

Intellect Response to Ofgem

Smart Metering Prospectus – questions requiring a
response by 28 September 2010

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Background

Intellect is the leading UK trade association for the IT, telecoms and electronics industries; industries that generate around 10% of UK GDP and 15% of UK trade. Our 750 plus members include blue-chip multinationals as well as early stage technology companies and play a crucial role in virtually every aspect of our lives. Intellect articulates a cohesive voice for these industries across all market sectors, and is a vital source of knowledge and expertise on all aspects of the technology industry. We do this by fostering improved business performance, encouraging thought leadership, and making the shaping of markets and influencing of policy possible.

Alongside the technology industry's considerable footprint in the UK, Intellect also enables many other industries to operate efficiently in today's economy including:

- utilities
- financial services
- creative industries
- retail
- transport and logistics
- manufacturing
- defence and aerospace
- pharmaceuticals

We are a trusted partner for Government, both in terms of policy development and policy implementation across numerous sectors. We look to ensure that all relevant engagement of policymakers and regulators with industry is both easy and as valuable as possible in order that the technology industry may play the fundamental role it merits in the success of UK plc.

Intellect Smart Grids and Smart Metering Programme

Intellect's Smart Grids and Smart Metering working group is an acknowledged source of expertise in the smarter energy debate. The group brings together senior personnel from Intellect member companies, many of whom are leading the way in the development and promotion of the technology which will place a smart meter in every home in the UK by the end of the decade, enabling a smart grid to be developed.

Group members come from a range of fields including software, consumer electronics, utilities, telecoms, meter manufacturers, satellite communications, the legal profession, consultancies and broader technology companies. This gives the group a uniquely broad membership and promotes strong debate given the multiple sectors with an investment in smarter energy systems.

Intellect counts within its membership numerous providers of smart data services to EDRP and commercial smart meter trials in the UK and abroad who have built up significant experience of smart meter installations. Lessons learnt from international deployments, should be taken advantage of by Ofgem and Intellect and its members are ready to input this information to benefit the process in the UK.

Given the strong position of our group, Intellect has been invited to sit on both working groups created by Ofgem in the Prospectus of August 2010, as well as a variety of sub-groups, and we look forward to continuing to play a strong role in the process going forward.

Intellect provides a technology-neutral and independent forum for our members to come together to articulate the industry voice for the technology sector and assist government and regulator in best carrying out their forward agenda.

Overview

Intellect welcomes the opportunity to respond to these important questions which will help shape the mass deployment of smart meters. We also look forward to responding to the next round of questions in a month's time and continuing to be actively involved in the debate.

In this paper, we have articulated the industry opinion in the neutral environment of Intellect. As such, we have included suggestions from our varying members to improve and accelerate the process – these may conflict in some cases and represent the broad membership who we have engaged in this work. We feel our position is strengthened by this and are happy to provide more information about any of the ideas suggested.

The UK has the potential to become a leading light in the development of smarter energy management. However, for this to happen it is essential for government and regulator to take the necessary steps to create the platform to enable the technology industry to innovate and shape the fundamental makeup of the UK energy infrastructure for the future. This encompasses regular engagement with the industry to actively define the requirements of smart meters, taking onboard the suggestions of a broad range of industry stakeholders.

Intellect's response

Question 3*: Do you have any comments on the proposed approach to ensuring customers have a positive experience of the smart meter rollout (including the required code of practice on installation and preventing unwelcome sales activity and upfront charging)?

Intellect members fully endorse the necessity to ensure that customers have a positive experience of the smart meter rollout and see an opportunity to excite customers about the potential of the new technology. Failure to recognise this could potentially result in a negative customer experience, resulting in the customer's loss of commitment to the smart metering programme and, ultimately, the wider energy efficiency agenda.

As has been stated previously, if the customers on the ground are not willing to open their front doors then the successful deployment of smart meters, regardless of their capabilities, will be jeopardised. Customers inhabiting the 26 million homes in the UK must be convinced that smart meters will be suitable to operate as a critical part of the nation's infrastructure. The technology used in smart meters obviously has a role to play in this, through ensuring that all designated criteria are satisfied. However, there is also a role for the government and the regulator to ensure that customers are onboard with the *concept* and that expectations are managed throughout the roll-out and beyond. This role encompasses media coverage and government statements/campaigns.

