

Response to the Private Wires Scheme Consultancy.

(Our thinking has changed a little in the interim, particularly around socialisation charges, and the CRU should be in charge of all licensing and safety regulations).

Fergus Wheatley – Engineering Director

Implications of the pending new private wire rules

Currently, ESB is the only entity that can legally supply the infrastructure for the supply of electricity. The pending private legislation is the biggest change in generations and will allow parties to essentially bypass a grid connection and sell electricity directly to other end users.

This has a lot of implications for renewable generators such as wind & solar farm developers. Private wire will allow solar / wind projects to connect directly to multiple end users and free up network space for other users and in some cases avoid the need for pricey transformer upgrades and other local grid strengthening requirements. Private wire should also greatly speed up project delivery as connecting solar & wind farms to the grid is currently a big constraint.

Some of the potential opportunities;

- Many shopping centres / office blocks will potentially have the opportunity to legally sub-meter electricity directly to tenants from a single office meter rather than the need for the tenants to have their own (more expensive) meter. This greatly simplifies building Green House Gas (GHG) reporting, which is key component of sustainability reporting mechanisms, and consequently the ability of the asset owner to raise green capital.
- Commercial buildings will have a market for new on-site renewable generation. Under current rules projects are sized to meet a landlord demand, which is generally only common area lighting and lifts. Changes to the Private wire rules will open up the opportunity to supply tenants on multiple floors with low cost (mostly solar) power and turn an empty roof space into a revenue generating asset.
- Changes will provide legal clarify around supplying electricity and VAT rates to car charger operators.
- For users that export CHP / Solar power currently, this offers an opportunity to increase the price obtained for that power (approx. 25%).

- It opens up business opportunities for renewable developers to connect multiple users in a business park to cheaper power. If completely off (battery/generator backup), this has the potential to dramatically speed up the delivery of (and scale of) renewable projects, while reducing costs for business park tenants.
- It greatly simplifies Part L compliance for new build apartment schemes. A solar array / CHP sized to meet the minimum renewable generation of Part L is generally much larger than the landlord common area electricity requirements. In some existing schemes the excess electricity is spilled back to the grid for free.
- It greatly helps CHP economics on District Heating Schemes (DHS). In many cases efficient CHP units are running on reduced output (or turned off) even though there is a requirement for the low-cost / free heat generated by the CHP, because the common area electricity requirements fall below the electrical output of the CHP.
- Large new data centres could be built without a grid connection using either adjacent or remote energy parks (mix of renewable and backup power).
- Currently solar farms need a separate grid connection to add a battery backup to the existing connection. Private wire will remove this expensive restriction and speed things up.

To enable these advantages, it is important that the Private Wire legislation is as broad as possible and not hemmed in by red-tape and overly restrictive regulation.

Q.1- Is there a type of 'Private Wire' which is not captured by the above definitions of 'Private Line' and 'Private Network'? If so, please outline the envisaged Private Wire

A private line should also be defined as a single line between any two entities. E.g. a commercial landlord supplying electricity to a commercial tenant.

Electrically a private line is not complex. In most cases it will simply be connecting a sub-distribution board to a distribution board and metering the consumption.

Q.2- Is there a need for further Onshore Transmission Asset Owners in Ireland?

No, Transmission assets are generally electrical connections that operate at 110 kV and higher in Ireland. If a generator and a consumer feel the need to use a voltage level that would be considered a transmission asset, then the ownership should be decided between these 2 parties themselves.

Q.3- Is there a need for further Distribution Asset Owners in Ireland?

No, the ownership of a private line should be determined by the parties involved in the connection. They should come to an agreement on who will own and manage the private line.

Q.4- Is there a need for further Distribution System Operators in Ireland?

No, the operation of a private line should be determined by the parties involved in the connection. The private wire will be connected 'behind the meter' and should be protected by a system similar to the current G10 protection used by synchronized diesel generation. The Distribution System Operator (DSO) should not be involved beyond being informed of the private wire.

Q.5- Is there a need for further Onshore Transmission System Operators in Ireland?

No, the operation of a private line should be determined by the parties involved in the connection. The private wire will be connected 'behind the meter' and should be protected by a system similar to the current G10 protection used by synchronized diesel generation. The Transmission System Operator (TSO) should not be involved beyond being informed of the private wire.

Q.6- Are there any Direct Lines currently in operation in the State? If so, please provide details of any and set out the purpose for which they are operating?

To the best of our knowledge, there are none that we know of.

Q.7- Are there any contestably built connections to the national electricity grid which are operational and are not under the ownership of the ESB? If so, please provide details as to the project and the reason why the contestably built infrastructure remains in private ownership.

None that we know of.

Q.8- Should Private Wires be permitted for the utilisation of the 2GW of offshore generation earmarked for hydrogen production? If so, please out why.

Yes, allowing private wires for the utilization of offshore generation earmarked for hydrogen production would speed up project development and enable meeting the governments Climate Action Plan timelines. Currently, the Transmission System Operator (TSO) and Distribution System Operator (DSO) face challenges in connecting wind farms or solar plants in a timely fashion. The involvement of the TSO or DSO should not be necessary.

Sub Questions Q.8(a)- Other than through Offshore and Onshore Private Wires, how is it envisaged to utilise the 2GW of offshore generation earmarked for hydrogen production?

Allowing the parties at the generation and production side to work out the engineering and contractual issues without input from the Transmission System Operator (TSO) or Distribution System Operator (DSO) can help avoid delays in the project.

Q.8(b)- If Private Wires are permitted for utilising the 2GW of Offshore generation, could such projects create issues for the development of the national offshore grid and/ or national onshore grid?

No, the systems would be independent of each other.

Q.8(c)- If Private Wires are permitted for utilising the 2GW of Offshore generation, could such projects create issues of land sterilisation, in particular with regards to landing points where the offshore grid can be brought ashore?

Unlikely. The necessary onshore infrastructure could be shared to lessen any burden. The provision could be made to give the TSO and DSO access to share facilities, provided that they do not adversely affect the operation of the private wire.

Q.8(d)- If permitting such Private Wires could create issues regarding national grid development and/ or land sterilisation, are there any mitigating measures which could be put in place to alleviate same?

The necessary onshore infrastructure could be shared to lessen any burden. The provision could be made to give the TSO and DSO access to share facilities, provided that they do not adversely affect the operation of the private wire.

Q.8(e)- If Private Wires are permitted for utilising the 2GW of Offshore generation, are there any concerns with offshore Private Wires and how they might interact with the current legislative and policy framework for the offshore transmission system?

No, there are none.

Q.8(f)- If Private Wires are permitted for utilising the 2GW of Offshore generation, should they be restricted to a Private Line only?

