said about the impact on the networks. Electric vehicles draw on the resources of the electricity system on the demand and storage sides. It is important for us to try to get that value from the point of view of the electricity system. I am the chair of a European working group that is looking at the future of distribution systems. A wide range of European regulators, including those from

Norway and Denmark, are represented on that committee. We need to be very clear about the role of the regulator. As an electricity regulator, the CER regulates the electricity system. The CER is not a transport regulator and does not regulate the transport system.

We have spoken to our Norwegian and Danish colleagues about best practice. It is interesting that a change in some of the incentives in Denmark has had an effect on the take-up of electric vehicles there. The key mechanisms that are driving this at European level are state and local government funding. They are the primary vehicles being used across the rest of Europe. I do not want to make a comment on that other than to say that from a regulatory point of view, we are limited in statute in what we can do to provide supports in this area and we are limited in legislation, including European legislation, in how far we can go to impose this as a cost on all the electricity users across the system. There is a view right across Europe - this is a key part of the legislation - that the market is good at coming up with clever ideas and finding solutions in new innovative areas, but such initiatives do not necessarily come from the natural monopolies, which are the network companies. We will try to incentivise the network companies to think clearly ahead, to look at research and development processes and to understand the implications for the network. We have to be careful about using that as the primary driver for supporting electric vehicles in any new area of the transport sector. We are picking this message up from our colleagues across Europe as well. I will be happy to share with the committee the knowledge we are picking up at European level. We will try to make a decision in conjunction with the Departments in order that there is as much joined-up thinking as possible across regulation and policy matters.

Chairman: I invite Ms Behan or Mr. Confrey from the Department to respond to the questions that were asked about the number of charging points and the measures that might be taken to increase the number of electric vehicles.

Ms Laura Behan: I will answer Deputy Dooley's question about who is in charge by explaining the architecture of the national climate mitigation policy. The overarching national mitigation plan, which is being developed by the Government, is being led and directed at Cabinet committee level by the Taoiseach and the key Ministers who are engaged in the process. Every sector within the Government will have to play its part in the effort to reach our national mitigation targets. The four key sectors in this regard are transport, agriculture, power generation and the built environment. The transport sector undoubtedly recognises that it needs to play a significant role by reducing transport emissions in order to contribute to the overall emissions reduction effort, which is a whole-of-Government effort. It is probably worthwhile to point out that we have achieved considerable success in reducing transport emissions. There was a reduction of over 25% in transport emissions between 2007 and 2013.

Deputy Timmy Dooley: That was because of the recession.

Ms Laura Behan: Yes, indeed. It is undoubtedly the case that the recession played its part, particularly in reducing emissions from freight. However, passenger car kilometres decreased by just 3% over that whole time period.

Deputy Eamon Ryan: They went up by 5% last year.

Ms Laura Behan: A number of measures that were taken by the Government and at EU level contributed strongly to the reduction in emissions over the time period in question. I have mentioned the biofuels obligation scheme, which contributed significantly to the reduction in emissions. I have also referred to the introduction at EU level of new vehicle emissions standards, which were doubled down on by the Government through the VRT and motor tax mechanisms. This has resulted in a significant improvement in fuel economy and significant reductions in emissions from private cars. I accept that transport emissions are increasing again. This is happening because of the growth in our economy and the increase in the number of jobs. As I have said, we need to redouble our efforts to ensure we can return to the emissions-reducing policies that have worked in the past. Alternative fuels and technologies will provide the most cost-effective pathway for us to reduce our transport emissions between now and 2030 to the extent that is needed. For that reason, the Government is conscious of the need to consider in a timely manner how to increase the take-up of low-emitting vehicles within HGV and passenger car fleets. That is why the light electric vehicle task force, which is working extremely hard, has been established. Most of the stakeholders that are represented at this afternoon's meeting are involved in and are contributing to the task force. A number of work programmes are ongoing within the task force.

A question was asked about the kinds of incentives that are being considered. I chair the first working group, which is looking at how the limited investment resources that are available to us might be deployed in this sector. Unfortunately, we do not have Norwegian resources available to us. We recognise that the Government can put softer and more cost-effective incentives and regulatory frameworks in place to try to secure a faster uptake of electric vehicles and other low-emitting vehicles than would otherwise be the case. It is true that these technologies will inevitably enter the worldwide system anyway. We have to consider timing issues like the extent to which we want to resource the earlier take-up of this form of transport than would otherwise be the case. While Ireland has limited resources, there is no doubt that we can consider more initiatives, such as putting better incentives in place. The work of the light electric vehicle task force in that space is leading the agenda now.

Chairman: I ask Mr. Mulvaney of the ESB to respond to the question that was asked about the number of charging points.

Mr. Paul Mulvaney: There are approximately 800 charging points across the country. They are divided among all Twenty-six Counties. There are approximately 80 new-model DC chargers, which are really fast, and approximately 720 standard chargers. It costs approximately €50,000 to install a fast charger and approximately €10,000 to install a standard charger. To date, the ESB has spent between €12 million and €13 million nationally on the installation of the physical infrastructure on the ground. That accounts for some of the money that was referred to earlier by the CER. It is not our intention to expand the national electric vehicle infrastructure network any further until there is some clarity regarding the future role of the ESB in this regard. The ownership model will have to be decided on by the CER.

