

DÁIL ÉIREANN

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

JOINT COMMITTEE ON COMMUNICATIONS, CLIMATE ACTION AND ENVI- RONMENT

Dé Céadaoin, 10 Iúil 2019

Wednesday, 10 July 2019

The Joint Committee met at 5 p.m.

Comhaltaí a bhí i láthair / Members present:

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| Timmy Dooley, | Terry Leyden, |
| Eamon Ryan, | Joe O'Reilly. |
| Brian Stanley. | |

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

The joint committee met in private session until 5.25 p.m.

ESB Networks: Discussion (Resumed)

Chairman: Before we begin, I 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 do so, 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.

Any submission or opening statements that witnesses have made to the committee will be published on the committee 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.

I remind members and witnesses to turn off their mobile phones or put them on flight mode as they interfere with the sound system.

I welcome Mr. Seamus O'Loughlin and invite him to make his opening statement.

Mr. Seamus O'Loughlin: I thank the members of the Committee on Communications, Climate Action and Environment for inviting me here today on foot of the "RTÉ Investigates" programme, "ESB Leaks", which aired on 5 June 2019. The years preceding the broadcast and, indeed, the weeks since have been an incredibly difficult journey for me and my family. I have been unable to work since 30 May 2018.

I would like to take this opportunity to outline my experience of the background behind some of ESB's non-compliance issues.

First, with regard to propane gas, ESB Networks staff use propane gas primarily to heat plastic type insulation. In April 2015, ESB Networks staff ignited a high-pressure gas main in Knocklyon in Dublin. The subsequent investigation found serious shortfalls across three broad categories: training; documented safe system of work; and safe tools and equipment. The risk was so large that the ESB Networks health and safety programme board committed to resolving all the issues by June 2016. This commitment preceded my appointment to the role of technical development manager. However, once I came into the role I started receiving ongoing complaints from staff as regards hot works issues. What brought the issue to a head was that most of the actions from the investigation were not started by December 2017 when a near carbon copy incident occurred in the UCD campus in Belfield. Thankfully, no one was seriously injured that time.

I raised the propane gas issue as one of 20 risks in February 2017 in what I understood to be a protected disclosure. However, in the 12 months post February 2017, I received six different instructions from senior management on how to progress the propane gas issue and despite my

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best endeavours I received no commitment on resources, senior management buy-in or finance in that time. That led to understandable frustration on my behalf. I understand a full roll-out has been happening since I submitted protected disclosure No. 4 to the Minister in January 2019.

Second, with regard to fluid-filled cables, ESB Networks has approximately 120 km of high voltage cables which use a mixture of fluids as an insulating medium. As per the agreed PR3 submission to the regulator, they contain 300,000 l of oil. The annual leakage rate over the past 20 years averaged 50,000 l per annum. That is a leakage rate of 17%; in the worst years it ran at 30%. UK utilities using similar cables have a leakage rate of approximately 2% annually. ESB is an associate member of the UK based Energy Networks Association, which provides expert guidance on dealing with fluid-filled cable leaks. The average leakage rate of 50,000 l compares poorly against the ESB Networks policy target of 15,000 l per annum. In 2017, five cable circuits were shown to have an environmental risk rating of nine and were all non-compliant with both the UK and ESB standards. The PR4 submission to the regulator by ESB Networks referred to environmental risk 23 times. Although the replacement fluid is bio-degradable, 90% of the fluid employed by the ESB contains some element of mineral oil, and the internal ESB guidance is quite clear that ESB Networks is obliged by law to design out and manage the environmental risk posed by leakage from fluid-filled cables on its network. It is my understanding that leakage detection and minimisation performance have improved since I submitted protected disclosure No. 1 in January 2019.

Third, regarding sulphur hexafluoride or SF6 reporting, in February 2017 I raised an issue concerning maintenance, repair and calibration of SF6 handling equipment. Due to resource constraints since 2013, these high-cost units were not subjected to any oversight as regards a maintenance regime. This was causing significant issues for front-line staff as regards complying with the F-gas directive. The more I looked into the overall SF6 issue, the more concerned I became. Once again I raised any issues I came across with management along with proposed solutions. However, SF6 did not seem to be a priority. I escalated the Moneypoint leakage issue in August 2017 and I understand that the reporting to the Environmental Protection Agency, EPA, was amended following this. However, I was instructed after this by a senior manager not to raise any other environmental issues within ESB Networks. Moneypoint 400 kV substation leaked more SF6 gas in 2017 than the entire of the UK transmission network. As per the F-gas directive, records are to be kept for five years. However, there has never been a coherent national approach to SF6 reporting, and our regime will not stand up to external scrutiny across any of the 18 high-voltage supervisor areas. This is an institutional fault, not any individual's fault. However, front-line staff may be exposed to draconian personal liability if they knowingly keep topping up a leaking device. It is my understanding that significant improvements to the SF6 gas handling and reporting regime have been made since I submitted my protected disclosure No. 7 to the Minister in January 2019.

Fourth, regarding flexible earths, in June 2016 I was asked to go to the UK to carry out an in-depth study of ESB Networks' earthing practices on foot of allegations made by a supplier of earthing material to ESB Networks. Rather than debunk these allegations, the study validated many of them and also showed other areas where ESB Networks were not aligned with minimum industry standards in the UK. I expected that this report would be acted on within a reasonable timeframe. However, it was not until the disaffected supplier contacted the Health and Safety Authority that ESB Networks started allocating proper resources to resolve the issues. It is my understanding that further improvements have been made since I submitted protected disclosure No. 4 to the Minister in January 2019.

It is with a profound sense of regret that I find myself before the committee washing the dirty linen of a company for which I have worked all my adult life and to which I owe an awful lot. I continue to try to operate in the best long-term interests of the ESB, and this has taken a very heavy toll on my personal and professional life. The ease with which the ESB can choose which parts of its own procedures and policies, and indeed national and European legislation, to comply with and which parts to ignore is not a work practice that is sustainable in the current climate or which aligns with the company's purported values. I take some succour that the ESB is now a more compliant and safer utility for its workers and the public on foot of my actions. I do not regret appearing on the "RTÉ Investigates" episode "ESB Leaks". I am perplexed, however, as to how it ever got this far. I offer my time to all State agencies and any subsequent investigations which require clarification on any of the issues I have raised. I also wish to place it on record that I never acted with malicious intent. I was simply trying to live by the ESB motto, "Never turn a blind eye". I was also trying to do the right thing for my colleagues' safety at what has turned out to be substantial personal cost. I thank the committee for its time and would welcome any questions members may have.

Deputy Timmy Dooley: I welcome Mr. O'Loughlin. We owe him a very considerable debt of gratitude for his courage in speaking out from within a very large, well-respected organisation. He has done a very considerable service to the company and the country for raising such important issues, recognising that it had to be done in an unorthodox way. What I want to try to understand first is Mr. O'Loughlin's current status with the company.

Mr. Seamus O'Loughlin: I am still off work. I have indicated that I consider we are still in mediation, and I am available for that. The personal toll and what my family and I are going through are not sustainable, so I want a resolution to this, but there are also other issues I want to bring to the table.

Deputy Timmy Dooley: Is Mr. O'Loughlin off on sick leave or-----

Mr. Seamus O'Loughlin: Stress related sick leave.

Deputy Timmy Dooley: Did that stress come about as a result of Mr. O'Loughlin making these declarations or of his going public or-----

Mr. Seamus O'Loughlin: I made what I believed to be a protected disclosure in February 2017. My professional life has become increasingly difficult since then.

Deputy Timmy Dooley: I ask Mr. O'Loughlin to go back a little, before the making of the protected disclosures. He had a senior role in the company and had responsibility for health and safety matters. He has identified clearly how this worked. He recognised problems, identified solutions and then sought support through the organisation to have those solutions implemented. Does he believe that the organisation failed to respond adequately to him when he raised those issues, the issues that we are now all aware of?

Mr. Seamus O'Loughlin: Yes. We were coming to the end of a safety transformation programme. I understand why the company would do this but it was trying to push the idea that the programme had been a resounding success. I was appointed to my role in February 2016, near the end of that transformation programme, and I suppose I was raising issues up the line that were inconsistent with what we were telling the workers.

Deputy Timmy Dooley: When Mr. O'Loughlin raised these issues, something clearly happened that took him from a position of raising them to his then progressing to a protected dis-

closure. That is certainly a ratcheting up of his position. Perhaps he could talk to us about how he got to the point that he felt he had to go down the protected disclosure route.

Mr. Seamus O’Loughlin: The matter is twofold. My function had a budget deficit because our financial requirements were not included in the submission to the regulator. This created tensions, and legitimate requests I was making were not being progressed and were being blocked. Staff on the ground were coming looking for tools and equipment to comply with legislation and their requests were stopping at my desk. In addition, we have 108 supervisor areas and there was friction previously about the tools and equipment my function supplies. I therefore appointed a representative to each of the 108 areas. I used to contact those people regularly to ask them whether they had any issues with tools and equipment. I also asked them whether they had any safety or environmental concerns, and information started coming back at me. I have a broad level of experience across all the major types of work we carry out so I was able to validate or dismiss issues that came back from front-line staff. I think the people further up the line just got overwhelmed by the number of issues I was bringing to their table.