No, it would unnecessarily constrain the commercial development of this asset.

Q.8(g)- If Private Wires are permitted for utilising the 2GW of Offshore generation, should a limit of distance on land be placed upon them i.e. a limit on how far inland the electrolyser can be? If so, please suggest a limit in KM.

No, it would unnecessarily and arbitrarily constrain the commercial development of the asset.

Q.8(h)- If Private Wires are permitted for utilising the 2GW of Offshore generation, should a limit of distance at sea be placed upon the Private Wire i.e. a limit on how long the Offshore wire can be? If so, please suggest a limit in KM.

No, it would unnecessarily and arbitrarily constrain the commercial development of this asset.

Q.8(i)- If such Private Wires are permitted, are there specific measures which could be implemented in respect of projects of this nature which could mitigate against the wider issues/ challenges highlighted as part of this consultation?

If two networks are connected and there is a possibility of back-feeding, standard protection such as G10 should be implemented. Reducing red tape and barriers can lower business costs, which in turn can help roll out renewable energy projects and achieve Government timescales.

Q.9- Should Private Wires be permitted for hydrogen production?

Yes, they should be permitted for hydrogen production and all other purposes too.

Sub Questions Q.9(a)- In what circumstances would the requirement arise whereby a Private Wire is necessary for hydrogen production?

The option of Private Wire will greatly speed up project development. The TSO and DSO currently cannot connect wind farm or solar plants in a timely fashion. Giving a project team the option of connecting without the involvement of the DSO and TSO will reduce costs, speed up project delivery. Private wires can also help enable off-grid solutions, which are necessary to meet Ireland's climate action targets and to stay within carbon budgets.

Q.9(b)- Would the co-locating of an electrolyser on the same site as a renewable generation asset negate the need for a Private Wire in hydrogen production?

No, it would unnecessarily constrain the commercial development and flexibility of this asset.

Q.9(c)- If Private Wires are permitted for hydrogen production, should the Private Wire be limited to a Private Line only?

No, it would unnecessarily constrain the commercial development and flexibility of this asset.

Q.9(d)- If Private Wires are permitted for hydrogen production, should there be a limit on the distance (i.e. length of cable) between the hydrogen production site and the renewable generation site? If so, please suggest a limit of distance in KM.

No such arbitrary limit should apply. There should be no limit on the distance between the two sites.

Q.9(e)- If Private Wires are permitted for hydrogen production, should any potential project be limited to only in circumstances where it involves the building of a new generation site?

No, it would unnecessarily constrain the commercial development and flexibility of this asset.

Q.9(f)- If Private Wires are permitted for hydrogen production, should any potential project be limited to only in circumstances where the entire project, generation and production, does not drive any reinforcement of the national electricity grid?

No, it would unnecessarily constrain the commercial development and flexibility of this asset.

Q.9(g)- If Private Wires are permitted for hydrogen production, should any potential project be excluded entirely from connecting to the national electricity grid, both at generation and electrolyser sites?

No, it would unnecessarily constrain the commercial development and flexibility of this asset. If there is a possibility of back-feeding from the private wire to the grid, then protection measures (e.g. G10) should be implemented with the cooperation of the DSO/TSO.

Q.9(h)- If Private Wires are permitted for hydrogen production, what benefit would the owner of a generation site derive from a Private Wire to a hydrogen production site?

Potentially speedier project delivery, lower capital, and operational costs.

Q.9(i)- If Private Wires are permitted for hydrogen production, could the national electricity grid derive any benefit from same?

No, this would only add complications and costs to any private wire development.

Q.9(j)- If Private Wires are permitted for hydrogen production, are there circumstances in which excess electricity may be generated and not utilised for hydrogen production?

Yes, and if there is a suitable grid connection in place, the excess could be sold similarly to current export arrangements or indeed onto a third party using a second private wire or a PPA over the National grid.

Q.9(k)- If Private Wires are permitted for hydrogen production, could future renewable generation assets be diverted away from the national electricity grid, thus impacting upon our ability to meet our 2030 and 2050 targets?

Unlikely, there are many more projects planned than the network can connect in a timely fashion. The main reason why a generator would choose to connect to hydrogen production rather than an electrical consumer is price. The hydrogen production is likely to be looking for very low cost electricity, so hence the first port of call for any renewable generator would be to sell the electricity directly to a user that is paying a higher price.

Q.9(l)- If such Private Wires are permitted, are there specific measures which could be implemented in respect of projects of this nature which could mitigate against the wider issues/ challenges highlighted as part of this consultation?

If two networks are connected and there is a possibility of back-feeding, then standard protection (e.g. G10) should be implemented. The less red tape and barriers means that that business costs are lower, which in turn help roll out renewable energy projects.. . Private wires can also help enable off-grid

solutions, which are necessary to meet Ireland's climate action targets and to stay within carbon budgets.

Q.10 Should Private Lines be permitted where a demand site abuts a generation site?

Yes.

Sub Questions Q.10(a) If such Private Lines are permitted, what benefit would the demand user derive from same?

Lower costs, the demand user could choose lower cost electricity from the grid if the electricity via a private wire was too costly. DUoS, TUoS and Semo costs will be eliminated and thus the costs reductions can be shared between the generator and the demand user.

Q.10(b) If such Private Lines are permitted, what benefit would the generator derive from same?

Higher prices, this could mean the difference between a renewable project happening or not. DUoS, TUoS and Semo costs will be eliminated and thus the costs reductions can be shared between the generator and the demand user.

Q.10(c) If such Private Lines are permitted, could the national electricity grid derive any benefit from same?

Yes, if there is a suitable grid connection in place, the excess could be sold, similarly to current export arrangements, or indeed onto a third party using a second private wire, or a PPA over the National grid.

Q.10(d) If such Private Lines are permitted, should any potential project be limited to only in circumstances where it involves the building of a new generation site?

No, it would unnecessarily and arbitrarily constrain the commercial development of existing assets.

Q.10(e) If such Private Lines are permitted, should any potential project be excluded entirely from connecting to the national electricity grid, both at generation and demand sites?

No, but protection between the 2 networks needs to be in place.

Q.10(f) If such Private Lines are permitted, should any potential project be limited to only in circumstances where the entire project, generation and demand, does not drive any reinforcement of the national electricity grid?

No, it would unnecessarily and arbitrarily constrain the commercial development of existing assets where there is capacity on the grid.

Q.10(g) If such Private Lines are permitted, could future renewable generation assets be diverted away from the national electricity grid, thus impacting upon our ability to meet our 2030 and 2050 targets?