Code of practice

In the experience of many of our members, a clearly defined code of practice is a sensible measure for this project – particularly given the scale and complexity of the smart meter roll-out across the UK.

A code of practice for the installation of smart meters is an important means of ensuring that customers are protected from installations being an excuse for new terms and conditions or unwanted sales opportunities. A code of practice should guard against the impairment of competition, and promote consistency and professionalism in the installation process. To achieve this, a code of practice needs to set out minimum standards for the customer experience of the rollout in respect of the smart meter installation and any future operations, whilst recognising the importance of customer transfers.

Best practice could also be importantly achieved by coordinated gas and electricity meter installation, particularly where there are dual suppliers. This is a complicated issue given the

difference in models but efforts should be made to achieve this. It will require thorough coordination of the relevant parties and an active approach from Ofgem.

Furthermore, it will also be important that existing supply quality, and customer service processes, are preserved post installation and a revised code of practice could help ensure this. The manner in which data problems are resolved when they do arise will also be fundamental – there will inevitably be a measurable failure rate concerning comms connectivity (based on the scale of the project and international lessons, such as the experiences of Vattenfall in Sweden) and more attention should be made towards governance, processes and commercial models focused on addressing errors, failures and other issues than currently within the Prospectus.

The experience of Intellect members, both in the UK and abroad, strongly suggest that a standardised installation process incorporating best practice offers important benefits. In summary, our members suggest this could be achieved by:

- promotion of the benefits of smart meters in advertising/the media from the outset;
- coordinated engagement of industry from Ofgem;
- a common installation process with minimum standards for the customer experience. This could be allied to appropriate meter operator incentives targeted at maximising successful first time installations, maximising reassurance and education of the customers in the new technology and minimising customer inconvenience;
- thorough training of meter operators not only on the process but in particular on the customer engagement during the installation visit, taking account of the wide demographics which will be encountered;
- a comprehensive audit trail including identification of the meter operator performing an installation and use of this information to proactively monitor and assure the performance of the meter operator agents;
- a positive confirmation from the data service provider that the installation has been successful prior to the meter operator leaving the customer's premise will be an important means of demonstrating the value of the project to customers from the outset.

Service Level Agreements and Key Performance Indicators

Building on this, our members emphasise that WAN connectivity must be ensured through a series of SLAs and KPIs which need to be clearly defined and policed. KPIs will help ensure a positive customer experience by covering:

- first time installation success rate
- the rate of re-visits to the household during the life of the assets
- the connectivity success rate during operation

KPIs for connectivity need to be defined for delivery of specific metering data and reporting of specific events and alarm messages, including those required for a Smart Grid. For this reason, many of our members emphasise that it is important that the WAN solution be designed first and foremost for retrieving metering information securely rather than being a general purpose consumer network.

Question 6*: Do you have any comments on the functional requirements for the smart metering system we have set out in the Functional Requirements Catalogue?

Intellect members appreciate these requirements are still evolving and believe they are a good starting point to be built on with further industry engagement. Ofgem should now play a leading role in removing areas of uncertainty which may hinder the UK maximising this opportunity.

Our members emphasise the need to confirm these requirements as soon as practically possible in order to provide the platform of certainty for suppliers, meter operators and meter manufacturers necessary to make the roll-out a success. In some cases this may be a challenge - such as the exact technical specifications of making a smart meter 'future-proof' - as it may not be possible to define the specifications that enable the smart meter to meet the requirements for as yet undefined services and usage models. However, our members suggest that there should be improved detail on the *capability* of the metering system to support a range of remotely-initiated alerts, and to prepare the groundwork for some of the foreseeable smart grid applications like demand response and e-vehicle support.

This must be addressed and given due consideration through industry consultation. Moreover, this will be essential for determining meter/metering point registration requirements. Given the current uncertainty regarding the use of existing registration systems for smart meters, it is important to agree the functional requirements at the earliest opportunity and define the registration dataset, which is likely to include additional data items compared to current requirements.