Deputy Timmy Dooley: What I am trying to understand is whether Mr. O’Loughlin believes there is an appropriate level of governance within the organisation or a culture that is open to people such as him raising issues of serious concern.

Mr. Seamus O’Loughlin: The fluid-filled cables are a perfect example. According to my understanding of EU legislation, the groundwater directive came in 2003, I think, and we should have been reporting the issue to the relevant State agencies back then. The leakage rates back then were particularly bad. One year we hit 90,000 l. That is more than the leakage for the entirety of New York city. That was not being reported at that time. The senior person who came into the organisation after that time could not report that issue as their predecessor did not report it. If someone inherits a dysfunctional system and a matter has not been reported previously, that person will hang his or her predecessor out to dry if he or she reports it.

Deputy Timmy Dooley: There has been a culture of silence around serious issues.

Mr. Seamus O’Loughlin: Given that middle and senior managers in the ESB are rotated every three years, why would one of them draw that grief down on himself or herself? Why choose to say that something needs to be reported to the Environmental Protection Agency? It is better to keep head one’s head down and turn a blind eye.

Deputy Timmy Dooley: That speaks to a culture within the organisation that a problem ignored is a problem solved in some instances.

Mr. Seamus O’Loughlin: Yes. I get that in the current climate we have to be paragons of virtue. We have to fly the sustainability flag. We are quite good at the propaganda element of that but if one is not living it on the ground, how can one go out and talk to front-line staff with credibility?

Deputy Timmy Dooley: We are getting to the nub of the issue. Mr. O’Loughlin persisted with his non-retention of that information and continued to raise the issues, which was the right thing to do.

Mr. Seamus O’Loughlin: Yes.

Deputy Timmy Dooley: How would he characterise the culture in the organisation when he started to take the matter to the next level? In other words, he contacted the Minister and he

went down the protected disclosures route. Culturally, how was he treated then? I do not want to get into the naming of any individuals.

Mr. Seamus O’Loughlin: I just felt I was being sidelined. I imagine a position was taken as regards me at a point in time which was not reflective of my intentions. Organisations, by their nature, defend themselves and I was seen as a threat. If the issues I had been raising were embraced, we would have had a totally different outcome. People within the company who I know and respect are perplexed as to how we have got to this point. I was not a malcontent roaring and shouting about nothing. I was bringing forward issues and proposed solutions which were implementable. We were coming towards the end of the transformation programme and with the budget deficit and the volume of issues I was bringing up the line, it was a perfect storm. In safety management, they talk about the Swiss cheese model in that one needs seven or eight issues to line up to cause a significant incident. In our industry one must be fastidious about health and safety and environmental issues. Bad practices might come in. We had another issue with fault location vans and the point was made to me that the company had never had an incident with one of the vans. They had not been maintained, repaired or calibrated in 20 years. I made the point in response that just because we had got away with it up to now is a bit like someone saying he does not wear a seat belt driving to Dublin and had never had an accident, so why should he wear one now. People need the safety stuff when they need it.

Deputy Timmy Dooley: When Mr. O’Loughlin reached a certain point with his disclosures, was there ever a point where the organisation offered or in some way extended an offer to him to leave the company?

Mr. Seamus O’Loughlin: Towards the end of mediation, a termination agreement was prepared by the ESB and I had three working days to review it. Psychologically, I was being asked to bring the hammer down on a career I had been in for 26 years and of which I am immensely proud.

Chairman: We want to confine the discussion to governance issues.

Deputy Timmy Dooley: With respect to governance, there is one issue I am a little concerned about regarding that exit. Was there anything in particular in that agreement to which Mr. O’Loughlin felt he could not sign up?

Mr. Seamus O’Loughlin: Just the commitment that I could not bring any more issues to the attention of the Minister.

Deputy Timmy Dooley: Mr. O’Loughlin was being asked to sign something that would have put a gagging clause on him from that point on regarding him communicating with the Minister for Communications, Climate Action and Environment? Is that the case?

Mr. Seamus O’Loughlin: That is my understanding from reading it. I have the termination agreement. I could read it out verbatim but-----

Deputy Timmy Dooley: Maybe Mr. O’Loughlin should not read it out verbatim but what I could ask-----

Chairman: Mr. O’Loughlin cannot read it out verbatim.

Deputy Timmy Dooley: I accept that.

Chairman: That information cannot be presented but we can talk about governance in

general. There is no problem with that.

Deputy Timmy Dooley: I suggest that Mr. O’Loughlin provide the termination agreement to the committee in due course so that we can have a look at it to see if there is something in it, to which Mr. O’Loughlin was expected to sign up, that would have prevented him from communicating with the Minister in future on issues of safety concerning the ESB. This was not a line stating he would not contact the media, “RTÉ Investigates” or whatever but was specific to the Minister-----

Mr. Seamus O’Loughlin: Yes, it was.

Deputy Timmy Dooley: That is a very serious development. I suggest the committee seeks that document from Mr. O’Loughlin and we can look at it further.

Mr. O’Loughlin has gone through all of this and the information is now public. We have had representatives of the Commission for Regulation of Utilities, CRU, before the committee and we will have representatives of the Environmental Protection Agency and the ESB before the committee in due course. The cat is out of the bag. Mr. O’Loughlin has indicated he is aware that certain actions are taking place in those areas of greatest concern to him. That is a positive development. Where does he want to go from here?

Mr. Seamus O’Loughlin: The programme finished up by pointing out that it had always been my intention to be part of the solution. Where I was allowed act on any of the issues I brought to the table, those actions have been successful. I suppose I bridged the gap. I was a front-line staff member. I have been in a cable joint where a cable exploded. I have fallen down a pole. I have walked in the shoes of the front-line staff. I am good at interpreting what they say, debunking the stuff that is vexatious and bringing legitimate issues up the line. I want to be part of the cultural change that has to happen in the company. I said in my opening statement that I do not take any delight in having to come up here today and wash the dirty linen of a company. The ESB will be an integral part of the climate challenge the country faces, which involves looking at electricity issues. The more fair-minded people within the company who have reached out to me since the programme have said I have done the country and the company a massive service. We no longer have to pretend about the fluid-filled cables. There is far greater rigour with respect to SF6 gas. My understanding is that all the issues I have raised have been acted on since January in a meaningful manner. If this matter had been embraced two to three years ago, we would never ended up here. Representatives of the ESB will appear before the committee after me. I know the individuals who will be on the other side of the table. There needs to be some resolution on the interpersonal issues.

Chairman: We cannot deal with those issues here today. Does Deputy Dooley have a final question?

Deputy Timmy Dooley: Is there anything else Mr. O’Loughlin would like to add?

Mr. Seamus O’Loughlin: No, I am happy enough with that. In 2013, we produced a safety strategy handbook. I read it from cover to cover when I was appointed to the role and I have tried to live by its values and guiding principles, namely, that the ESB is a proactive company which is trying to identify issues before they arise.

Senator Joe O’Reilly: I welcome Mr. O’Loughlin and acknowledge his very successful career in the ESB. He referred to propane gas and stated he found serious shortfalls in the areas of fluid-filled cables, sulphur reporting and flexible earths. He then went through a list. He

acknowledges that the position has changed in each case. Is that correct?

Mr. Seamus O'Loughlin: Yes.

Senator Joe O'Reilly: Somebody watching these proceedings could reasonably ask where is Mr. O'Loughlin's evidence that the same results could not have been achieved within normal structures in the ESB and without a public outcry about this.

Mr. Seamus O'Loughlin: I have 400 or 500 pages of documentation to back up the fact that I have been continually raising these issues. It is how protected disclosure legislation is meant to operate. Changes have happened since I raised it with the Minister. Changes were not happening prior to that, despite my best endeavours.

Senator Joe O'Reilly: Did Mr. O'Loughlin investigate all opportunities before he went down this route? Is he convinced beyond reasonable doubt that he tried every opportunity to work within the structures to achieve the same objectives?

Mr. Seamus O'Loughlin: I believe I am. I exhausted all internal mechanisms to progress this.

Senator Joe O'Reilly: Is he absolutely sure of that?

Mr. Seamus O'Loughlin: I cannot answer that question objectively. However, anyone I have asked to look at the documentation has said it is a farcical situation. I was highlighting issues and providing solutions and I was hammered for doing so. That is how I felt.

Senator Joe O'Reilly: It has occurred to me that there was a degree of reform and ongoing improvement in the company's health and safety and structure, which was necessary. Mr. O'Loughlin was right in his fundamental analysis but this was happening and the company was improving. Were Mr. O'Loughlin's actions necessary to achieving that? Was that process likely to happen anyway? How sure is Mr. O'Loughlin that he went the extra mile to establish that the company was not doing the right thing and was not willing to listen?

Mr. Seamus O'Loughlin: I have the documentary evidence to back it up. I will give the committee another example. I brought the Organisation of Working Time Act 1997 to the Minister's attention. Broadly speaking, that stipulates that an employee cannot work more than 48 hours a week on average. We had staff members hitting 70 hours a week on average over a period of six to ten months. Nobody was prepared to grasp that nettle because there was no upside to doing so. The institution was turning a blind eye to it. Now it has been raised and resolved. A friend of mine said to me that I would be the most hated man in ESB because I would cost front-line staff members real money. However, I understand is the general feeling is that the company feels it got away with this for a long time but now the cat is out of the bag and it must comply. I did not feel there was an atmosphere in which raising issues like that would be viewed positively. Doing so would create work for those above one, which was hard to handle.