When the e-car project was started in 2010, the Government of the time estimated that the ESB and the car manufacturers would require approximately €25 million to install and roll out a national electric vehicle charging infrastructure. Approximately a year ago, the ESB finished its programme of providing not just the charging infrastructure, but also the ICT computer systems required to ensure the drivers of electric vehicles know whether every charging point in the country is working or is in use at any particular point in time and the proper billing systems linking to the supply companies. The ESB estimates that the total cost of doing all of this was €31.5 million. Given that this end-to-end national infrastructure is as good as, if not better than, what has been done in most other European jurisdictions, we feel it was good value for money. There is a difference of €6.1 million between the original €25 million we received from the CER and the costs we have incurred in rolling out the infrastructure. We believe it costs between €3 million and €4 million to run the electric vehicle system each year. This includes the replacement of very old chargers that were made by companies that are no longer in existence. When the ESB did this work in 2011 or 2012, it was pioneering stuff. We would be willing to do that on a pass through basis for a number of years until there was between 25,000 and 30,000 vehicles in the country. If there was an agreement that the timing was right between the various Departments, the IEVOA, car manufacturers and so on - a costing mechanism would have to be introduced at some stage - the ESB at that point of time would run it on a commercial basis from then on. We have received the €25 million in funding agreed initially. There was a shortfall of just over €6 million, which has been covered by ESB, which is being considered at the present time, and then it will cost €X million per year to keep the system going to everybody's advantage until the company can commercialise.

Mr. Frank Barr: I agree with Deputy Dooley's comment. It is our experience that there is not joined-up thinking. For instance, does one go to the Department of Communications, Climate Action and Environment, the Department of Transport, Tourism and Sport or the local authority? We were told by the ESB on occasion that some local authorities wanted money before they would allow chargers to be installed in their area. They saw this on a completely different basis from everybody else. There is a huge resistance in some councils, particularly in Dublin, to give over parking spaces for EVs because of the revenue they will lose if these bays are unoccupied some of the time. The joined-up thinking is not there but it needs to be there.

The infrastructure is super in some places. For example, there are chargers all along the N11, which is fabulous, but there are practically none on the N2, N3 and M3. I would struggle to get to Cavan whereas I would easily get to Rosslare. There is a lack of consistency in the network.

Deputy Timmy Dooley: I thank Ms Bean who has outlined what the Department has tried to do but I do not get the impression that it has a vision. Perhaps that is because of the role it plays in so many other areas but it has not grasped the role it must play from a climate change perspective and the opportunity that presents. If she can point out one speech the Minister has made on this area, it will be news to me because I certainly have not heard one. I will leave his statement of priorities because that is a political issue. I do not recall him setting out the role of the Department in encouraging a wider roll-out of EVs. That is regrettable when one considers how far behind we have fallen. I could be political and blame him but I do not wish to blame the Department either. Is there a push within the Department to encourage him? If so, perhaps an FOI request will help me to identify whether he is negligent in his duties and not listening to his officials. The Department has not grasped the nettle. It has been indicated to me on the floor of the Dáil that the Department does not necessarily have control over this. Greater engagement is needed. Ms Bean indicated that the percentages are a little off and that perhaps we can do better but we cannot even start from where we are. The approach needs to be disrupted.

Chairman: We will bring the Minister in and, therefore, he can speak for himself.

Deputy Timmy Dooley: I am sure he will make a speech between this and then.

Chairman: There is a vote in the House. Deputy Ryan can pose his question before the meeting suspends.

Deputy Eamon Ryan: Ms Bean put it well in the sense that it is not just her Department that has this attitude about whether we should be leaders. I find that incredible in a country that is falling behind on climate change. That attitude, unfortunately, is apparent in most Departments. The core of the problem is a lack of ambition. This is also the case in the ESRI and the ESB. The ESB made a presentation to the Committee on Budgetary Oversight in which its representatives effectively said we should not lead. That is a mistake.

Nobody should be allowed to drive in bus lanes because buses are also working toward our climate targets. Something needs to be done in budget 2018 because our climate target negotiations will be going on in Brussels over the next few months. They have us over a barrel because we are the laggards in Europe. There should be a transformation in the priority for investment in low-carbon technology in the next budget.

Deputy Dooley mentioned the Department of Finance, which is part of the problem. Officials see a loss in future excise revenues on fuel as part of this equation. One of the committee's recommendations should be that the tax strategy committee in conjunction with the CER examine the implications for tax revenues of switching off fossil fuels because that is part of the equation we have to take into account in making the switch.

Mr. Jerry Kiersey: Due to the changes in the motor taxation bands in the 2008 budget, last year 70,000 second hand British diesel cars were imported. This year, the figure will be 100,000. Those savvy consumers know where to get value for money but the importation of those diesels cars is obviating everything that is being discussed. The 100,000 consumers buying them this year could buy Irish hybrid cars.

Sitting suspended at 7.10 p.m. and resumed at 7.40 p.m.

Chairman: I apologise to the witnesses for the delay and thank them for their patience. There were a number of Dáil votes. Just before the break, Mr. Alan Nolan wanted to make a point.