Intellect members would also make the following points:

- IM.2, IM.4 – Where firmware updates are deployed, rollback to the previous firmware should be readily available to minimise loss of supply should the update fail. This and other firmware management issues are not adequately addressed, and points to insufficient inclusion of participants who have experience in these matters – broadband home hub providers etc.
- IM.11 - Self configuration of the meter may be difficult as it will have to either be preconfigured with the MPAN/MPRS or have a remote set-up. Both of these methods are challenging as they rely on a specific meter being delivered to a specific site and if the meter has a technical problem it cannot immediately be replaced to avoid delaying the roll-out. Experience of early smart metering trials has shown that practically it is easier to enter the MPAN/MPRS during installation. The experience and learning of smart metering rollouts within the EDRP trial should be considered when developing the deployment strategy.
- OP.7 - With all meter updates provision should be made to validate the accuracy of the telemetry once changes have been applied.

HAN

Many of our members highlight that the HAN specifications still need further clarification.

- Intellect has received numerous statements from its members that it is not desirable that different suppliers should fit meters with different, integrated HAN modems for the reason that this would harm the ability of competing suppliers and other innovators to develop new, different IHDs that would work with all meters.
- Moreover, responsibility for performance of the HAN remains unclear which fails to provide our members and the wider audience with assurance of its capability standards.

- One suggested compromise is that meters should have a standard “port” or socket, to which HAN modems can be attached. Such a compromise demonstrates awareness that many homes already possess some form of HAN equipment which the smart meter may connect to.
- Another suggestion from our membership suggests that a Central Communications Provider should be responsible for connectivity to meters, not just to homes, and thus urges consideration be given as to how a central communications provider can manage the communications path against Service Level Agreements to individual meters, including electric, gas and water meters. This would potentially allow for greater simplicity of administration, security and future-proofing.
- Furthermore, one of our members with extensive experience in real-time business intelligence notes that an increasing use of insulating materials such as Celotex sheets in floors/wall/roof in new housing stock and ‘green’ refurbishments, together with earthed metal frameworks for plaster-board create increasing problems with certain wireless approaches. This is likely to get worse in the medium term with increased incentives for holistic insulation linked with interest in heat-pumps and underfloor heating. It is therefore important that the HAN standards take this trend into account including the need for wired-connections as well as wireless standards.
- It is also important that connectivity with water meters is seen as being of fundamental importance rather than simply a ‘possible future development’ and is prioritised given the accelerated timescale of the roll-out and the fact that customer demand will likely soon encompass water usage.

More information on these suggestions from our members is available upon request.

Prepayment

The technology in smart meters is prepared to support the payment infrastructure in a smart energy environment, however to maximise this there remain parameters and responsibilities which must be defined to enable the industry to take this forward. Indeed:

- When a customer attempts to vend it is necessary to validate that the meter is in prepayment mode and to ensure that the payment reaches the correct supplier. The handling of misdirected payments is one significant driver of the costs to serve associated with pre-payment customers. There is currently no mention of this in the Design Requirements. If this were done by the DCC it would give payment agents (e.g. PayPoint, POCL) a single interface to validate payments.
- Given that customers may still need ID cards for prepayment vending (so that the meter can be identified and the correct meter credited), there will be a need to manage the reference numbers used to do this (referred to as purchase IDs in some current smart meter systems or more generally as PANs). These numbers need to be unique and are best managed by the DCC rather than individual suppliers.

To build on the earlier point regards customer experience, registration of a smart meter has a service level of 90% within 2 hours. Our members believe this is far too long. Meter installers require confirmation that a meter has successfully registered in the DCC before they leave the customer’s premise.

- Ideally those responsible for installations should be able to remotely interrogate the DCC or a registration confirmation message should be sent to the IHD. These need to be received reliably within minutes. This is a fundamental requirement to delivering a positive customer experience and ensuring successful installation on the first and only visit.