Chairman: Does the Senator have another question or will I move on to Deputy Eamon Ryan?

Senator Joe O'Reilly: I am happy with that.

Deputy Eamon Ryan: I must apologise to Mr. O'Loughlin. I had to speak in a debate in the Chamber so I have arrived late, but I have read his statement. I met Mr. O'Loughlin on this issue last year, and I have had several telephone conversations with him in the meantime. I

have also been in discussions with departmental officials in regard to the mediation process he mentioned. In any of the discussions or dealings we have had, I found what Mr. O'Loughlin presented to be credible. Things subsequently have been seen to be exactly as he outlined.

We are in a difficult situation. It is always about personal circumstances. It is clear that Mr. O'Loughlin has been through very difficult circumstances because of his willingness to do the right thing and highlight the need for change. I wish to ask a couple of very general questions without prying into the personal details of any particular manager or other person. I had not realised that the ESB motto was "Never turn a blind eye". Where does that tradition come from?

Mr. Seamus O'Loughlin: We had two staff fatalities in 2012 and 2013. We realised that we could not keep operating the way we were operating. An awful lot of money, time and expertise was invested in changing our culture. That is where that motto came from. I raised a point that there are stickers up all over the place that say "Never turn a blind eye". Do we really mean that or is it empty rhetoric? Are we prepared to make decisions which will be unpopular in the short term but which are in the long-term interests of the company?

Deputy Eamon Ryan: That motto originated after those two terrible fatalities in 2012. It was not an old tradition that went way back, but a deliberate and conscious attempt to improve the company's ways after those fatalities.

Mr. Seamus O'Loughlin: Yes. I have been trying to understand how we got to this point. We are a very large player in the Irish industry. The various State agencies should have oversight of us but we have far more technical expertise than somebody who comes in from outside. We would not get away with some of the things we were getting away with in the UK because the regulators there have the required expertise and experience to ask the real questions and hold suppliers accountable. For example, oil leakage is published annually in the UK in a public report that anyone can see. It is listed as a percentage of overall oil usage. Leakage of sulphur hexafluoride, SF₆, is reported annually in the UK. If a provider leaks it must account to Ofgem - the British equivalent of the Commission for Regulation of Utilities, CRU - for why it leaked. Providers are penalised financially for leaks.

Anecdotally I have heard that Belgium only has leakage equivalent to seven bottles of SF₆ gas. I do not know how true that is but having spoken to the various experts in the company, my best guess is that Ireland leaks somewhere between 2,000 and 5,000 bottles of SF₆ gas. Moneypoint has been leaking for years and we have been putting SF₆ gas into it. We have always viewed SF₆ as an €800 bottle of gas, but it is not really. I viewed it as a potential €50,000 fine. The guys there are incredibly conflicted. I have found this throughout the country. They are expected to keep gassing up breakers that leak on a regular basis. If the engine of a car was leaking one could just keep topping it up with oil, but that is not sustainable in the long term. SF₆ gas seems like a relatively benign issue, but 1 kg is the equivalent of 24 tonnes of CO₂. The way we handled it was not sustainable in the current climate.

Deputy Eamon Ryan: Did the handbook Mr. O'Loughlin mentioned come out in 2012 or 2013, at roughly the same time as the other reforms? Was it part of the same response as the "Don't turn a blind eye" motto?

Mr. Seamus O'Loughlin: Yes.

Deputy Eamon Ryan: Am I right to say that DuPont advised the ESB? What was that company's role?

Mr. Seamus O’Loughlin: That company provided external industry experts. They came in to show where we could improve and how we could up our game from a safety performance point of view.

Deputy Eamon Ryan: This is a personal detail but I mention it as background. Mr. O’Loughlin completed a postgraduate certificate in health and safety in UCD. Is that correct?

Mr. Seamus O’Loughlin: Yes.

Deputy Eamon Ryan: Did he complete that part-time, while working? How did that work?

Mr. Seamus O’Loughlin: I did it prior to moving into safety. I did it over the course of a year. I went up to UCD a couple of times.

Deputy Eamon Ryan: Representatives from the Commission for Regulation of Utilities appeared before the committee yesterday. I asked a question about health and safety. Interestingly, Mr. O’Loughlin has said that in the UK, if a health and safety issue arises in work an employee could go to Ofgem, the equivalent British regulator. The CRU’s representatives said yesterday that it does not have a direct safety function within the ESB. If someone has a complaint he or she should go to the Health and Safety Authority, HSA.

Mr. Seamus O’Loughlin: The relevant body in the UK is the Health and Safety Executive, HSE, the equivalent of our HSA.

Deputy Eamon Ryan: Did Mr. O’Loughlin think of going to the Health and Safety Authority with these concerns?

Mr. Seamus O’Loughlin: Under the legislation there is a higher bar to meet if one approaches a State agency. The bar is lower with a Minister.

Deputy Eamon Ryan: The legislation sets out the path to take.

Mr. Seamus O’Loughlin: Yes.

Deputy Eamon Ryan: Why would someone go to the Minister with a safety complaint in those circumstances?

Mr. Seamus O’Loughlin: It was not just about safety. This concerned safety, financial issues and environmental issues. I was also concerned by the scale of the problem. It is potentially a threat to the national economy. It affects the security of the energy supply around Dublin.

Deputy Eamon Ryan: Did Mr. O’Loughlin think about going to the HSA?

Mr. Seamus O’Loughlin: I did, actually. I rang up once to get background to it but I was in crisis mode. I believed I may not have had a job at the end of it. There is no manual to say how to go down this road. If I am being honest I presume I could have handled things differently.

Deputy Eamon Ryan: In his presentation, Mr. O’Loughlin stated one of the compounding factors was that due to an accounting error his function faced a shortfall of approximately €4 million per annum. I do not want to raise an inappropriate question but I would like background on this.

Mr. Seamus O’Loughlin: We prepare a submission for the regulator every five years. This is the agreed PR4 submission. My understanding is that my function’s financial requirements

were forgotten.

Deputy Eamon Ryan: CRU mentioned yesterday there had been a budget allocation for PR4 of €25.4 million-----

Chairman: It was-----

Deputy Eamon Ryan: It was €20.4 million in PR3. Only a small percentage of it had been had been spent.

Mr. Seamus O'Loughlin: Was that to do with the cable?

Deputy Eamon Ryan: Yes, it was with regard to the cable oils.

Mr. Seamus O'Loughlin: Ironically enough, a more than €20 million shortfall is far easier to fix than a €20,000 shortfall because people further up the line must actively engage in resolving it. It did get resolved but it caused tension that I had no active budget to work with.

Deputy Eamon Ryan: In PR4, some of Mr. O'Loughlin's safety budget was not included as one of the regulated asset approvals from CRU and, therefore, his budget was somewhat constrained.

Mr. Seamus O'Loughlin: Yes. We could resolve run of the mill issues in our own function but if something required significant financial muscle it was outside.

Deputy Eamon Ryan: What type of things might have been cut back because of it?

Mr. Seamus O'Loughlin: Cable fault location vans, which have units in the back of a transit van. If there is a cable fault a high-voltage pulse is injected to locate it. We had units that had been there for 20 years but there was no maintenance regime for them. We had ridiculous things. The lads had to put one unit on a pallet because they were getting shocks off it. They had to disconnect it from the ground so it was on a timber pallet.

Deputy Eamon Ryan: From my experience of utilities, if someone is going abroad with IDA Ireland and visiting a major investor into Ireland something we always speak about is the stability of our electricity grid system. The level of outage is very low, particularly given some of the stormy weather we have. Investment in fault location is a critical part of keeping the figure low, not just for safety but performance standards. I would have thought being good at this is mission critical.

Mr. Seamus O'Loughlin: I was bringing issues up the line as logically as I could but they were not being acted on.

Deputy Eamon Ryan: CRU mentioned yesterday that one of the difficulties - it related to the mineral oil in the cables, but it applied more widely - was that in the period from 2013 to 2015, which is the period we are concerned about, the ESB had serious significant contraction in the capital budget, which put a strain on its ability to meet certain capital spending areas. Did Mr. O'Loughlin have a sense of this or does he think it was part of the problem in some of the difficulties he ran into?

Mr. Seamus O'Loughlin: I have a very good understanding of the regulatory model because I worked in asset management and I was involved in revising the PR3 submission. Given the recession the country was going through we had to pull back on an awful lot of projects.

CRU might allow us €20 million but if we cannot raise the capital on the international bond markets it does not count for anything. Replacing the fluid filled cables in Dublin does not generate an awful lot of cash and it is very resource heavy from a management perspective. It is far easier to build a €100 million substation in Kerry because it can be contracted out and put on the regulated asset base, RAB, whereas a cable outside this door is heavy on management resources and it might only add €2 million or €3 million to the RAB at the end of it.

Deputy Eamon Ryan: Was Mr. O'Loughlin aware that under PR3 there had been such a significant underspend on that?