Unlikely, there are many more projects planned than the network can connect in a timely fashion. The main reason why a generator would choose to connect to hydrogen production rather than an electrical consumer is price. The hydrogen production is likely to be looking for very low cost electricity, so hence the first port of call for any renewable generator would be to sell the electricity directly to a user that is paying a higher price.

Q.10(h) If such Private Lines are permitted, are there circumstances in which excess electricity may be generated and not utilised by the demand user?

Yes, and if there is a suitable grid connection in place, the excess could be sold similarly to current export arrangements, or indeed onto a third party using a second private wire, or a PPA over the National grid.

Q.10(i) If such Private Lines are permitted, should a generator with a Private Line be permitted access to the national electricity grid for the sole purpose of supplying excess electricity?

No. This would be an unnecessary complication, the entity with a private wire arrangement should apply in the normal way to the grid for a connection. This connection could be used for import / export as required and as applied for. ESB Networks can then quote for the connection in the normal manner.

Q.10(j) If such Private Lines are permitted, are there specific measures which could be implemented in respect of projects of this nature which could mitigate against the wider issues/ challenges highlighted as part of this consultation?

If two networks are connected and there is a possibility of back-feeding, then standard protection (e.g. G10) should be implemented. The less red tape and barriers means that that business costs are lower, which in turn help roll out renewable energy projects.

Q.11- Should Private Lines be permitted where a demand site and generation site are located some distance from one another?

Yes, best to let the parties at the generation and production side and any third party land owner work out the engineering and contractual issues without input from any third party.

Sub Questions Q.11(a)- If such Private Lines are permitted, should there be a limit on the distance (i.e. length of cable) between the demand site and the generation site? If so, please suggest a KM limit

No such arbitrary limit should apply.

Q.11(b)- If such Private Lines are permitted, what benefit would the demand user derive from same?

Lower costs, the demand user could choose lower cost electricity from the grid if the electricity via a private wire was too costly. DUoS, TUoS and Semo costs will be eliminated and thus the costs reductions can be shared between the generator and the demand user.

Q.11(c)- If such Private Lines are permitted, what benefit would the generator derive from same?

Higher prices, this could mean the difference between a renewable project happening or not. DUoS, TUoS and Semo costs will be eliminated and thus the costs reductions can be shared between the generator and the demand user.

Q.11(d)- If such Private Lines are permitted, could the national electricity grid derive any benefit from same?

Yes, and if there is a suitable grid connection in place, the excess could be sold similarly to current export arrangements, or indeed onto a third party using a second private wire, or a PPA over the National grid.

Q.11(e)- If such Private Lines are permitted, should any potential project be limited to only in circumstances where it involves the building of a new generation site?

No, it would unnecessarily and arbitrarily constrain the commercial development of existing assets.

Q.11(f)- If such Private Lines are permitted, should any potential project be excluded entirely from connecting to the national electricity grid, both at generation and demand sites?

No, it would unnecessarily and arbitrarily constrain the commercial development.

Q.11(g)- If such Private Lines are permitted, should any potential project be limited to only in circumstances where the entire project, generation and demand, does not drive any reinforcement of the national electricity grid?

No, it would unnecessarily and arbitrarily constrain the commercial development.

Q.11(h)- If such Private Lines are permitted, could future renewable generation assets be diverted away from the national electricity grid, thus impacting upon our ability to meet our 2030 and 2050 targets?

Unlikely, there are many more projects planned than the network can connect in a timely fashion. The main reason why a generator would choose to connect to hydrogen production rather than an

electrical consumer is price. The hydrogen production is likely to be looking for very low cost electricity, so hence the first port of call for any renewable generator would be to sell the electricity directly to a user that is paying a higher price.

Q.11(i)- If such Private Lines are permitted, are there circumstances in which excess electricity may be generated and not utilised by the demand user?

Yes, and if there is a suitable grid connection in place, the excess could be sold similarly to current export arrangements, or indeed onto a third party using a second private wire, or a PPA over the National grid.

Q.11(j)- If such Private Lines are permitted, should a generator with a Private Line be permitted access to the national electricity grid for the sole purpose of supplying excess electricity?

No, the generator should have the option of connecting to the grid for both importing and exporting electricity. The generator should apply for a connection in a normal manner. The private line is a separate issue in much the same way as a diesel generator can supply electricity to the facility (and export to the grid) while the facility is also taking power from the grid as required.

Q.11(k)- If such Private Lines are permitted, are there specific measures which could be implemented in respect of projects of this nature which could mitigate against the wider issues/challenges highlighted as part of this consultation?

If two networks are connected and there is a possibility of back-feeding then standard protection (e.g. G10) should be implemented. The less red tape and barriers means that that business costs are lower, which in turn help roll out renewable energy projects.

Q.12- Should Private Networks be permitted for the purpose of Renewable Energy Business Parks?

Yes. It will help supply competitively priced green electricity.

Sub Questions Q.12(a)- If such Private Networks are permitted, should they be restricted to only sites with co-located generation and demand? If not, please suggest a limit, if any, to the distance which may be permitted between business park and associated off site generation asset.

No, it would unnecessarily and arbitrarily constrain commercial development.

Q.12(b)- If such Private Networks are permitted, should they be limited to only in circumstances where it involves the building of a new generation site?

No, it would unnecessarily and arbitrarily constrain the commercial development.

Q.12(c)- If such Private Networks are permitted, should potential projects be excluded entirely from connecting to the national electricity grid, both at generation and demand sites?

No, it would unnecessarily and arbitrarily constrain the commercial development.

Q.12(d)- If such Private Networks are permitted, should potential projects be permitted to connect to the national electricity grid for the sole purpose of supplying excess electricity to the grid and not allowed draw from the grid?

No, the generator should have the option of connecting to the grid for both importing and exporting electricity. The generator should apply for a connection in a normal manner. The private line is a separate issue in much the same way as a diesel generator can supply electricity to the facility (and export to the grid) while the facility is also taking power from the grid as required.

Q.12(e)- If such Private Networks are permitted, should any potential project be limited to only in circumstances where the entire project, generation and demand, does not drive any reinforcement of the national electricity grid?

No, it would unnecessarily and arbitrarily constrain the commercial development.

Q.12(f)- If such Private Networks are permitted, what benefit would a demand user derive from same?

Lower costs, the demand user could choose lower cost electricity from the grid if the electricity via a private wire was too costly. DUoS, TUoS and Semo costs will be eliminated and thus the costs reductions can be shared between the generator and the demand user.

Q.12(g)- If such Private Networks are permitted, what benefit would the generator derive from same?

Higher prices, this could mean the difference between a renewable project happening or not. DUoS, TUoS and Semo costs will be eliminated and thus the costs reductions can be shared between the generator and the demand user.