Mr. Alan Nolan: My submission tried to underline that decarbonising the fleet is a very complex issue as is rolling out electric cars. There is a danger in looking for a silver bullet and suggesting that suddenly switching to a stronger offering for electric cars would solve the problem. It is a slow process. Norway, the most successful country, reached 100,000 electric cars this year. In no year have 100,000 been sold and Norway has 2.6 million cars on the road. If it was to reach 100,000 a year, it would take 25 years to replace them all. One would hope it would ramp up over a period. Even stopping the sale of internal combustion cars will still mean having a fleet of older cars that will continue to grow older.

We have had a focus on CO2 in the past. CO2 is still a very big issue environmentally. We have an average age of diesel cars in Ireland of 5.6 years. In Norway, the average age is 10.6 years, which is pre-diesel particle filters. We are talking about health and all the rest of it. We need to take a wider view of the issue. We would be very happy with the idea that one could replace all the cars involved by 2025. That would give us a new car market of approximately 300,000 per year and our institute would be really happy with that.

Realistically, we need to look at the whole problem and come up with considered solutions that will actually deliver rather than just being seen to be doing things. We have had targets in the past, such as 10% of the cars on the road or whatever it might be. Targets based on hope rather than on a realistic appraisal of what is possible will always disappoint. Hope is not a strategy. We face a huge challenge and we need to get all the stakeholders involved in order to see how we might drive it forward. It is for us all to make this work.

Mr. Dave McCabe: My name is Dave McCabe and I represent the Irish Electric Vehicle

Owners Association. I wish to address this to the Departments involved. As has been stressed by Deputies Ryan and Dooley, there is a key factor missing in the development of EVs in Ireland, which is the role of the State in setting a coherent and ambitious strategy. The relevant authorities need to bring in the stakeholders and say, “This is what we’re going to do, chaps.” That is what is missing. We have had efforts by individual bodies, the CER, the ESB, with its engineering prowess, and other interested entities, to try to get this project off the ground. It is happening, but at a snail’s pace.

We can forget about the past. The adoption of EVs is really only beginning now because consumers this year are being presented with realistic choices in cars. The Tesla model 3 to be introduced next year will set a price point that will really challenge manufacturers and keep prices down for EVs. Tesla will act as a price cap for manufacturers such as Nissan and Hyundai which will have to stay below that price point. The market will begin to sort the price point issue. We need to ensure running costs are kept very low so that users can see a distinct advantage. Money talks. However, the State must take a role.

Ireland is unique in Europe. It is small; one only has to drive 300 km before ending up in the sea. Therefore, a huge battery is not needed. Range anxiety in this country will not be an issue within the next two years. Electric vehicles can meet 90% of people’s requirements for private motoring. The debate is over. The VHS versus Betamax cassette tape debate is finished. It is battery electric vehicles. The technology is rapidly ramping up. We will see 50 kW batteries within the next year and a range of 400 km.

I make the plea that the State, through its Departments, must actively promote this process. Only through this process will we see a dramatic change in this situation.

Chairman: Does Ms Behan wish to respond to that?

Ms Laura Behan: We may be at fault in not having communicated properly the role of the LEV task force, which has been established. I fully recognise that the complexity of the issues and the range of stakeholders involved to drive the market forward and ensure earlier uptake of EVs is such that it needs a clear focus and a clear driver, and some mechanism by means of which all of the disparate interests and mechanisms of the State can be drawn together in order to secure a focus on this issue. We have spent a large amount of time at this meeting discussing matters that come under the remit of our Department and transport issues that come under the remit of the Department of Communications, Climate Action and Environment. We have even discussed the issue of parking spaces, which relates to the Department of Housing, Planning, Community and Local Government. The LEV task force was established in order to bring the three Departments together under one umbrella steering group. Each of the sets of issues is being led by the individual Department, but they are all being drawn together at the highest level. Recommendations will be made by the steering group drawing on the evidence, particularly information gleaned from exchanges with stakeholders that the working groups will bring to that steering group.

The LEV task force plans to arrange its initial stakeholder consultation day in the third week in July. We will issue invitations to all the bodies represented here today to come in and be part of the deliberations about the various barriers that exist and how the State might overcome them. We will consider what kinds of incentives might be used to get impetus behind LEVs that we know is necessary at this point in time given that we feel we are on the cusp of important market developments. Mr. Confrey may wish to add to that.

Mr. Eamonn Confrey: Ms Behan has outlined the scale of that challenge. Trying to house it all under one Minister or one Department is a separate debate. Regarding planning, the role of local authorities has been mentioned when it comes to parking spaces. The issue spills into energy targets. A range of incentives have already been mentioned, including those in Norway and elsewhere. The task force is the first effort to bring that together. It is not perfect, but we will learn as we go along. It is important that we have the right people in the room to help us. We need to have as many viewpoints as possible around the table because we cannot do everything. The scale of the challenge is such that it will cost a considerable amount. Ultimately, they are policy choices. Our responsibility will be to bring those policy choices and recommendations to Government, which will make the final decision. There are competing priorities in any given year but the scale of this issue in transport is enormous in terms of the emissions and trying to meet European targets.