Mr. Seamus O'Loughlin: I was only aware from hearing the CRU yesterday.

Deputy Eamon Ryan: It is interesting that Mr. O'Loughlin cited that. This problem goes back to 2003 and probably a lot further. Some of these cables have been in place since the 1960s and 1970s.

Mr. Seamus O'Loughlin: Yes.

Deputy Eamon Ryan: As Mr. O'Loughlin said, it is publicly reported in the UK and he knows what the New York figure is. While this may not be glamorous or tough career advancing, it is not insignificant. There were 90,000 l back in 2003 and we have still had 30,000 l, 40,000 l or 50,000 l in recent years. For an issue like this to be ongoing for at least 15 or 20 years, what was the response from the company when Mr. O'Loughlin raised it as a concern?

Mr. Seamus O'Loughlin: I raised it verbally at a point in time. The year I raised it I was told we were under 15,000 l, which is the company policy, and that we were compliant with legislation. In fairness there was a dip in 2016 and 2017 but that was an aberration more than anything else. If we applied the UK figures our policy it should be 6,000 l per annum. That would be a 2% leakage rate.

Deputy Eamon Ryan: Mr. O'Loughlin said he was aware that under the 2003 groundwater directive we have an obligation to refer any leakage over the level to the relevant authorities. Did he raise this with the ESB?

Mr. Seamus O'Loughlin: That was not really my remit. The genesis of all this is the propane gas. The highest risk area for propane gas is in Dublin because that is where most of the cable jointing work goes on. When I met various people and front-line members it was a bit of a joke that we were still getting away with the level of fluid leakage that was going on. On the one hand the ESB is stating the fluid it is putting in is biodegradable but in the PR4 submission it continually highlights how damaging it is. It states that several of the programmes are largely justified based on the environmental impact and that fluid leakage presents a challenge to ESB networks that is costly and environmentally damaging. We just cannot have that level of leakage. The elephant in the room is the rate of replacement of the cables. If we do not replace these cables in line with our commitments to the regulator the problem will grow exponentially. I do not fancy our chances of getting into work on time in the morning if we have to start digging up half of Dublin.

Deputy Eamon Ryan: I was tangentially involved in conversations with the Department. As part of the mediation process in the past six to eight months, Mr. O'Loughlin was in touch with the Department. It might be useful to summarise what role it had and how it fitted into the attempt to get it resolved in a mediated way.

Mr. Seamus O’Loughlin: I made my three submissions initially to the Minister. Then I met his nominee. I understood that he would step back from it. I met his nominee on a number of occasions. My wife and I were aware of the psychological toll this would take so I did not actually submit them until January 2019. We had to be prepared for what would come at us after that. The ESB was given a period of time to investigate each of the issues I raised and come back with responses. It has acted on an awful lot of the issues I have raised, which is validating if I am being honest. Where I am left is wondering where I will be in six months’ time. Will I still have a job? Will I be able to provide for my wife and family? This is the difficult situation I find myself in. As I said earlier, the people whom I contend are the more farsighted in the company reckon I have done it a massive service because we have been compelled to grasp very difficult nettles, such as the SF6 reporting. Staff are asked to go out and regas breakers that are continually leaking. That is a clear breach of the F-gas directive. Is the Environmental Protection Agency, EPA, an oversight or a policing authority? What role does the Commission for Regulation of Utilities, CRU, have in all of this? All of that must be clearly defined to ensure this does not happen again.

Deputy Eamon Ryan: Has the EPA approached Mr. O’Loughlin for information or contacted him in any way?

Mr. Seamus O’Loughlin: No. When I brought these issues to the Minister I expected that there would be tick-tacking back and forth and that I would be asked to validate what I was sending in. I sent them in and I had to sit on my hands after that. Financially, it has been a challenge to sustain this process. I am quoting legislation and UK figures. There are many clever people in ESB at the other side of the table pushing back on what I am saying but the figures speak for themselves. In the submission to the regulator we continually say why we need to do this work and that it is environmentally damaging. On the other hand, we are saying that the cable fluid is biodegradable. The stuff being displaced is not biodegradable. Anecdotally, I heard we used C4 until the 1960s or 1970s. That is particularly damaging if one looks at the safety data sheet.

It would be great if we could report in our sustainability report on the fluid-filled cable leakage and the SF6 gas. That would represent a real cultural shift. I have absolutely no doubt that ESB Networks will come out of this a more resilient company. Our staff will have a better chance of getting home safe and sound.

Deputy Eamon Ryan: It is called not turning a blind eye.

Mr. Seamus O’Loughlin: Yes, but where do I fit in to this? How will I be at the end of it? Once again, I reach out to the company. I want to re-engage in meaningful mediation. I want to be part of the solution to all of this.

Deputy Eamon Ryan: I thank Mr. O’Loughlin very much.

Chairman: We thank Mr. O’Loughlin for coming before the committee this evening.

Sitting suspended at 6.03 p.m. and resumed at 7.35 p.m.

Chairman: I welcome Mr. Paddy Hayes, managing director, and Mr. Paul Mulvaney, executive director, network customer delivery, and Ms Claire Quane, network operations manager, from the ESB. I draw the attention of witnesses 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 committee 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.

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 House or an official either by name or in such a way as to make him or her identifiable.

I remind Members and witnesses to turn off their mobile phones as they interfere with the sound system. I invite Mr. Hayes to make his opening statement.

Mr. Paddy Hayes: I thank the Chair for the opportunity to appear before the committee to address the matters raised recently on television concerning ESB Networks operations. ESB has always been a company that strives to do the right thing. For over nine decades we have worked in and with communities enabling development and better standards of living. Over that time, we have evolved our work practices, adopted new technologies and dealt with the legacy of older technology in a proactive way. Notwithstanding the fact that in recent years we have made significant progress on the safety and environmental issues raised, we recognise that we can do more. I would like to address a number of the significant matters raised in the recent programme. At the outset, I note the Chair's advice.

The 3,000 staff of ESB Networks install, operate and maintain the electricity distribution system and install and maintain the electricity transmission system. We use our network of over 180,000 km of lines and cables to connect and provide services to 2.3 million customers in homes, farms and businesses throughout the length and breadth of Ireland. Our role is connecting people and businesses to the electricity they need. ESB Networks also has a key role supporting the national climate action plan. We work to create a brighter future for the communities we serve and lead the transition to a low carbon future powered by clean, renewable electricity. This involves connecting more renewable generation so that 70% of electricity comes from renewables by 2030. We also distribute that clean electricity to facilitate the decarbonisation of heat, transport and industry.

The programme raised the issue of fluid filled cables. Without wanting to minimise in any way the challenges we face relating to legacy fluid filled underground cables, they were for many years the technology of choice for electricity networks in cities all over the world. That leaves ESB, along with the many worldwide utilities operating city networks, with the ongoing challenge of managing fluid filled cables for many years to come, although these cables now make up less than 1% of Ireland's underground cable network. The fluid is an essential component of the electrical insulation of the underground cables in question and the fluid is readily biodegradable. Notwithstanding this, we know it is important to minimise and eliminate the leakage which can occur, for example, as a result of damage from construction activity or deterioration of the outer casing of the cables. We have taken many concrete steps to improve, and our current performance in 2019 is comparable with that of our international peers and comparators. Those concrete steps include replacing almost 20% of underground fluid filled cables so far, thereby removing the source of 40% of the historical leakage, and investing in specialist detection equipment that allows us to track down leaks more quickly. Our current rate of fluid leakage is in line with international comparators at 10 cu. m per year. We have reported the rate of fluid usage in underground cables annually to our sectoral regulator, the Commission for

Regulation of Utilities, CRU, since 2007. Our records show five occasions over 26 years, since 1993, when cable fluids spilled into water. In each case we notified the relevant local authority, Waterways Ireland, or both, and immediately mobilised an environmental response. However, we acknowledge and accept that a greater and more systematic level of liaison with the relevant local and other statutory authorities on cable leaks would be appropriate. That is happening.

SF6 gas is a standard insulating gas used in switchgear all over the world. It is specified by the international manufacturers of modern switchgear because its properties make it particularly good in providing the insulation and arc suppression required to safely operate high voltage switchgear. At ESB Networks we comply with the requirements of the EU F-gas directive and have reported our annual usage of SF6 gas to the EPA since 2006. One of the characteristics of SF6 gas in switchgear is that a certain level of leakage is anticipated. Until 2019 ESB Network's SF6 gas usage was higher than that of peer comparators. It was primarily an issue with HV switchgear at our Moneypoint transmission substation. Now that the switchgear has been de-energised, taken out of service and replaced, our SF6 gas usage will be significantly lower. This was a major project started some years ago and it has now finished. The switchgear has been de-energised in the last month or so.

It is important to address the aspects of safety culture raised in the programme. For many years the ESB has invested in an open culture to encourage employees to identify and report safety issues or potential safety issues of which they become aware. We believe they are a leading indicator, increasing people's involvement in safety issues and cumulatively reducing the likelihood of injuries. ESB Networks has over 3,000 highly trained and very committed employees who, between them, raised over 4,500 good catches in 2018. We acknowledge and appreciate the commitment of all those who openly raise safety suggestions, believing this to be the key to a continuous safety culture. For example, the decision to replace the hand-held propane gas blow-torch referenced in the RTÉ television programme came about as a result of our employees identifying issues and reporting incidents in their use. After a review process, that model of torch was replaced. We have a well resourced safety organisation which audits, reviews and supports safety performance in dealing with any issue or incident raised in the normal course of daily operations. Our safety and environmental systems are audited annually and accredited to OHSAS 18001 and ISO 14001 standard.