Q.12(h)- If such Private Networks are permitted, could the national electricity grid derive any benefit from same?

Reduction in capacity issues.

Q.12(i)- If such Private Networks are permitted, could future renewable generation assets be diverted away from the national electricity grid, thus impacting upon our ability to meet our 2030 and 2050 targets?

Unlikely, there are many more projects planned than the network can connect in a timely fashion. The main reason why a generator would choose to connect to hydrogen production rather than an electrical consumer is price. The hydrogen production is likely to be looking for very low cost electricity, so hence the first port of call for any renewable generator would be to sell the electricity directly to a user that is paying a higher price. Private wires can also help enable off-grid solutions, which are necessary to meet Ireland's climate action targets and to stay within carbon budgets.

Q.12(j)- If such Private Networks are permitted, are there specific measures which could be implemented in respect of projects of this nature which could mitigate against the wider issues/challenges highlighted as part of this consultation?

If two networks are connected and there is a possibility of back-feeding then standard protection (e.g. G10) should be implemented. The less red tape and barriers means that that business costs are lower, which in turn help roll out renewable energy projects.

Q.13- Should Private Networks be permitted for the purpose of Generation and Demand located in different places?

Yes

Sub Questions

Q.13(a)- If such Private Networks are permitted, should they be restricted to XLEU and LEU demand users only?

No. These are likely to be very rare examples of private wire, if such restrictions were to apply this would be in effect a de-facto ban on private wire.

Q.13(b)- If such Private Networks are permitted, should they be open to including domestic customers?

Yes, this would open up the possibility of a larger solar farm supplying a housing estate / development with green power.

Q.13(c)- If such Private Networks are permitted, should there be a limit as to the size of the geographical area of an individual Private Network? If so, please suggest a limit as to the allowed area of a Private Network e.g. 250 acres or 1 KM2 .

No arbitrary limit should apply.

Q.13(d)- If such Private Networks are permitted, is it envisaged that they would compete against the national electricity grid for generation assets and demand users?

Yes. But not very likely, a private network will supply power when the renewable asset is generating, otherwise the demand user will import from the grid either directly via the generator supplying grid electricity.

Q.13(e)- If such Private Networks are permitted, should they be limited to only in circumstances where it involves the building of a new generation site?

No, it would unnecessarily and arbitrarily constrain the commercial development.

Q.13(f)- If such Private Networks are permitted, should potential projects be excluded entirely from connecting to the national electricity grid, both at generation and demand sites?

No, it would unnecessarily and arbitrarily constrain the commercial development.

Q.13(g)- If such Private Networks are permitted, should potential projects be permitted connect to the national electricity grid for the sole purpose of supplying excess electricity to the grid and not allowed draw from the grid?

No. This is an unnecessary complication, the entity with a private wire arrangement should apply in the normal way to the grid for a connection. This connection could be used for import / export as required and as applied for. ESB Networks can then quote for the connection in the normal manner.

Q.13(h)- If such Private Networks are permitted, should any potential project be limited to only in circumstances where the entire project, generation and demand, does not drive any reinforcement of the national electricity grid?

No, it would unnecessarily and arbitrarily constrain the commercial development.

Q.13(i)- If such Private Networks are permitted, what benefit would a demand user derive from same?

Lower costs, the demand user could choose lower cost electricity from the grid, if the electricity via a private wire was too costly. DUoS, TUoS and Semo costs will be eliminated and thus the costs reductions can be shared between the generator and the demand user.

Q.13(j)- If such Private Networks are permitted, what benefit would a generator derive from same?

Higher prices, this could mean the difference between a renewable project happening or not. DUoS, TUoS and Semo costs will be eliminated and thus the costs reductions can be shared between the generator and the demand user.

Q.13(k)- If such Private Networks are permitted, could the national electricity grid derive any benefit from same?

Reduction in capacity issues. There are many thousand of DG5 connections who do not need the minimum connection level of 15 kVA. Private wire will eliminate some of these and return capacity back to the network.

Q.13(l)- If such Private Networks are permitted, could future renewable generation assets be diverted away from the national electricity grid, thus impacting upon our ability to meet our 2030 and 2050 targets?

Unlikely, there are many more projects planned than the network can connect in a timely fashion. The main reason why a generator would choose to connect to hydrogen production rather than an electrical consumer is price. The hydrogen production is likely to be looking for very low cost electricity, so hence the first port of call for any renewable generator would be to sell the electricity

directly to a user that is paying a higher price. Private wires can also help enable off-grid solutions, which are necessary to meet Ireland's climate action targets and to stay within carbon budgets.

Q.13(m)- If such Private Networks are permitted, are there specific measures which could be implemented in respect of projects of this nature which could mitigate against the wider issues/ challenges highlighted as part of this consultation?

If two networks are connected and there is a possibility of back-feeding then standard protection (e.g. G10) should be implemented. The less red tape and barriers means that that business costs are lower, which in turn help roll out renewable energy projects.

Q.14- Are the current restrictions on Private Wires an impediment to the delivery of electric vehicle charging infrastructure? If so, please outline how and any proposed changes which may assist with delivery.

Yes, car chargers, particularly fast chargers need a high-capacity connection. Adding an option to connect a third- party solar farm, battery backup or third- party electricity generation would help in the flexibility of rolling this out.

Q.15- Could the allowance of Private Wires support the development of Hybrid connections? If so, please explain how.

Yes, we agree that hybrid connections present an opportunity to maximise the utilisation of existing national grid infrastructure, and to accelerate the connection of new renewable generation assets and associated storage to the national grid. CAP 23 recognises the important role which hybrid connections may play in assisting us to meet our 2030 targets and tasks CRU with delivering upon this action.

Wind and solar are generally anticorrelated, so sharing a grid connection makes sense, unfortunately not possible under current rules. The way electricity is generated and consumed will change over the coming years as we move towards a greater reliance upon renewable energy sources in order to offset the impact of climate change. To deliver this and the ability to meet the expected increase in electricity demand, Ireland must deliver an unprecedented amount of national electricity grid infrastructure. Separately we must also look to enable off-grid solutions which will assist in meeting our climate targets.

Q.16- If Private Wires are permitted, could this see the development of Hybrid connections where generation assets are not co-located on the one site? If so, please outline the type of projects envisaged.

Private Wires would offer a "work-around" to sharing a single grid export connection, so different legal entities could share a single connection. E.g. a wind farm owner, a battery owner and a solar farm could all enter into a contract to share grid access. This would open up existing wind farms for solar / battery projects and in effect increase the capacity factor for each connection. More MWhs for

the same infrastructure. This would enable the creation of a more flexible and resilient electricity system, which can better accommodate the variability of renewable energy sources.