Ms Laura Behan: There should be no doubt in anyone's mind of the scale of ambition of the transport sector in seeking to decarbonise. We have stated overwhelmingly clearly on a number of occasions that we expect the transport sector to be fully decarbonised by 2050. What we are seeking to do is find the roadmaps to ensure that happens. We are focusing the majority of our effort on securing increased investment for public transport to ensure that in urban areas, where public transport is most appropriate and the least carbon emitting mode of mass transit, we can secure additional capacity for public transport to meet the additional transport demand that will arise over the next 25 years.

The second key plank of our approach will be the move to alternative fuels and technologies. There is a strong commitment in the Department to the establishment of the LEV task force and ensuring that its work is being appropriately resourced to ensure the ambition that everybody in this room shares of moving from internal combustion engine technologies to lower-emission vehicles over the next 15 years will be secured.

Chairman: Does anybody want to come in before we conclude?

Deputy Eamon Ryan: I have a concluding comment. This is a useful process. I have looked at the transport budget and my understanding is we are spending approximately 80% of our budget on new roads. When we look at this into the future, we can see that the motor industry will completely change. There will not only be low-emission vehicles, there will be fewer vehicles. Perhaps that is not easy for the SIMI to hear but everyone is saying there will be car-sharing and automated driving. We have to start planning for that level of revolution and we might not need to spend so many billions each year on roads. In that case, we might spend more on incentives than the €25 million we stopped spending about three or four years ago at the same time that we caught the target of investing in electric vehicles. I cannot remember when that €25 million was last given. Was 2012 or 2013? Nothing has been allocated since. It is no surprise that we end up not meeting targets when we do not back up what we say we are going to do on climate action with information on where we spend the money.

Chairman: I will bring in Mr. Kiersey and then Deputy Stanley.

Mr. Jerry Kiersey: Everything counts, no matter how small it is. France has recently increased the maximum weight of carriage of five axle trucks from 40 tonnes to 44. We have just reduced it from 42 tonnes to 40. France did it for environmental reasons. Why are we doing the reduction? I do not understand the lack of joined-up thinking at all. People dissociate one thing with environmental benefits from another. We cannot do that; we need to consider the whole picture.

Deputy Brian Stanley: I did not hear the answer to my question on land use. The witness said there are 800 charging points in the State. There are a number of DC, quick charging points. Am I correct in saying that the slow chargers are based solely at commercial premises or in people's homes? Will Mr. Mulvaney explain where the 800 are located?

Mr. Paul Mulvaney: The standard chargers were the only ones available on the market when we started installing the national EV charging infrastructure. As technology has developed and as the car manufacturers have become more engaged and produced more cars, a key issue was establishing quicker ways to charge cars. A key part of that was battery technology. The standard chargers, which are not called slow chargers, are the majority of chargers one sees around the country. We have installed the DC chargers, which are the fast chargers, on the motorway circuits in the various rest stops along the motorway.

Deputy Brian Stanley: Are there 80 of those?

Mr. Paul Mulvaney: I will just look at my figures. We have not far off 80 of those nationally.

Deputy Brian Stanley: There are 800 overall and they are generally in public places.

Mr. Paul Mulvaney: It does not include the 2,000 home chargers that we give out as well.

Deputy Brian Stanley: That is a better figure.

Chairman: I will bring in Mr. Confrey.

Mr. Eamonn Confrey: The Deputy is right on the food versus fuel issue. The direction of travel at European level is towards advanced biofuels. That means there is a shift away from crop-based biofuels, or first generation biofuels as they are known, towards using waste and residues. The proposal is for that target to be increased. The second dimension to it is the indirect land use change directive which we are transposing in the Department. It has to be transposed by September. We will support the shift towards those biofuels away from crops. It is generally the direction of travel at European level.

Ms Laura Behan: It is probably important to note we have not stopped investment in EVs. The SEAI grant is still available. It is funded every year by the Department of Communications, Climate Action and Environment. A large tax cost arises from the VRT exemption available in respect of every new vehicle. The incentives that are available for EVS cost the Exchequer significantly. It is important to point out that the State's investment in electric vehicles did not end with the €31 million invested by the ESB. In terms of the transport budget, the current capital plan gives equal weight to public transport and roads investment. Overwhelmingly, the money spent on roads relates to maintenance of the steady state and the very significant road network which supports our bus, cycling and walking journeys, in addition to passenger car journeys which are necessary. Very little of the current transport investment budget is spent on building new roads.

Chairman: I will give the final word to Mr. Dave McCabe.

Mr. Dave McCabe: I will address Deputy Stanley's question about the chargers. The public charging network is significant. It is a place where EV drivers meet the infrastructure. It is very important. We have 80 fast DC chargers. Some of them are correctly positioned in motorway service stations and various places along our transport arteries. However, some are incorrectly positioned in shopping centres where they get abused by people who go shopping while they charge their car when a car only takes 20 minutes to recharge. The standard charge points are known by users as slow charging points. The vast majority of modern EVs use DC charging and many cannot adequately utilise the power available from the standard charge point. The Nissan Leaf only draws one third of the available power and the Hyundai Ioniq only draws about half of the available power from those points. That is unlikely to change because manufacturers are shifting to DC charging. The emphasis in the future will undoubtedly be on DC charging and AC charging will probably take place in the home and in what we call destination charging, which is in hotels and places where people leave their cars for long periods. Many of our standard chargers are in the wrong places. We had issues in Dublin where we did not have any street parking for them and that needs to be sorted. We are very lucky to have that infrastructure but we need to take it another step forward. The State now has to get involved in deciding how and where that infrastructure grows and develops and how it meets the needs of supporting all the EVs we hope will suddenly appear on the market.