The ESB has a very clear policy on speaking up. We provide comprehensive support for employees who feel the need to speak up, including a 24-hour confidential helpline that can be accessed by phone or online and an opportunity to directly contact the ESB's group internal auditor. ESB Networks is an open organisation. The issues highlighted in the RTÉ television programme had been identified as part of our safety and environmental reporting systems and many had already been the subject of internal review, investigation and action. With the disclosures from the Department of Communications, Climate Action and Environment, any concern raised that had not been investigated within ESB Networks was assigned for investigation. The investigations were carried out by people with the appropriate expertise from areas of the ESB outside ESB Networks or using external specialist expertise, where appropriate. At the request of ESB's chief executive, we are also commissioning an external review of the potential for environmental impact of ESB Networks operations to ensure our internal assessments are comprehensive.

I would like to address aspects of security and the reliability of the Dublin city network raised in RTÉ's television programme. The Dublin city electricity network, including the underground fluid filled cables in question, has been designed, configured and operated to provide

a high level of security and reliability typical of any modern city. The high and medium voltage network is monitored 24/7 in real time using a modern operations management system. Accordingly, customers in Dublin, whether domestic or business, enjoy a reliable, resilient and high quality electricity supply. The ESB has always been a company that strives to do the right thing. Throughout our history we have evolved our work practices, adopted new technologies and dealt with the legacy of older technology in a proactive way. Notwithstanding the fact that in recent years we have made significant progress in safety and environmental performance, including in dealing with the issues raised, we recognise and acknowledge that there are a number of areas where we could and should have done more. We recognise the opportunities for further improvement into the future. My colleagues and I will be happy to address questions committee members may have on these or relevant matters.

Deputy Timmy Dooley: I thank Mr. Hayes and his colleagues for coming before the committee. I also thank him for his comprehensive overview.

The issue which was the source of greatest concern from an environmental perspective was the ongoing leakage of oil. Mr. Hayes has reiterated that it is readily biodegradable, but there seems to have been a suggestion that there was some level of mineral oil in the coolant in up to 90% of cables. I understand that oil is not biodegradable.

Mr. Paddy Hayes: There are two types of fluid in the cables, both of which are readily biodegradable. I will ask Mr. Mulvaney, head of customer delivery, to provide more detail.

Mr. Paul Mulvaney: Both compounds are readily biodegradable and certified to OECD standard 301D. A document is being circulated to members with pictures of four types of fluid filled cable. All cables have the same components: copper as a conductor - that is what carries the electrical power; an insulator which stops the power from escaping the conductor; an earth sheath around the outside to ensure the cable operates safely; and another covering which forms a protective outer layer. In the illustration provided for members in the top left hand diagram the fluid passes through the centre of the conductor and the insulating medium is paper on the outside of the copper, but the fluid seeps into the paper and it is the combination of the fluid and the paper which provides the isolation. The image on the top right hand side shows a different construction. It is a three-phase cable. The fluid passes through the copper pipe on the outside of the cable. The image on the lower left hand side shows a different construction again. The fluid is not in separate ducts and the cable is immersed in it. The diagram on the bottom right hand side is of the modern cable. Plastic is used. No fluid is used as an insulating medium. Our new cable is of this XLPE construction and there is no need for fluid. Our network has 25,000 km of cable, of which less than 1% is fluid filled. The cables were installed largely between the 1950s and 1970s. The last of it was installed in 1989. It is a technology which has been moved away from across the world, but all large cities have legacy cables that are managed. There are also leakages which they also must manage. It is not an issue which is unique to Ireland.

Deputy Timmy Dooley: Mr. Mulvaney is comfortable that it is absolutely biodegradable, certified and tested to the standard identified.

Mr. Paul Mulvaney: Yes.

Deputy Timmy Dooley: I assume the EPA will have a view on the matter when it completes its investigation. Does the ESB have an inventory of the SF₆ gas it has in stock?

Mr. Paddy Hayes: Yes, we do. I will ask Ms Quane, the operations manager for the net-

work, to answer the question.

Ms Claire Quane: It is important that members of the committee understand we have been reporting the level of SF6 gas usage since 2006 when the F-gas regulations took effect. As Mr. Mulvaney said, the ESB has been around for 90 years. It has equipment that is old and which we manage, as well as equipment that is new. That is part of what we do. We have legacy equipment and it is a challenge to manage it.

Deputy Timmy Dooley: Will Ms Quane provide the committee with an inventory of the SF6 gas the ESB has in stock? If she does not have it with her, she can forward it afterwards.

Ms Claire Quane: I can talk about SF6 gas. We have a list of the equipment with which we use it. We report on it because we report annually to the EPA how much usage we have. In addition, it is important to understand that we manage SF6. We do that through a suite of procedures and those were rolled out in 2015 and 2016. We also have to manage the usage and we do that through containers. We have an inventory of those containers as well.

Deputy Timmy Dooley: That is what the gas is stored in.

Ms Claire Quane: That is correct.

Deputy Timmy Dooley: It is known exactly and there is a full log.

Ms Claire Quane: Yes, exactly. I sent pictures to the committee and what I am speaking about can be seen in those. There is legacy equipment and we replace equipment on the network. That is part of what we do.

Deputy Timmy Dooley: If the EPA were in contact by telephone tomorrow, Ms Quane has access to a database of information with full details of exactly how much SF6 there is, where it is located, how it is stored and all of that information.

Ms Claire Quane: We know what SF6 equipment we have-----

Deputy Timmy Dooley: I am not talking so much about the equipment as about the gas.

Ms Claire Quane: We know what SF6 equipment we have and which equipment has the SF6 gas in it. We are constantly improving that. The old switch gear from Moneypoint can be seen in the first picture provided. As Mr. Hayes stated, we de-energised that in early June. The last of the circuits have gone into the new switch gear and the next stage now is to decommission the old switch. The new switch gear being put into Moneypoint can be seen in one of the other pictures. To give a sense of scale, the height of the old Moneypoint switch gear is approximately 7.5 m while the new gear is approximately 3.9 m. Technology evolves all of the time. The level of information we have relates to what information we got from the suppliers at the time of purchase. That improves as the technology evolves because the regulations have evolved over those years as well.

Deputy Timmy Dooley: To be clear, the ESB has absolute clarity concerning its inventory. It knows exactly how much of this gas it has in its ownership.

Ms Claire Quane: We know where all of the gas is, we know the equipment that is filled with the gas and we are always trying to improve the inventory. If we have old equipment, for example, we may not have originally got the total volume of SF6 gas from the supplier. The requisite information may not be readily available for that old equipment but we do have an

estimate of the SF6 gas contained within that equipment. The newer equipment is in compliance with the new regulations so that would be very clear. We are constantly evolving and that is when I go back to the fact that we are dealing with and managing legacy equipment. That is what we do.

Deputy Timmy Dooley: That is a fair point and understandable. I do not want to hog all of the meeting. Mr. Hayes mentioned speaking up. That is important. He has had the benefit of hearing evidence that we received earlier. We do not want to talk about specifics in respect of any individuals. In the context of speaking up, however, in the case of someone leaving the company and having to sign certain declarations, it has been suggested that there was potential for a person to have to give a commitment to not bring up any further areas of concern regarding legal non-compliance on the part of the ESB and that such information not be provided to the Minister for Communications, Climate Action and Environment. Does Mr. Hayes have any comment on that?

Mr. Paddy Hayes: Yes. I appreciate the opportunity to set the record straight on this matter. I heard that comment and the interpretation of that clause in the agreement. I will be absolutely clear in stating that is a fundamental misinterpretation of the clauses of that draft agreement. In fact, the very opposite is the case.

Deputy Timmy Dooley: Is that clause in the agreement? Is there language to suggest that an individual would not communicate further with the relevant Minister in respect of issues of safety?

Mr. Paddy Hayes: The way in which that particular clause has been interpreted is fundamentally and absolutely not the case. It is the opposite of that.

Deputy Timmy Dooley: That is okay. I understand. Sometimes context is everything. It is in a particular context, I assume.

Chairman: Let Mr. Hayes finish his reply.

Deputy Timmy Dooley: Mr. Hayes is not disputing that the clause is in the agreement.

Mr. Paddy Hayes: At some point in the future, I would be happy to go through the agreement with the committee.

Chairman: We are not going to discuss individual cases now. This question is being posed more at governance level by Deputy Dooley. Is that correct?

Deputy Timmy Dooley: In having this conversation-----

Chairman: Without-----

Deputy Timmy Dooley: -----with Mr. Hayes, we have to be careful that we satisfied that there is not a potential for a culture to develop within the organisation that would silence, seek to silence or have the effect of silencing people who might otherwise be minded to speak up. I am sure Mr. Hayes would also want to address this issue from his perspective.