Q.17- If Private Wires are permitted, could they assist with a greater community involvement in the energy transition?

Where there are more opportunities generally, they will also be more opportunities for community projects. Greater community involvement in the energy transition could be achieved through the installation of privately owned electricity infrastructure linking generation with demand. This would allow for the creation of off-grid solutions for the generation and supply of electricity in Ireland as we move towards greater reliance on local renewable energy.

Sub Questions Q.17(a)- Are there particular legislative changes related to Private Wires, not referenced herein, which, if made, could facilitate greater community engagement in the energy transition? If so, please outline the changes and the projects it would facilitate.

Currently ESB Networks have no penalty if a grid connection is delayed. In Denmark, if a three-month window is missed, their operator pays damages.

Q.17(b)- If Private Wires are permitted, would Community Projects require different treatment to commercial undertakings? If so, please outline why.

No. Community Projects do not need to be subsidised to work.

Q.17(c)- If Private Wires are permitted, would Community Projects have access to the required funds associated with developing and maintaining Private Wire infrastructure?

It all depends on the scale of the project. Private Wire can range between connecting 2 boards together in adjacent sites/ buildings, to building a line 100's of KM long.

Q.18- Are the current restrictions on Private Wires an impediment to the roll out of Onsite generation and consumption? If so, please outline how.

Yes, a site for example that has excess solar generated power at the weekend has currently no option to sell this power to a third party. This limits the commercial viability of many projects.

Q.19- If Private Wires are permitted, is it understood that a Private Wire operator may, depending upon the characteristics of the project, be determined to be a Transmission or Distribution System Operator as appropriate?

Yes, but only in a very few limited cases, the vast majority of private wire connections would be very small. It is important not to introduce unnecessary regulation.

Q.20- If Private Wires are permitted, is it understood that a Private Wire owner may, depending upon the characteristics of the project, be determined to be a Transmission or Distribution Asset Owner as appropriate?

Yes, but only in a very few limited cases, the vast majority of private wire connections would be very small. It is important not to introduce unnecessary regulation.

Q.21- If Private Wires are permitted, is it envisaged that there would be created a new Private Wires System for those projects determined to be neither a Transmission nor Distribution System?

There is no need to classify a private wire as anything as it will not be part of the transmission or distribution networks.

Q.22- If Private Wires are permitted, is it understood that a project will be governed at a minimum by the current regulatory regimes in place, as appropriate to the individual characteristics of a project?

A RECI cert should be sufficient.

Q.23- Is there the potential to develop Private Wire projects, elements of which, may be outside of current regulatory oversight?

Most projects will be very small. E.g. connecting a small demand user within a shopping centre. These will not require external oversight, a RECI cert should be sufficient.

Q.24- If Private Wires are permitted, should all projects, regardless of individual characteristics, be subject to a minimum level of regulatory oversight? As part of your response please consider the level and type of oversight which would be appropriate.

A RECI cert should be appropriate for most if not all projects. Where the demand user is also connected to the grid, then it is suggested that G10 protection would be useful, and sign off should follow the same EXACT procedure as for CHP or synchronous diesel generators.

Q.25- If Private Wires are permitted, should installations be required to meet minimum standards? If so, should those standards be set by ESB Networks and EirGrid, or an alternative body?

It should obtain a RECI cert.

Q.26- If permitted and not required to meet national grid standards, what minimum standard should a Private Wire installation be required to meet?

It should obtain a RECI cert.

Q.27- If Private Wires are permitted, should a Private Wire operator be required to have their system audited and certified each year in order to ensure same meets minimum safety and compliance standards?

No, a diesel generator or a CHP is connected in a very similar fashion, once the G10 has been tested, the same standards should apply. Once per year is excessive and onerous. No G10 protection should be required where the demand user does not have a grid connection. i.e. 100% of their power is coming through the private line.

Q.28- If Private Wires are permitted, should project operators be required to obtain an appropriate policy of insurance? If so, would a public liability policy suffice?

This should be between both sides of the private line /wire. Where a private wire does not encroach onto private land or anywhere the public can access, the existing insurance policies can be expanded to include a rather minor change in the electricity infrastructure. Third party verification should not be required. It is important not to introduce unnecessary regulation.

Q.29- Without an appropriate policy of insurance in place, how could a Private Wire operator guarantee they could cover the costs associated with any successful personal injury, death, or material damage claim?

Exactly the same way that businesses deal with successful claims against them for all other manner of hazards. Private Wire does not bring in any extraordinary risk in its own right. E.g. an outdoor lighting pole with a broken earth connection would pose the same risk if the premises was connected to a private wire or not. An injured person would sue the company in question and normal public liability insurance would cover the costs. If not, a judgement is made against the company. A private wire owner that crosses land accessible by the public is not likely to be short of assets that can be recovered in light of a successful claim. It is important not to introduce unnecessary regulation.

Q.30- If Private Wires are permitted, is it understood that the rules governing the ability to purchase electricity from a supplier of a customer's choice will apply to projects deemed to be Distribution or Transmission Systems?

The demand user should always have a choice to purchase power through a grid connection from a supplier of their choosing. Private Wire should always offer a lower over all cost of power and a demand user should not be forced to pay artificially high prices.

Q.31- If Private Wires are permitted, how is it envisaged that a demand customer with a Private Wire would maintain their ability to purchase electricity from a supplier of their choice?

The demand user should always have a choice to apply for a grid connection and to purchase power through this grid connection from a supplier of their choosing. Private Wire should offer a lower overall cost of power and a demand user should not be forced to pay artificially high prices.

Q.32- If Private Wires are permitted, how is it envisaged that a demand customer would exit a Private Wire contract?

A demand user would apply for a grid connection, once in place the private wire would be disconnected. It would be a good idea to legislate that the demand user always has the right to exit a private wire arrangement. The private wire should offer lower costs than the grid, once it doesn't the demand user should be able to exit the arrangement.

Q.33- If Private Wires are permitted, is it understood that a Private Wire operator, if deemed to be a System Operator, will have to comply with the regulatory requirements as regards electrical safety as set out in the relevant System Operator licence?

No opinion

Q.34- If Private Wires are permitted, should projects not deemed to be either a Distribution or Transmission System come within the scope of regulation and oversight of the CRU?

The vast majority of private wire connections would be very small. It is important not to introduce unnecessary regulation and associated costs.

Q.35- If Private Wires are permitted, should Private Wires which interact with domestic households come within scope of regulation and oversight of the Safe Electric Regulatory Scheme

Yes.

Q.36- If Private Wires are permitted, should a Private Wire operator be considered for designation as an Operator of an Essential Service?