Chairman: I thank all the witnesses for their excellent contributions. This has been a very worthwhile exercise. I propose that the committee publishes the opening statements and submissions we received. Is that agreed? Agreed.

I propose to suspend proceedings for five minutes in order to allow the witnesses to leave. The witnesses from the CER are staying on for the next part of the meeting.

Sitting suspended at 7.49 p.m. and resumed at 8.03 p.m.

Oversight of Commission for Energy Regulation: Discussion

Chairman: Session B deals with oversight of the Commission for Energy Regulation. The joint committee has a statutory role in the oversight of a number of regulatory bodies and the committee intends to meet each regulator under its aegis on an annual basis. The committee is also developing a model for engagement with regulators and this will have *ex post*, current year and *ex ante* elements. This is our first engagement with the Commission for Energy Regulation, CER, and I welcome Dr. Paul McGowan, chairperson; Mr. Garrett Blaney, commissioner; and Ms Laura Brien, director of energy markets and smart metering.

Dr. Paul McGowan: I will make a short opening statement. Given that this in the context of the commission's accountability to the Oireachtas, it is probably worthwhile to have a very brief recap of who we are and what we do, as well as what we achieved over the years, setting out publications, etc. that are produced which could assist the committee with our accountability to the Oireachtas.

We are now Ireland's independent energy and water regulator. We were established in 1999 and our core function is to protect customers, whether from an economic perspective in terms of charges and customer protection measures, or from the safety perspective, which literally protects lives and property. We have broad functions across economic safety and customer protection in energy, and in 2013 we became the economic regulator for the water and wastewater sector in Ireland. Our mission is to regulate water, energy and energy safety in the public interest. Our functions are encapsulated in our strategic goals and they are simply to ensure that energy and gas are supplied safely, the lights stay on and the gas continues to flow, with a reliable supply of clean water and an efficient treatment of wastewater. Prices should be fair and reasonable and regulation should be best international practice.

To give a sense of the sorts of areas we have tackled over the years, an important element is security of supply. In particular, there have been huge levels of investment overseen by us in the gas and particularly the electricity networks, delivering reliability and accounting for growth in the economy. Separately, there is the development of competitive markets and other instruments to ensure we have adequate generation on the system to ensure the lights can stay on. We have also introduced competition in the electricity and gas retail markets to the extent that they are now fully deregulated. We have introduced a single wholesale competitive electricity market on the island of Ireland and we jointly regulate that with our sister regulator, the utility regulator in Northern Ireland, and an independent member. We have also established a safety framework both in respect of the safety of upstream oil and gas activities in Ireland and downstream gas in Ireland. We also oversee the registered gas installer and registered electrical contractor schemes.

We have established the water framework under which we have completed two price controls and we have challenged Irish Water to deliver a 20% reduction in operating expenditure over four years. An important feature of what we do is also the customer handbook, which is essentially the minimum standards that suppliers must reach when engaging consumers. If they fail to reach those standards, we also operate a dispute resolution function that ensures customers have somewhere to go if they cannot reach a satisfactory settlement with their supplier. Through our networks price controls, we drive efficiencies in both the gas and electricity sectors ensuring that while meeting the needs in terms of network infrastructure investment, we also drive performance improvement. For example, one of the key metrics we measure relates to minutes lost, which is the amount of time people have no electricity when they turn on a light. There has been a sustained reduction in that over the years with the level of investments and improvements overseen by us.

We are also very active on the international front. We are active members of four key international institutions. These are the Agency for the Co-operation of Energy Regulators and the Council of European Energy Regulators on the energy and economic side; WAREG, which is a newly established water regulatory forum across Europe; and the EU Offshore Authorities Group, a key safety forum in Europe. We are founding members for some of those institutions. With regard to our own operations it is probably worth pointing out we are compliant with all public sector requirements in terms of payscales and so forth. Everything we do is ultimately subject to sanction by the Department of Finance via our own Department.

It might be worth giving a flavour of the sample of outputs we produce that would assist the committee in its oversight of the CER. It includes our annual report and accounts which we submit and are tabled before the Oireachtas. We have a customer care annual report that outlines the types and range of complaints we deal with throughout the year, along with the types of queries we get as an energy regulator. We also have quarterly retail market monitoring reports and an annual substantive report on the functioning of the retail market. We produce specialist analyses from time to time, and this year we produced a specific analysis of the state of retail competition in the energy markets. Finally, we produce a safety annual report. Our annual report covers both water and energy as we report to Ministers in respect of our functions.