Mr. Paddy Hayes: Absolutely, and that is why-----

Chairman: That is the general sphere of employees.

Mr. Paddy Hayes: -----I appreciate the opportunity to clarify that any interpretation along

the lines that Deputy Dooley has suggested is an entire misinterpretation of the terms and intent of any draft agreement. The opposite is the case. This gives me the opportunity to speak to that point. We encourage all of our staff to speak up. We really appreciate staff speaking up and we believe that is part of the culture. We have sought to increase the level of reporting of near misses, good catches and of safety opportunities. We brought that up to a level of about 4,500 last year. Every one of those is an opportunity for someone in the organisation to have a dialogue with the business about opportunities for safety improvement. The situation, therefore, is quite the contrary to any other suggestion in that regard.

Deputy Timmy Dooley: On a final point, I would like to get some confidence concerning how a whistleblower might be treated. Based on what was captured in the programme, we might have some concerns that these issues were only addressed when they were escalated to the level of a protected disclosure. We would be concerned that an individual would have to go to those lengths in order to get the attention necessary to address these issues. On the basis of Mr. Hayes's admissions and the discussions in the programme, it seems that much started to happen on this issue when the protected disclosures were made. Would that be a fair characterisation?

Mr. Paddy Hayes: If we look at the evolution of the company in the round, the retirement of legacy equipment and the building of new equipment, such as the switch gear that Ms Quane was speaking about earlier, that was a major capital replacement programme. That switch gear replacement cost is of the order of €100 million and so that process did not start today or yesterday. The capital approval was in-----

Ms Claire Quane: It was 2012.

Mr. Paddy Hayes: -----2012 and that was followed by the long-term commissioning of some equipment, including the tendering, buying and installation. At any given point, therefore, we have a range of issues where we are managing the past and investing for the future. Having said that, however, everyone who brings an issue to us in respect of an opportunity to improve or a concern about safety provides us with an opportunity to make a difference. To take one example, when we investigated the first protected disclosure to the Minister regarding fluid-filled cables our investigation came up with the finding that there was an opportunity for us to improve our liaison and reporting with the local authorities. That was despite the fact that we had reported each and every leak to water in the last 26 years. There was an opportunity to do that better. We have now put in place a protocol with each of those local authorities for reporting any future leakage. As a result, it has been an opportunity for us to improve.

Deputy Timmy Dooley: Does Mr. Hayes have some regrets then that it took an individual having to go to those extreme lengths to highlight the issue to which Mr. Hayes specifically referred in order for it to be addressed? Does he regret that the internal procedures were not better? I accept that the ESB is a big organisation and that a lot is going on. Surely, however, there are lessons to be learned from this experience. Does Mr. Hayes accept that?

Mr. Paddy Hayes: I believe I am correct in saying that Mr. O'Loughlin had not raised that particular issue formally within the company beforehand. I would like to think everyone in the organisation feels they can expose issues or bring them to the surface and that they will be dealt with speedily and effectively. From the start of this process where Mr. O'Loughlin-----

Chairman: I would avoid naming names, because we do not want to talk about individual cases. Mr. Hayes can talk about the structures within the ESB and how complaints are dealt

with but I do not want any names mentioned here because it is not appropriate.

Deputy Brian Stanley: I thank the witnesses for their attendance. I was shocked by the contents of the “RTÉ Investigates” programme. My sense of the ESB is that it is a big professional organisation. I was an ESB employee for three years. Even then its motto was “Never turn a blind eye”, though that was a few decades ago. As the ESB is seen as a reliable company with a huge emphasis on safety and on workers being well treated, there is some concern when an issue like this crops up. The ESB will need to carry out a number of projects over the coming years because ESB’s networks will require a huge upgrade to deal with the electrification of transport and greater electrification of many sectors due to climate change. New infrastructure will be installed, some of which already has planning permission. It is important that both the public and members, as public representatives, can defend and stand over the ESB’s record as our company, that is, as a State company. We want it to be a safe pair of hands in constructing networks, installing infrastructure and operating safely and I am sure that is what the ESB also wants.

The revelations in this programme are damaging. There is a question about whether the leaked material is oil or fluid and whether it is biodegradable. In the real world, equipment and infrastructure installed up to 60 years ago are now past their best-by dates. The water network is in the same position and replacing that network also is a challenge. However, it is better that we know what is wrong and that these issues are brought to the attention of the relevant authorities. In this case, the relevant local authority, Dublin City Council, knew what was happening and brought it to the attention of the Environmental Protection Agency.

It was said that what leaked from the underground cables is biodegradable. However, a confidential ESB document shows the ESB had been fully aware of the environmental hazards caused by those leaks since 2009, which is concerning. The document also states the Inchicore circuit presents the highest environmental risk due to the fact that its route runs parallel to the Grand Canal. That shows there already was some concern at that point that the environmental impact was severe. It went on to state that an acid replacement and maintenance report on the Grand Canal in Dublin was conducted in 2014, and that ESB Networks had considerable difficulties accessing that route’s cables in order to repair leaks. The report claimed this was an area where leaks “could present a very high environmental impact”. Between 2012 and 2014, 10,000 l of oil leaked into the waterway alone. It is hugely concerning that this was not brought into the full light of day at the time.

Representatives from the Commission for Regulation of Utilities, CRU, were before this committee yesterday. The ESB has to make a pitch to the CRU if it wants to do a capital upgrade. As I recall, the ESB looked for spending of €20 million between 2011 and 2015 for upgrade works of this type but only €6 million was used. I am trying to balance this in my head, while trying to be fair to the ESB. I understand that was during the austerity period and that the ESB was subject to austerity like everyone else. Why, however, was this allowed to go on when it had authorisation to spend €20 million? Why was there not a more open process in dealing with this? No matter how bad a situation, it is always better that the relevant authority knows what is happening.

Chairman: I will bring the witnesses in on this point.

Mr. Paddy Hayes: I ask Mr. Mulvaney to address that issue.

Mr. Paul Mulvaney: I thank Deputy Stanley. He has raised a number of different issues

and I will try to get to all of them.

First, he mentioned a specific leak and said that a certain amount of fluid went into the canal. However, that fluid did not leak into the canal. There was a leak from a cable near the canal, but the canal banks are impermeable clay structures for keeping water in, and so the only way for fluid to get into the canal is to go in over the top. As that particular cable is 1.2 m below the level of the canal, no fluid from that particular leak got into the canal. Having said that, it was a big leak and it took more time to find than to repair. The repair itself is a tricky piece of work but finding the leaks in these cables can be quite challenging. The traditional method for finding a leak in a cable, which might be a number of kilometres long, is to dig a hole halfway along the cable, bring liquid nitrogen down to freeze the cable, and then monitor the pressure on either side of the frozen piece to see which side the leak is in. That must be done a number of times to find the leak. We have invested in a newer technology where gas is put into the fluid and a detector essentially sniffs that gas out. However, that technology did not work in the case of that leak because it was right under the middle of a very busy road and the old method of digging and looking for the leak took a long time.

The Deputy's last point was about the ESB's spend. We agree work programmes with the regulator on a five-yearly basis when we cover various price reviews and agree a programme of work we are going to get done. Over the last number of price reviews, we have changed out 44 km of that underground fluid-filled cable, which brings the total length of the cable network down to 177 km. We did this using a risk-based method, whereby we replaced the cables with the history of most leaks first. By taking out 20% of the cables, we got rid of 40% of the leaks.

Deputy Brian Stanley: Mr. Mulvaney said that 177 km of cables remains. Is that mainly in the Dublin area?

Mr. Paul Mulvaney: Yes. It is mainly in the Dublin area but is in some other cities as well.

Deputy Brian Stanley: How long would it take to replace that or phase out that infrastructure?

Mr. Paul Mulvaney: Replacing cables is a tricky piece of work because we need to find new routes for them. There are many other services underground, where the cables are, such as water, sewage, telephone cables, broadband cables and gas pipe work. As there must be a certain amount of clearance between electrical and gas networks, finding routes to replace those cables is highly challenging. This will take a long time but we are working our way through it. Electrically, as these cables will be sound for another 100 years, they are doing their job and are well designed from that point of view. We want to take them off the system because of leakage but it is not a simple fix. Replacing all the cables in Dublin would cause disruption around the city equivalent to building 70 Luas cross-city lines. It is something that we have to manage and do in a controlled manner.

Deputy Brian Stanley: The CRU, which was before the committee yesterday, stated that the ESB informed it four years ago that it was performing to a very high standard environmentally. It said it took the ESB's assurances at face value. Was that a factual position to relay to the CRU? Did the ESB specifically inform the EPA or the Department in 2009 or beforehand about the leaks?

Mr. Paddy Hayes: Yes, that was the position, and we stand over that. Our report to the CRU said that we were in substantial compliance with environmental legislation, and we are. I

am not clear who we reported to in 2009. We reported certainly to the CRU.

Deputy Brian Stanley: Is Mr. Hayes not sure if the ESB reported to the EPA or the Department? Did the ESB report to any of the local authorities?

Mr. Paddy Hayes: Any leak that went into a water course since 1993 has been reported to the local authorities, Waterways Ireland, or both, and in some cases the EPA. We have made a number of reports over the years.