No. Most private wire connections will be to small users, many of which will have an independent grid connection. Designation as an Operator of an Essential Service will bring unnecessary regulation and costs which are completely out of line with the service being provided (lower cost electricity which in turn may be intermittently supply or not).

Q.37- If Private Wires are permitted, is there a minimum level of investment in cyber security which an operator of a Private Wire should make?

Only where there is a risk to the grid plus an internet connection to the control system. For example, an air-gapped control system should suffice by default.

A small system e.g. under 1 MW coming under control by a bad actor will not offer a threat to the grid or third parties, so cyber security concerns should remain within the remit of the generator and demand user without third party oversight. (This is the case in nearly all other business function, including where customer data and customer bank details are held).

Q.38- If Private Wires are permitted, could they increase the level of exposure of the national electricity grid to cyber-attack? If so, please explain how and what, if any, mitigating actions could be taken to alleviate this.

For any larger private wire systems (> 1MW) where controls are connected the internet, the same security protocols that are currently in place for remotely switched Demand Side Units (DSUs) could be used.

If air gapped systems or control systems with IP address are used, then this point is moot.

Q.39- If Private Wires are permitted, could Private Wire projects with connections to the national electricity grid pose a threat to Irelands security of electricity supply? If not, please outline why.

If a bad actor where to remotely switch many MWs of power in a “square wave” fashion, this would cause issues to the grid.

Sub Questions Q.39(a)- If Private Wire projects with connections to the national electricity grid pose a threat to Irelands security of electricity supply, are there any mitigation measures which could be put in place to reduce any such threat?

- “Air-gapping” controls so that they cannot respond to an internal bad actor signal would mitigate this situation.
- Adding switching protections (minimum time between subsequent switching operations, and a maximum no of switching operations per day) would mitigate this risk and would be simple to deploy.
- Use the same cyber security protocols as are currently used by Demand Side Units

Q.39(b)- If Private Wire projects with connections to the national electricity grid pose a threat to Irelands security of electricity supply, is there a difference between Private Wire projects which seek to meet current electricity demand and projects which seek to bring new electricity demand to Ireland?

Private wire projects where the Demand User and generator are not connected to the grid at all have no impact on the security of supply whatsoever. This is new demand.,

Replacing existing demand implies that a grid connection will still be in place, so some security precautions appropriate to the size of the grid connection should be in place.

Q.39(c)- If Private Wires are permitted, should Private Wire projects only be offered non-firm connections to the electricity grid as a backup? These non-firm connections would not guarantee access when electricity supplies are tight.

It is up to the parties involved, if firm or non-firm is appropriate with the project type. Artificially limiting will reduce new project opportunities for no good reason.

Q.40- If Private Wires are permitted, could Private Wire projects with connections to the national gas grid for the purpose of electricity generation pose a threat to Ireland's security of gas supply? If not, please outline why.

No.

Sub Questions

Q.40(a)- If Private Wire projects with connections to the national gas grid for the purpose of electricity generation pose a threat to Ireland's security of gas supply, are there any mitigation measures which could be put in place to reduce any such threat?

Q.41- If Private Wires are permitted, should Private Wire projects be excluded from having any connection to the national electricity and gas grids, to remove security of supply risks for grid connected customers?

No.

Q.42- Should Private Wires be permitted if they would lead to an increase in national electricity grid network charges? Sub Questions

Yes. But they are more likely to reduce charges by removing some need for grid build out. By selectively choosing projects, actors against development could use this as an excuse to introduce lengthy expensive studies and delay projects. For example, "Shell to Sea" is a well-known activist organisation that played a weak safety card to hold up infrastructure for years.

It is not advisable to leave clauses in place that can be used by actors to delay and hinder projects.

Q.42(a)- If Private Wires are permitted, and it is allowed for that those with a Private Wire connection may also maintain a connection to the national grid, how might they circumvent national grid Network Charges?

The Demand User should pay for kVA connection charges on the size of their connection. They should also pay kWh charges on power that is imported from the grid. Power used via a private wire should not incur network charges as this power is not transported via the grid.

Q.42(b)- If Private Wires are permitted, should the manner in which network charges are calculated be reviewed?

No.

Q.42(c)- If Private Wires are permitted, should demand user connection fees and capital allowances be reviewed?

No.

Q.42(d)- If Private Wires are permitted, besides Network Charges are there any other charges or levies etc. which could be avoided by a generator and/ or a demand user? If so, what are they?

- TUoS
- DuoS
- Market Operator
- Electricity Tax
- Day ahead market (DAM) electricity costs
- Excessive VARs from poor power factor correction.

Q.42(e)- If Network Charges and/ or other levies cannot be circumvented are Private Wires still a viable commercial endeavour?

In many cases yes, but each project must be examined on their own merits. Adding charges to a private wire operator to subsidise the grid is not appropriate.

Q.43- If Private Wires are permitted what mitigation measures could be introduced to reduce their impact upon the efficient development of the national electricity grid and/ or land sterilisation?

After lines have been built, Eirgrid and ESB networks could have the rights to share routes. This is likely to be rare in practice.

Sub Questions Q.43(a)- If Private Wires are permitted, should Private Wire project routes be required to be agreed in conjunction with EirGrid and ESB Networks?

No, this would introduce unnecessary delays and could be used as a method to block development of projects. Better to allow Eirgrid and ESB networks to have the rights to share routes/infrastructure.

Q.43(b)- If Private Wires are permitted, should EirGrid and ESB Networks be given a right of veto in respect of potential Private Wire project routes? Q.43(c)- If Private Wires are permitted, should Private Wire project routes have to be agreed in conjunction with all national infrastructure operators, (Irish Water, Gas Networks Ireland, EirGrid, ESB Networks)?

No, this would introduce unnecessary delays and could be used as a method to block development of projects.

Q.43(d)- If Private Wires are permitted, should all national infrastructure operators, (Irish Water, Gas Networks Ireland, EirGrid, ESB Networks) be given a right of veto in respect of potential Private Wire project routes?

No, this would introduce unnecessary delays and could be used as a method to block development of projects.

Q.44- If Private Wires are permitted, should the CRU be given legislative authority to transfer ownership of a project to ESB Networks, if the project operator ceases actively operating the project or ceases trading etc.?

Yes.

Q.45- If the CRU are given authority to transfer ownership of a project to ESB Networks should such a transfer be subject to the agreement of the proposed asset owner, ESB Networks, and/ or the proposed System Operator, EirGrid or ESB Networks as appropriate?

Yes, without the agreement of the private line owner, then there could be the possibility of the ESB Networks/ CRU taking over the project and this will result in legal disputes that could last years. It will also scare off investment in this area.

Q.46- If the CRU are given authority to transfer ownership of a project to ESB Networks should such transfer be at no cost? Please explain your answer in detail.