With regard to future strategies, it is worth pointing out there are a few elements we see as key in the foreseeable future. There is going to be an increasing focus on our part on the role of properly structured incentives to ensure that under network price controls network companies deliver a win-win situation for themselves and for customers. A good example of that is GNI, Gas Networks Ireland, and how it will grow demand on a gas network which will benefit the consumer without spending too much money which would ultimately fall on the consumer. We are trying to design incentive mechanisms to ensure we get the most out of that asset.

We are also looking at a new integrated single electricity market in conjunction with the North. This will go live early next year and then there will be a serious amount of work bedding that in, as was our experience with the introduction of the first single electricity market.

We are launching a new HR, human resources, strategy. As a regulator, one of our key resources is our staff. Staff development and retention is a key issue for us into the future. We envisage we will be producing our new energy and water strategy statements to apply from 2019 onwards because our current strategic plan applies to the end of 2018. We foresee we will be doing a substantial amount of work in 2018 on ensuring those statements will be in place from 2019 onwards.

There is currently an OECD review of the commission, focusing on governance, accountability and the regulatory process, compared to our peers in Europe and elsewhere. Its report will be formally published in November with recommendations. From that point on, we will be looking at its recommendations, trying to take them on board in our new strategy statement. We also feel there will be opportunity to engage further with the committee on this.

Chairman: Do the Commission for Energy Regulation, CER, and the Department of Communications, Climate Action and the Environment have an oversight agreement in place? When is the commission's 2016 annual report due to be published? Have the Department and the commission agreed key performance indicators which can be used to measure its performance?

Deputy Brian Stanley: I thank the CER members for staying on so long this evening.

Will the commission give a timescale for the roll-out of the integrated single electricity market? Rolling it out is more important for the North because its supply is a bit more precarious than ours. It is also important for having a stronger market with a stronger grid for dealing with fluctuations. For example, much wind-generated energy will be coming on to the grid and we need more capacity to absorb that.

On the cost of electricity, how did we compare with the average European price ten or 15 years ago? Now, we have the third highest electricity costs, with only Germany and Denmark ahead of us. Despite the fact there is a regulator in place, there is a perception CER has not been effective in overseeing the market. There is significant frustration around that. Is the public service obligation, PSO, due to increase?

My secretary keeps changing from one electricity supplier to another. He has changed around three times in six years. However, I have never changed my electricity supplier simply because of my secretary's experience. The packages are complicated but are short term. I also have not changed because I feel there is no benefit to it. I have heard from feedback and media discussions that people feel there is no value in changing energy supplier. The mantra is shop around and that is okay if one is buying bread. However, if one is getting into a contract for a bill every two months, one needs to see some continuity in benefit. I would like to see a gain over a long period that is easily explained. There should be no-frills and cut the bullshit. It should be straight up.

Deputy Eamon Ryan: I am going to make some general comments on the nature of the regulatory function. The key output of our meeting this evening is to engage ourselves in this

OECD review process of CER.

The first point to make is that the OECD is in a certain state of chassis itself. It should be slow in telling any country what to do when one of its leading members, the American Government, is now a pariah when it comes to energy and climate policy. The first thing we should consider is what we will do with the OECD. Who wants to be in with an American Government which is defying science and acting in a rogue state way? We should be looking at the possibility of connecting with the Chinese or Indian Governments. The Chinese Administration has taken some initiatives in its energy policy, such as its silk road initiative, with grid plans and ambition for decarbonisation and developing renewables. We could learn much more from these than from the OECD.

The American Government's role in the OECD is now in question because of its climate policy. The first question we should ask of any OECD review of us is what it is doing about advising other countries when one of its own leading members is outside the Pale in energy policy.

A really interesting question is how one manages a regulatory function in a Brexit-affected world. As seems to be the case from yesterday's negotiations, it looks like a hard Brexit with Britain outside the customs union and the Single Market. It will also be outside of European Court of Justice rulings. That will be traumatic for our energy policy because it will tear up the whole market and co-operative mechanisms. We are in a crisis situation if that happens because we have moved towards a single electricity market, as well as having significant interconnection and gas security issues with the UK. What will Britain's role be in the Agency for the Co-operation of Energy Regulators, ACER? These are the issues and everything else in ordinary time has to be put to one side.

If we were dealing in ordinary time without America being a rogue state and Britain tearing up regulatory rulebooks, we have benefited tremendously from the EU regulatory system. I do not believe we would have introduced this complex market regulatory system ourselves. It came from European directives over several decades. By and large, we have been quite good at regulation. From my experience as a former Minister and a Member, we have an independent, capable and professional regulatory system. While it is not the best in class, we are up there with European countries in telecommunications and energy policy. I would like to hear anybody argue differently. While there are failings in our system, by and large, we have a capable independent administrative system, including our regulators. I cite as evidence the work we do. It is very sporadic, haphazard and it is far from perfect - one could look at the event just two hours previous to this of discussing electric vehicles which was a bit of a bun fight with 50 people in the room - but that is the way we do things. We hear different stakeholders and different views. It is our connection, however, with the regulator that is slightly strange and does not follow the normal rules. I speak from my experience of more than ten years in the Oireachtas. We follow what the public interest is and the public stories at the time, which are varied. Six or seven years ago the price of electricity was the key issue at the time. It strays into areas such as the grid and the difficulties in building the grid and wind power infrastructure due to public opposition. How would Dr. McGowan and the CER explain to anyone in the OECD the situation in Ireland regarding water charges? How could Dr. McGowan assess the Commission for Energy Regulation's performance in terms of setting a proper charging system for water when we all know it was the political system and the political dynamics that dominated and which are very hard to explain?