Deputy Brian Stanley: Mr. Mulvaney says that the fluid did not leak into the canal, but it would require a lot of testing to ascertain that. We know that tens of thousands of litres leaked into the soil and into the area close to the canal. It is of great concern that the ESB is not able to state exactly when the leak was reported to the relevant authorities, either to a local authority, the EPA or the Department. That is a crucial issue and it appears that when the issues came to light that reporting did not happen.

Mr. Paddy Hayes: Yes. What we have done is looked at the systematic reporting of leaks. We have talked to each of the local authorities and we have put a protocol in place. That is already in place and will be in operation looking forward. Equally, we have put a protocol in place that works with local authorities to look back at any areas of potential leakage or environmental damage. We do not believe that there was. Otherwise, we would have reported it immediately. We do not believe there was any environmental damage but we have put a protocol in place and we have already engaged external environmental specialists to work with us and to look back at any area where we had a significant leak to establish whether there was any environmental damage or if we were correct in saying there was not.

Deputy Brian Stanley: I wish to ask about the 177 km of remaining cable.

Mr. Paul Mulvaney: That is 177 km out of 25,000 km of cable.

Deputy Brian Stanley: Are there leaks along sections of the remaining cable that are of concern?

Mr. Paul Mulvaney: Yes. We have one known leak today, of which we have informed the authorities, and we have three suspected leaks. We are engaging with the local authorities on all of those. We have details on all of that on our website as well.

Deputy Brian Stanley: I understand that cable replacement is a challenge. How quickly can leaks be identified? How does it happen? Does it show up on the system? Can action be taken to at least carry out remedial works until such time as replacement is possible?

Mr. Paul Mulvaney: Absolutely. There are pressure gauges and head tanks. The oil is in head tanks on either end of the cable and there are pressure gauges, so we can monitor the level of the oil. It fluctuates up and down as the cable heats up and cools down as it is loaded, but we know if there is a leak based on that. Once we have a leak we then have to find it. I went through the procedure as to how we find the leak, which can be an arduous procedure. It is possible to repair the cable. The cable is not damaged permanently, and it can be repaired. The troublesome ones, on a risk basis, are being changed out.

Deputy Brian Stanley: There are two issues of concern from the public's point of view. The first is that the infrastructure is safe and that the networks are safe but there is a related issue. I accept that the witnesses have said that it is the ESB's policy to allow for a whistleblower

to come forward whereby an issue is brought to the attention of the company internally. The television programme raised questions about that which I will not go into for legal reasons. There is only a certain amount we can say. We cannot deal specifically with an individual case or identify an individual. The witnesses can understand the concerns of members of the public who saw the programme. The key issue is that safe practices are employed by the ESB, that the company is professional in the way it carries out its business and that when something is wrong, to paraphrase the witnesses, people do not turn a blind eye. The ESB depends on its workers to put up their hands and say there is a problem. The key issue is that they would not be shown the door and the problem would be brushed under the carpet.

Mr. Paul Mulvaney: I might speak to the safety culture. We have a lot of safety structures in place in the ESB. We have local safety committees all around the country which can report up through a national safety committee. Staff members around the country have the opportunity to bring any areas of concern to the committee through their local safety representatives. Concerns then go to the national safety committee where the issues can be addressed. That is one way it may be done.

We have a computer system called Shield and anybody can raise any issue on the system. The issue will be tracked and actioned. That is another way of doing it. In the past year, we started a transformational behavioural safety programme using consultants that we brought over from the UK. It deals with people's relationship with safety. As part of that, we have set up 30 local leadership teams. We also have a business unit leadership team. The programme addresses people's relationship with safety and the psychological side of safety. Local safety committees tend to deal with the processes, procedures, rules and regulations, equipment and the physical things and the behavioural and relationship side is dealt with through the safe and sound programme. We are anxious to engage with the organisation on safety and we do so actively.

Deputy Brian Stanley: One part of my question was not answered. When leaks are identified, how quickly and successfully can remedial works be carried out? Could Mr. Mulvaney deal with that?

Mr. Paul Mulvaney: The remedial work is the easier piece. Finding the leak can take time. We have invested in new technology such as sniffer vans. We put gas into the fluid and if it leaves the cable, a passing van can take a sample of the gas. We also have a gas concentrator and a chromatograph that studies the gas and can pick up a concentration. Assuming the gas is penetrating the ground, one can home into the leak within a radius of 3 m.

Deputy Brian Stanley: Are the repair works successful?

Mr. Paul Mulvaney: Yes, the repair works are successful. They might take a number of weeks but they are successful. Repairs must be done safely and the repair of old cables is a highly skilled job.

Deputy Brian Stanley: I thank Mr. Mulvaney.

Chairman: I wish to get some clarity on Deputy Stanley's question to make sure I have understood it correctly. Mr. Hayes said the leaks have been reported to the CRU since 2007. The CRU appeared before us and it said that it has no role other than to approve the spending of money to fix leaks. Am I correct in saying Mr. Hayes is not clear whether the systematic leaks were reported to the EPA?

Mr. Paddy Hayes: No, I think I misinterpreted the question regarding 2009. We are clear that any leak of our cable fluid into water since 1993 has been reported to the relevant local authority, Waterways Ireland or both.

Chairman: Does that include the EPA? Is it correct that any leak since 1993 has been reported to the EPA?

Mr. Paddy Hayes: No, since 1993 any leak that went into water has been reported to the relevant local authority, Waterways Ireland or both, and we have immediately mobilised an environmental remediation team and remediated the impact. We did not report those leaks to the EPA.

Chairman: Is it not the relevant environmental authority to which to report?

Mr. Paddy Hayes: No. Our understanding with respect to leaks in the water supply is that we should liaise with the local authorities and Waterways Ireland in that regard.

Chairman: Not the Environmental Protection Authority, EPA.

Mr. Paddy Hayes: No.

Deputy Eamon Ryan: I apologise for being late. This is the second last night sitting of the Dail and it is slightly busy with all sorts of things going on. I apologise in advance if some questions I ask have been asked already. I will keep my contribution brief. I will take the example of sulphur hexafluoride, the gas used for insulating in the generation system. As I am not a technology expert, I am not too sure where this gas is used but I understand Mr. O'Loughlin's concern was that its use was far in excess of international best practice and that the reporting, monitoring and accounting of its use did not give an accurate assessment of what was happening. What is Mr. Hayes's response to that concern? What has changed in the ESB with respect to the use and monitoring of the use of SF6 gas, as it is called.

Mr. Paddy Hayes: I thank the Deputy for his questions. I will ask Ms Claire Quane, the operations manager for ESB Networks, to respond.

Ms Claire Quane: I am happy to talk about SF6 gas. It is used as an insulator and is a very good insulator. It also has arc suppression qualities. If one flicks a light switch, one might get a spark which is fine but if the voltage is very high, it is very important to have an arc suppression medium in place when doing that. SF6 is good for doing that. That is why it is used around the world in distribution and transmission systems as an insulation. As a consequence, the equipment can be much smaller than if one was using a different medium. That is important when we are trying to build stations which are required in urban or other areas where land can be difficult to get. It is used all over the world for that reason.

SF6 is a greenhouse gas and we are mindful that we have to manage its usage. The F-gas directive was issued in 2006 and updated in 2014. We are constantly improving what we do. Some equipment that has SF6 gas has been on the system and in use for a long time. Money-point power station was built around 1980. This relates to the fact that we are always trying to get better at what we do. In 2015, we had a suite of management procedures on how to deal with and manage SF6 procedures. In addition, we are looking at our inventory. I spoke about our inventory of equipment and noted that we are keeping a record of the equipment we have. We are constantly improving in this regard, as I explained. Under the regulations in place at the time, information on the exact amount of gas in the switchgear was not required. All of our

newer equipment is in compliance with the current regulations and it is clear exactly how much SF6 gas is in that type of switchgear. We are always trying to improve the inventory and that has been happening.

There is some leakage and we acknowledge that. The leakage rate in comparison to other international utilities has been higher. Part of the reason for that was the older switchgear that was put in place in Moneypoint in the 1980s. That has now been replaced by newer switchgear and we are already seeing the impact of that. When building a transmission station one needs a number of years to retire the old gear and bring in the new gear because it is a big job. Our usage of SF6 gas in 2018 was significantly less than it was in 2017 because we had already moved some of the circuits from the old Moneypoint switchgear into the new switchgear.

Ireland has 60 million tonnes of CO2 emissions. To place SF6 gas usage into context, it equates to 0.027% of Ireland's overall greenhouse gas emissions. That is not to minimise the fact that we have to manage it.

Deputy Eamon Ryan: SF6 has a potency 23,000 times greater than CO2 in terms of greenhouse gas emissions.

Ms Claire Quane: Yes, it has. That is why it is extremely important that it is managed and we can show we are improving all of that.

Deputy Eamon Ryan: Would it be fair to say Mr. O'Loughlin's drawing of this to the attention of the ESB was one of the reasons those figures in the recent year are so much lower than they have been in previous years?

Ms Claire Quane: The main contributor to that related to Moneypoint, which is a very significant project. We originally envisaged the Moneypoint project in 2012 when we got capital approval for it and it took a number of years to do the design and purchase the equipment. That piece of it has been in train but we have also been undertaking other initiatives.