Transfer should be at market value.

Q.47- If required to take ownership of a Private Wire project should the owner be required to indemnify ESB Networks against any costs incurred in bringing said project up to national grid standard? Please explain your answer in detail.

No, the private wire could be disconnected if the project is not up to national grid standards. Putting this requirement on a project would mean that a further bond is required which will make any project less viable.

Q.48- If Private Wires are permitted, could they assist the electricity sector in remaining within its carbon budget ceiling?

Totally, they will assist in connecting more renewable generation, which will offset grid electricity and will assist in meeting our climate targets.

Q.49- If Private Wires are permitted, should they be restricted to projects with renewable generation assets only, or should they also facilitate carbon emitting generation, such as gas or diesel generation? If facilitating carbon emitting generation, please outline any mitigation measures which would assist with our ability to meet our Carbon Budgets.

They should be permitted in all cases. Carbon taxes on fuels should be used to reduce the commercial viability of running gas / diesel generation. This generation would only run if grid electricity was more expensive in any case.

Q.50- If Private Wires are permitted, could they impact upon Ireland's ability to meet the energy saving target as set out in the Energy Efficiency Directive?

Renewable energy projects would be expected to accelerate meeting the target as they will be more viable.

Sub Questions Q.50(a)- If impactful, is there a difference in impact between Private Wire projects which seek to meet current electricity demand and projects which seek to bring new electricity demand to Ireland?

Each project regardless of meeting new demand or curtailing existing demand will have a different impact by virtue of the project size, and location.

Q.50(b) If impactful, are there any mitigation measures which could be put in place?

N/A

Q.51- If Private Wires are permitted, can projects be complimentary to the plan-led approaches being developed for both the national electricity grid and the deployment of renewable generation assets?

Yes, some renewable projects may be competing for the same grid capacity, by allowing private wire all projects have a better chance of proceeding.

Q.52- If Private Wires are permitted, should projects be refused if they impact upon the plan-led approaches being developed for both the national electricity grid and the deployment of renewable generation assets?

No.

Q.53- If Private Wires are permitted, should a regime similar to 'Dial Before You Dig' be introduced for Private Wires?

Yes, but only for projects that cross land where the public has access.

Sub Questions Q.53(a)- If a Private Wires 'Dial Before You Dig' scheme is introduced, who should be responsible for running same?

Central Network Mapping, ESB Networks or the CRU.

Q.53(b)- If a Private Wires ‘Dial Before You Dig’ scheme is introduced, should the scheme be financed through charges on Private Wire owners? If not, then how could such a scheme be financed?

Through charges that are set by an independent body, appropriate to the cost of the service.

Q.53(c)- If Private Wires are permitted and no Private Wire ‘Dial Before You Dig’ scheme is introduced, how could maps of Private Wires in an area be obtained?

e.g. Surface marking, county councils.

Q.54- If Private Wires are permitted, could they assist Ireland in reaching its renewable electricity generation targets for 2030 and beyond?

Yes, more renewable energy projects would be viable with grid costs. Renewable energy projects would not be subjected to the serious bottlenecks currently in place for grid connections.

Q.55- If Private Wires are permitted, should projects be required to demonstrate how they assist Ireland in meeting our 2030 targets?

No, this requirement would only introduce delays and costs to the project without providing any benefit.

Q.56- If Private Wires are permitted, how is it envisaged that such a policy will interact with demand side flexibility targets? Could Private Wires assist with meeting our 2030 target?

Demand side flexibility as seen from the grid would generally improve. For example, connecting a site to a battery backed renewable generator via private wire will allow the demand user to take power from the battery during periods of grid constraint.

Q.57- If Private Wires are permitted, please outline any potential benefits which you believe Ireland could derive?

Reduce the cost of electricity to connected users, which in turn will speed up the electrification of transport, heat and industrial sectors.

Renewable Energy project will be built out in a timelier fashion and at lower cost which will bring carbon reductions from offset energy in other sectors (offsetting grid electricity, gas use for heating, and help build out car charging infrastructure).

Q.58- If Private Wires are permitted, please outline any potential detrimental effects which you believe this could have on Ireland?

None that could not be easily rectified.

Q.59- If Private Wires are permitted, could Private Wire projects impact upon the public acceptance of national electricity grid infrastructure?

Most private wire infrastructure will be invisible to the public. Where over land wires are needed, they would mostly be under 20 kV and on wooden poles. It would be very unlikely that 400 kV transmission lines would be required.

Sub Questions Q.59(a)- If Private Wire projects could impact upon the public acceptance of national electricity grid infrastructure, are there any mitigation measures which could be put in place?

If nothing else they should help, the demand user and the generator are likely to be both local and part of the local community, so this should generate buy-in.

Q.59(b)- If Private Wires are permitted, should all Private Wire projects be required to establish community support funds in respect of their infrastructure?

No, this is an arbitrary and unnecessary. A small private wire network could be as simple as connecting a CHP feed to a neighbouring business, the less red tape and fees involved the better for these projects.

Q.59(c)- If required to establish community support funds, should the value of said funds mirror those of funds already in existence? If not, please suggest a value.

€0.00

Q.59(d)- If required to establish community support funds, should such funds recur every year for the lifetime of the Private Wire infrastructure?

No, this is an arbitrary and unnecessary. A small private wire network could be as simple as connecting a CHP feed to a neighbouring business, the less red tape and fees involved the better for these projects.

Q.60- If Private Wires are permitted, could Private Wire projects impact upon the public acceptance of national grid connected renewable generation projects?

If nothing else they should help, the demand user and the generator are likely to be both local and part of the local community, so this should generate buy-in.

Sub Questions Q.60(a)- If Private Wire projects could impact upon the public acceptance of national grid connected renewable generation projects, are there any mitigation measures which could be put in place?

No compulsory purchase orders.

Q.60(b)- If Private Wires are permitted, should Private Wire projects be required to establish Community Benefit Funds in respect of their generation assets?

No, this is an arbitrary and unnecessary. A small private wire network could be as simple as connecting a CHP feed to a neighbouring business, the less red tape and fees involved the better for these projects.

Q.60(c)- If required to establish Community Benefit Funds, should such funds recur every year for the lifetime of the Private Wire generation asset?

Q.60(d)- If required to establish Community Benefit Funds, should funds be funded at a rate of €2 per Megawatt hour of generation? If not, please suggest a proposed rate of funding.

No, this is an arbitrary and unnecessary. A small private wire network could be as simple as connecting a CHP feed to a neighbouring business, the less red tape and fees involved the better for these projects.

Q.61- If Private Wires are permitted, is it envisaged that Private Wire owners will require access to land/ property that they do not own for the installation of Private Wire infrastructure?