If this meeting is to discuss Oireachtas oversight, there is a game changer, not just because of the US Government changes or Brexit, and that it is a wider change in the European Union.

The days are over for the 1990s obsession with the market knows best approach. The market has a role and we need enterprise, but we are now in an environment where the State will take a stronger role. Ultimately, we need to meet the climate objectives to make such a radical change. The market cannot do it on its own and we cannot rely on market mechanisms. We must get the State with its regulatory, administrative and political systems to take some risks and to make some bets and investments that the market never would. If I was to change the system, I would look at where we are today with the lack of advancement and investment, smart metering, electric vehicles, offshore energy, solar power and demand management mechanisms. We have the real potential to be brilliant at this. In some instances, we are very good. We are very good at integrating renewable power. We are fairly good at energy efficiency in certain areas. We are not, however, grasping the goal which is a massive leap towards the low-carbon future. The regulator has a key role in that but it should not necessarily be just an obsession with market arrangements. I do not believe in the old trialogue of security and economic value and the environment. The environment must come first because it is a physics parameter that cannot be ignored. The other two aspects of competition and security of supply can be met in a range of different ways but we cannot ignore the physics of climate change anymore. The regulator and the administrative system need to start taking a few more risks and bets and not worry about failing. If it fails the political system would carry the can. We need to make the same sorts of leaps made when the State was founded such as the development of hydropower and others. We need to make that scale of jump. While the regulator has a role it is not on the old market-knows-best regulatory system, where the income will deliver it, which is no longer credible.

Chairman: I thank Deputy Ryan. I know there is a lot there and I will let Dr. McGowan come in on that.

Dr. Paul McGowan: I will spread the replies around among my colleagues. I will start by answering a few of the specific questions. With regard to the oversight agreement, it is currently compliant with the code of practice as of 2009. We are currently working with the Department on the new code of practice for governance of State bodies to reach compliance by the end of this year. We have just come to the end of a gap analysis. We will then be in discussions with the Department as to what, if any, form of oversight agreement we would need. That will be clarified later this year. Our aim is that by the third quarter we will have identified and hopefully have everything in place in terms of compliance. We will then carry out our own internal audit to make sure we are fully compliant with the new code of practice by year end. It is my understanding that the Department is now talking to all the sectoral regulators to ensure they have a level of consistency around the form and content of oversight agreements should they be needed.

On the concept of comply or explain, it is fair to say that the code of practice on the governance of State bodies assumes there is a board and a chief executive and that it is almost a commercial semi-State organisation in some ways. We are obviously not like that and there are some areas where we are not in compliance, but can easily explain why not. We are largely complaint with the code of practice, but we have yet to conclude our gap analysis. Part of that will be working with the Department to ensure we have the appropriate oversight agreement, in whatever form it may be required.

Our 2016 annual report is currently in preparation and in the next week or two we will be looking at our accounts. The body of the report on what we have undertaken during the year is currently in preparation and it will be the third quarter of this year before we will publish that report. This is being realistic in the context of where we are in the development of that report.

As part of our annual work planning, which we submit to the Department, we seek to establish a set of key performance indicators, KPIs, based on what we hope to achieve in the year, by which we can be judged. One of the key outputs that may be of benefit to the committee is our annual work planning cycle, which itself is based on our strategic plan. We set ourselves a series of goals around work we want to achieve such as advancing the all-island single electricity market, initiating some new piece of policy implementation based on new legislation or a review of an existing piece of work. The goals may include elements of business as usual such as running a complaints service for consumers where we try to set realistic KPIs.

Reference was made to Brexit. Ms Brien will cover some of the questions on electricity prices and the single electricity market as raised by Deputy Stanley.

Ms Laura Brien: I will respond to the question on timescale for the revision to the single electricity market rules. Our target for the new rules to be in place is May 2018. As Dr. McGowan explained, we have a single electricity market today. It has been up and running since 2007. We are revising the rules to make them compliant with the broader pan-European electricity market. The revised rules should be in place in May 2018, which is the target.

On the costs and prices of electricity, we rely on a very good report produced by the Sustainable Energy Authority of Ireland on the comparison of residential and commercial electricity prices in Ireland relative to our European peers. It is coming out with a new metric that looks at a weighted average price across a range of consumption values. The level of consumption in Ireland is different from other countries. When we look at that average, our prices have been at or below the EU area average for the last couple of six month periods. Denmark and Germany are outliers, but when we average across all the countries within the eurozone area, Ireland is at the average level. We are not necessarily an outlier but we recognise that we have some underlying costs that tend to make us that much more expensive. We have a very geographically dispersed population. This means that for each customer we end up having to build more distribution lines and this leads to the delivery of electricity within Ireland being more expensive than in more densely populated countries such as The Netherlands or France. Ireland is not really out of line in that respect.