Deputy Eamon Ryan: Was that part of the sulphur scrubber project at Moneypoint or was that earlier?

Ms Claire Quane: No. As I understand it, that is on the generation station, the substation. I am not familiar with that.

Deputy Eamon Ryan: Ms Quane believes the reduction in the use and the proper monitoring of those gases would have happened any way.

Ms Claire Quane: With respect to Moneypoint, that project was in train for a number of years. We have also been putting other initiatives in place for a number of years. The F-gas directive changed in 2014 and a suite of management procedures were rolled regarding the management of SF6 in 2015 and 2016. We are looking at the inventory and improvements with respect to particular containers.

Deputy Eamon Ryan: To put it a different way, when Mr. O'Loughlin raised concerns with the ESB about the monitoring, accounting, reporting and assessment of what was happening, he had a valid concern about what was happening with the use of SF6 in the ESB? Does Ms Quane agree?

Ms Claire Quane: The concern that was raised is a valid one. What I am trying to explain is that the ESB takes responsibilities with respect to the environment and its management very

seriously. That is why we are trying to improve all the time. As to whether there are there areas we can improve, I have no doubt there are.

Deputy Eamon Ryan: I am only touching the surface and I am using a random example. One of the other issues Mr. O'Loughlin raised-----

Chairman: With respect to mentioning names and identifying people, I ask the Deputy to speak in general terms.

Deputy Eamon Ryan: That is fine. I should acknowledge that I had been talking to Mr. O'Loughlin during this process. I did not approach the ESB on any of this because I understood there was a mediation process taking place and I was hoping that it would resolve the issues. I am not questioning any of the ESB representatives or Mr. O'Loughlin.

On a public interest matter, a concern was raised about the fault locator vans. I am not a technical expert but I heard earlier a description of incidents involving fault identifier crews travelling in vans. A question arose regarding the inventory of vans and the upgrading, maintenance and monitoring of them and the equipment in them. A description was given of a crew who were getting a live electric charge - I do not know what the correct technical word is - but they had to earth it using a wooden platform or whatever to enable use of some of the fault detector equipment. I may be inaccurate on that. Ms Quane will have seen the earlier presentation and I presume she knows what I am talking about. As I said earlier, I would have thought that fault detector vans would be a key part of the function the ESB prides itself on doing well in maintaining a grid, even in stormy or difficult conditions.

Mr. Paul Mulvaney: If I may, I will deal with that question. To be clear, I spoke earlier about a leak detector and a van but we were talking about a different type of van here.

Deputy Eamon Ryan: Yes.

Mr. Paul Mulvaney: We have the second largest fleet of vehicles in the country, numbering more than 2,000. They are managed on a Tranman fleet management system which looks after all the maintenance records, etc. All the vehicles are maintained to a standard. I do not know what particular fault detector was spoken about. I am not familiar with that particular incident but any equipment deemed unsafe, unusable or whatever is taken out of service. We do not use faulty equipment. We do not put people in harm's way. I am not sure of the specifics-----

Deputy Eamon Ryan: I do not want to get into the specifics too much because I am not knowledgeable enough. I am going on memory and, if I recall rightly, my understanding is that there were about 14 vans in the inventory but 30 in existence. Some had been in operation for 20 years but there had not been any maintenance or proper accounting of the repair and maintenance of those vehicles. On the basis of the protected disclosure, has the ESB changed the way in which it monitors or manages its fault repair equipment in those vans?

Mr. Paul Mulvaney: We have a section that looks after our transport. A recent check of that van system confirmed that everything is up to date in terms of maintenance and repair reports. There may have been issues in the past but I can confirm as of today, anyway, that they are all up to date.

Deputy Eamon Ryan: On the basis of the protected disclosure, did the ESB find that what Mr. O'Loughlin had been saying was happening with regard to those vans was an accurate assessment?

Mr. Paul Mulvaney: I am aware of one case where there was an inventory issue, which was identified a number of years ago and has been sorted out.

Deputy Eamon Ryan: I only caught the end of the response to Deputy Stanley's question with regard to the leak of mineral oil surrounding the cables in the Dublin area. I will take a very localised approach but I noted Mr. Mulvaney stated the incident under the Royal Canal had not led to any leak of mineral oils into the canal. I understand there was another incident under the River Dodder in my own constituency. Can Mr. Mulvaney confirm whether that leaked into the watercourse?

Mr. Paul Mulvaney: I do not know of the particular leak. We have had five leaks to water over the past decade or so and they were all advised to the councils.

Mr. Paddy Hayes: There certainly was a leak in 2009 between Dodder Road and Templeogue. That was a spill to water and it was notified to Dublin City Council. It was remediated. I am not sure exactly where that was or if it was going under the Dodder but it was in Dodder Road. As Mr. Mulvaney said, since 1993 we have recorded five spills to water from fluid-filled cables.

Deputy Eamon Ryan: Would that have been reported to the Environmental Protection Agency, EPA, as well?

Mr. Paddy Hayes: No.

Deputy Eamon Ryan: Should it have been reported?

Mr. Paddy Hayes: I do not believe so.

Deputy Eamon Ryan: Mr. O'Loughlin cited the 2003 groundwater directive and, as I recall, argued that it should be reported. Why would the ESB report it to the council but not to the EPA?

Mr. Paddy Hayes: We think that is the appropriate place to report it. We have just established a more formalised protocol for systematic reporting with each of the local authorities. That will tell us whether it is sufficient to report to them or indeed whether there are aspects of a particular leak or environmental situation that would mean a report would have to be escalated to the EPA.

Deputy Eamon Ryan: I understand what Mr. Mulvaney said about the technical difficulties in finding these leaks. We heard earlier that the leakage rate was 90,000 l in 2003. Was it 43,000 l last year?

Mr. Paul Mulvaney: We have had high leakage rates in the past. At the moment, we are at best international practice. We have looked to see what is good practice. We looked to the Electrical Networks Association, ENA, in the UK, where there about 20 different network operators. They have a voluntary reporting code under which the report to the local authorities. We noted their threshold levels for dealing with leakage and their targets. We have adopted the same targets as them, namely, 50 l per kilometre of cable per year. That would give us a target of 10 cu. m of leakage per year. We are on target for that now.

Deputy Eamon Ryan: How many thousand litres is that?

Mr. Paul Mulvaney: That is 10,000 l per year. That is their target. They do not achieve it;

their leakage rate last year was twice that. We are achieving it at the moment.

Deputy Eamon Ryan: Are those mineral oils soluble?

Mr. Paul Mulvaney: We covered earlier that they are readily biodegradable to an OECD standard.

Deputy Eamon Ryan: In the presentation from the Commission for Regulation of Utilities, CRU, that we had here the other day, its representatives were citing the fact that in the PR3, there had been an underspend in this subcategory. This budget line was €20 million for that five-year period but expenditure had been roughly €6 million. They were not able to update us on the latest estimate for PR4 in terms of that budget line. Can Mr. Mulvaney give us any indication of that figure?

Mr. Paul Mulvaney: Going back to PR2, we replaced 14 km of cable and in PR3, we replaced another 19 km. Over recent years, we have replaced 44 km of the cable. From memory, at the moment we have 23 km or 24 km of work in progress in terms of replacing the cables. These are multi-year projects. It is a case of finding a route for the cable. The Deputy has just come in but we were discussing this earlier. We have to find a route around the city or under the city streets that avoids the other services, and there is a lot of congestion and so on. These projects typically take a number of years to plan. We certainly acknowledge that the CRU has made adequate funds available. This is not a funding issue.

Deputy Eamon Ryan: It allocated roughly €25 million in PR4 for this project item. We are in the fourth or fifth year of that five-year period. Can Mr. Mulvaney give me an indication of what the spend is to date?

Mr. Paul Mulvaney: The spend is still relatively low because we are at the design stage for a lot of those. Physical spend at the design stage is quite low. The figure of €26 million is for all underground cable. There are other underground cables, such as cables with paper insulation that do not have fluid and others with nitrogen gas insulation. We are replacing all of those on a risk basis. Of that roughly €25 million, around €12 million is for the fluid-filled cables. We are spending about €4 million at the moment but we are designing for more. That will run into PR5.

Deputy Eamon Ryan: We are pretty much at the end of the PR4 period and to have spent one third of the budget in the last six months of the five-year period would seem to back up Mr. O'Loughlin's contention that this does not get the attention that bigger, easier projects get. This is difficult work

Mr. Paul Mulvaney: As I said, there is work in progress. It takes a long time to complete these projects and, as the Deputy has rightly said, they are really tricky. These are not easy projects to do. As we are doing them, we are repairing leaks and keeping the leakage rate down. We are managing what we have of these legacy cables as we work through the replacement programme.

Deputy Eamon Ryan: Does Mr. Mulvaney have any assessment of the rate of leakage in the first six months of this year?

Mr. Paul Mulvaney: It is on target to hit that 10 cu. m we spoke about. It is around 5 cu. m.

Deputy Eamon Ryan: Okay. I do not want to go into the personal details here. I will leave

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it at that.

Chairman: I thank the witnesses for coming before us today.

The joint committee adjourned at 8.39 p.m. until 10 a.m. on Thursday, 11 July 2019.