If they do, then an arrangement with the land / property owner should be entered into, without interference from third parties.

Q.62- If Private Wires are permitted, how is it envisaged that Private Wire owners will gain access to land/ property which they do not own, as required for their project?

By paying rent for the cable route, as agreed between the parties without external interference.

Q.63- If Private Wires are permitted, is it envisaged that project owners would be provided with statutory powers in respect of the right to lay cables/ infrastructure upon third party property/ land?

No. This should be done on a purely commercial basis without obligation from any unwilling party. By introducing legal rights of a third party commercial party to private property from another entity will only serve to act as a lightning rod for individuals who seek to renewable energy projects and other infrastructure development.

Q.64- If Private Wires are permitted, is it envisaged that project owners would be provided with statutory powers in respect of compulsory purchase orders?

No. This should be done on a purely commercial basis without obligation from any unwilling party. By introducing legal rights of a third party commercial party to private property from another entity will only serve to act as a lightning rod for individuals who seek to renewable energy projects and other infrastructure development.

Q.65- If Private Wires are permitted, is it understood that compensation payments will have to be made to any third party for the use of their land?

Yes, rent for the cable route.

Q.66- If Private Wires are permitted, is it envisaged that access to private property/ land would be by agreement only?

No. This should be done on a purely commercial basis without obligation from any unwilling party. By introducing legal rights of a third party commercial party to private property from another entity will only serve to act as a lightning rod for individuals who seek to renewable energy projects and other infrastructure development.

Q.67- If Private Wires are permitted, would it be in the common interest to afford statutory powers to Private Wire Owners with regards to laying infrastructure along/ upon / across etc. private property/ land? If so, please outline why.

No. This should be done on a purely commercial basis without obligation from any unwilling party. By introducing legal rights of a third party commercial party to private property from another entity will only serve to act as a lightning rod for individuals who seek to hinder renewable energy projects and other infrastructure development.

Q.68- If Private Wires are permitted, would it be in the common interest to afford statutory powers to Private Wire Owners with regards to the compulsory purchase of private property/ land? If so, please outline why

No. This should be done on a purely commercial basis without obligation from any unwilling party. By introducing legal rights of a third party commercial party to private property from another entity will only serve to act as a lightning rod for individuals who seek to renewable energy projects and other infrastructure development.

Q.69- If Private Wires are permitted should projects be allowed make use of public roadways?

Yes, but only with the agreement of the local council.

Q.70- If Private Wires are permitted, would it be in the common interest to afford statutory powers to Private Wire Owners with regards to laying infrastructure along/ upon public roadways?

No, the local council is best to determine whether infrastructure benefits the community or not.

Q.71- If Private Wires are permitted should projects be allowed make use of public land?

Yes, but only with the agreement of the local council / relevant park dept. Rental for the cable route could give a much needed boost to local budgets

Q.72- If Private Wires are permitted, would it be in the common interest to afford statutory powers to Private Wire Owners with regards to laying infrastructure along/ upon public lands?

No, the local council / parks dept. is best to determine whether infrastructure benefits the community or not.

Q.73- If allowed use public roadways and/ or public land should Private Wire Owners pay to the State/ local authority a per annum fee for the use of the State land/ roadway etc.?

Yes, this fee should be negotiated with the local council.

Q.74- If Private Wires are the solution, what are the problems it is fixing?

- New Connection costs. E.g. a tenant in a shopping centre may face significant costs in running a cable to the local ESB meter room, the minimum connection size is 15 kVA, the tenant may only require 1 kW for lighting, yet is currently obliged to run a cable back to the ESB room, regardless if there is a local connection to their landlord already in place.
- SEMO, TUoS & DUoS kWh costs
- Help reduce network congestion
- Some small users (DG5) are paying a very high portion in fixed connection costs, when these costs would be eliminated by connecting to an existing landlord supply.
- Reducing a large number of underused 15 kVA DG5 connections would free up network space for other users and may push out transformer upgrades and other local grid strengthening requirements.
- Makes a better case for solar / wind projects that can connect directly to an end user.

Sub Questions Q.74(a)- Are there changes which could be made to the current wider electricity system which would negate the call for Private Wires?

No.

Q.74(b)- Would an accelerated delivery of national electricity grid infrastructure and connections to the national electricity grid negate the call for Private Wires?

No.

Q.74(c)- If Private Wires are permitted, is it envisaged that there would be a role/ need for new Private Wire projects post-2030? If so, please outline the envisaged role/ need.

Yes, new renewable energy projects after 2030 will still need new connections.

Q.74(d)- If Private Wires are permitted, should projects be limited to areas where, at the time of application for permission to construct a project, the national electricity grid lacks available capacity?

No, private wire will make the delivery of projects more timely and cost effective. By introducing requirements for ESB networks to conduct a study to determine whether there is grid capacity or not will only introduce delays and costs for all parties involved. In any case, ESB networks is struggling to get through a serious backlog of grid connection applications, so introducing a requirement such as this would be only creating an unnecessary administrative bottleneck and delay.

Q.75- Are there any other issues relevant to the development of a policy on Private Wires, not covered elsewhere as part of this consultation, which you wish to raise?

Last year we examined the possibility of covering the roof space in Charlestown Shopping Centre, Finglas with Photovoltaic Panels to provide power to the landlord areas of our shopping centre and car parks.

During the exercise, we noted that we could deliver power into the building cost- effectively as we have a plant room with a sufficiently large cable next to the roof. However, as our daytime landlord load is low (we also have a Combined Heat & Power Generator / CHP running during the 7am to 11pm), there was not sufficient load for the project to make sense. At the same time our retail tenants have more than sufficient load to support an extensive solar array, with the added benefit that by virtue of their lower connection levels are currently subjected to higher kWh charges. All our tenants are on DG5 and DG6 connections while the centre is on a high voltage (10kV) DG7 connection.

We examined the possibility of providing sections of the solar panel array directly to the individual tenants, but the large cable runs required increasing the cable size/rating to counteract the voltage drop would push the project returns to beyond 10 years. (It is much more cost effective to have one system, with one large inverter and one set of switchgear rather than 20 odd smaller systems each with their own inverter and cable run.).

If private wire / direct lines were legalised in Ireland, we would have the option of providing retail tenants lower cost power from our CHP unit and installing a large solar array which would have sufficient load from our retail tenants to be feasible.

In addition, we have some small units that use very little power, if we had the opportunity to take over their electricity supply completely, we would be able to offer savings on the significant kVA fixed charges. In light of the current difficult trading conditions this would be a very welcome development for both us and our customers. It would significantly enhance our operating flexibility and make businesses more viable in the current volatile market.