The members asked about switching and the duration of deals. Obviously, the commercial offerings of suppliers are based on their own ideas of what they think is best for their companies. Most of them tend to have a large initial discount for a 12-month period and the price then reverts to a more standard tariff after that. Not all companies have adopted that pricing strategy. Some companies have adopted a different pricing strategy of a smaller discount over three years. There is some variety out there. The Commission for Energy Regulation supports switching as one of the ways that customers can get the benefits of competition. By shopping around, switching is straightforward, fast and free. A customer who is a dual fuel home customer could save €200 to €300 per year, even today, by switching to a different supplier for that initial 12-month discount period. While we do not promote anyone in particular we accredit price comparison websites. There are two price comparison websites that are accredited by the CER and we always encourage people to go to those and put in a consumption level or an average consumption. The websites then display the level of competitive offers that are available.

The issue around the public service obligation was also raised. Obviously, the CER does not set the level of renewable supports that the PSO levy goes to fund. We act on behalf of the Department to calculate the level of the levy every year. In recent weeks we have come out with a proposed decision with regard to the levy that would apply for the 2017-18 period. As was pointed out, because of the increased levels of renewables on the system, the levy will be supporting approximately 500 MW more wind generation in the coming year compared to the previous year. The overall level of the levy that we have gone with to the proposed consultation is higher than last year.

Deputy Brian Stanley: How much higher?

Ms Laura Brien: It is a little over €100 million higher. The levy for the year is approximately €496 million at our current estimate. Once we have gone through our consultation process we need to update some of the underlying data.

Deputy Brian Stanley: Can the CER clarify a point on the bills for a householder or business? We are looking at approximately a 25% increase in the PSO. Is that correct?

Ms Laura Brien: Yes, although it is a little more on the residential side. What we have gone out with is an estimate of a €2.30 increase per month approximately that would apply for the PSO levy on a household bill starting in October of this year. The numbers are not at the tip of my tongue for commercial and large industrials users but it is approximately a €2.30 increase on the residential side.

Deputy Eamon Ryan: How can the CER calculate what the net reduction in general prices may have been because of the marginal cost of renewables? Can some matching-off be done in terms of the net consequences or cost to the consumer?

Ms Laura Brien: That is not possible on a one-for-one basis. I think it is rather difficult to calculate the counterfactual with respect to what the wholesale prices would have been. However, we are generally seeing that the increased level of renewables on the system has led to a reduction in the use of fossil fuels. This applies primarily to gas because the renewables are replacing gas. Wholesale prices during the past three years have been lower than in the past. It is a combination of increased renewables and a reduction in natural gas prices, which is the fuel that sets the price on the margin. It is not really easy or possible to do a one-for-one basis, but we recognise that benefits are coming through in lower wholesale prices.

Mr. Garrett Blaney: At a European level we have done an assessment of the cost of renewable support across all the various regulators. Based on the prices Ireland has paid historically for renewables, we have one of the four lowest across Europe. These are significant extra costs for consumers but when we compare them to those overseen by our German or Danish colleagues we can see there have been very expensive renewables subsidised throughout Europe. The cost of renewable subsidy or equipment has significantly reduced. There is an opportunity but it is obviously a matter for the Department to seek to try to get as much value for money in renewable supports. We have been working closely with the Department to advise on the new strategy. We are trying to help the Department in the development of that.

I will now come to the issue of Brexit. We are trying to share as much knowledge and information that we are picking up in our discussions with our colleagues in Northern Ireland and at European level. However, it is a matter for Government when it comes to where the negotiation strategy sits. We have some concern about the single electricity market. We see it as valuable to consumers here and in Northern Ireland. As the regulators, we will do what we can to try to support the continuation of the project. We have considerable investment in the integrated single electricity market project, which will be delivered next year. We have a strong commitment, inasmuch as we can as regulators, but we are subject to the negotiations that are happening between the UK and the rest of the European Union. We are available and we have worked closely with the Department of Communications, Climate Action and Environment and the Department of the Taoiseach and anyone else who needs information. That is all we can do at this stage. Unfortunately, where the Brexit negotiations go is out of our hands.

Dr. Paul McGowan: I would like to conclude on two points. I wish to pick up on what Mr. Blaney said about Brexit. It is fair to say that I-SEM and the maintenance of I-SEM is high up the political agenda on the part of the UK Government and on the part of the Irish Government.

Reference was made to the OECD review. There is a network of economic regulators under which that review is being carried out. Basically, they got a tried and tested model. In fairness to the OECD, the model has been developed along the lines of how the International Energy Agency might carry out a country review. It is very much a peer review. Next week, those involved are bringing people from Mexico, Italy and Great Britain over. These are people who have extensive experience of being reviewed and running regulatory agencies. We have found this to be a useful exercise in terms of casting a light not on the decisions we make but on the means by which we are governed and by which we run our regulatory process. One point that is particularly relevant to today's interaction is how we are accountable to the Oireachtas. This is very much a conversation that the CER, as an organisation, is happy to continue with the committee in future.

Chairman: We very much welcome that. Thank you for coming here for the two long sessions. The committee proposes to publish the opening statements and any submissions received relating to the meeting. Is that agreed? Agreed.

The joint committee went into private session at 8.35 p.m. and adjourned at 8.45 p.m. until 5 p.m. on Tuesday, 4 July 2017.