Feed in Tariff Update

The feed in tariff has a service level of 95% within 2 days. Intellect members' current experience is that tariff updates are planned weeks in advance and loaded onto the meters with an effective from date set to a future date on which the tariff becomes active. There should be a requirement for meters to be able to store changes (e.g. tariffs, configurations etc.) with a future effective date and the service level then become 99.9% (or whatever upper limit is used) within, for example, 7 days.

Business processes

There are no requirements relating to standard business processes and clarity of these, even when the answer of where responsibility lies can be assumed, is important if the processes are to be put in place now which will support a long-term smart energy infrastructure. For example, there is no requirement to obtain a meter read on Change of Supplier (CoS) – it is assumed that all such processes are going to be the responsibility of the supplier and that the DCC merely provides the interfaces to allow suppliers to do this.

In this infrastructure, suppliers will need to be able to access and read meters in near real time, typically when a customer has called the supplier's call centre with a query.

Some Intellect members are currently being asked to support **service level agreements** (SLAs) of around 95% of meter queries being responded to within 1 minute, however the requirements in the catalogue imply a much lower SLA which would not enable suppliers' call centres to achieve the cost to serve benefits associated to first contact call resolution and to deliver the customer experience envisaged in a smart world:

- Meter read (import & export) has a service level of 90% within 30 minutes
- Energisation status requires 95% within 5 minutes

Question 7*: Do you see any issues with the proposed approach to developing technical specifications for the smart metering system?

Ofgem have access to a multitude of industry advice across multiple sectors and should endeavour to utilise it in the best way possible – particularly given the range of sectors with an investment in the deployment of smart meters and the development of a smart grid. Intellect, with our large number of members from multiple sectors, has the potential to be of great assistance to Ofgem here. We provide a neutral, independent forum, for industry to discuss the technology that will shape the new infrastructure and for regulator and government to interact with industry in a mutually beneficial manner.

We have observed that different organisations are at varying levels of understanding and are often segmented in their expertise – there is a role for bodies such as Intellect to play in coordinating these groups and we encourage Ofgem to take advantage of this. Only by casting the net as broad as possible and making full use of representative bodies can Ofgem ensure that all criteria are fulfilled, and that genuine interconnectedness and greater understanding is achieved. In particular, the regulatory, technical and operational aspects should develop in parallel. As such, Intellect supports the adoption of Option 2 - where the technical work is done by the industry groups - and we look forward to continued involvement in these.

Many of Intellect's members operate internationally in this space and note that the industry will expect whatever standards are adopted in the UK to be in line with EU and/or US directions - as manufacturers will look to have common specs worldwide. The EU (via EG1 of Smart Grid Task Force) has the mandate to develop the initial draft of functional requirements and related standards before the end of 2010. Indeed, there is a pressing needs for standards to cover physical characteristics of the modular connections to the new meters, covering both the WAN and HAN modems. Combining this EU timeline with NIST current timeline should enable the UK timeline to be met, assuming there is no major divergence in the coming months.

It is important to accept that, given the nature and scale of this project, mistakes may be made; and that although these can be costly they are necessary for the development of capacity and capability and making sure the UK takes a leading role in the low carbon economy.

Consultation with industry and an acknowledgement of these principles will provide the best possible trade off between features, quality and cost.

DCG sub-groups

Intellect and its members are broadly content with the opportunities for engagement with the DCG through our membership of the main DCG group, the community of technical experts and the future possibility of sending our members to present to the DCG sub-groups.

However, Intellect and its members are disappointed that we are not allowed permanent representatives on the DCG sub-groups 1 and 2. Whilst appreciating Ofgem's reasons for this, Intellect feels that the sub-groups will suffer for lack of appropriate levels of technical expertise. In turn, we encourage Ofgem to both fully leverage the community of technical experts and also to take the opportunity to invite Intellect members to give presentations to the sub-groups 1 and 2 where appropriate.

Question 16*: Do you have any comments on the proposals for requiring suppliers to deliver the rollout of smart meters (including the use of targets and potential future obligations on local coordination)?

Intellect members broadly support these proposals. We note that the need to ensure that customers have a positive experience in the installation process (and beyond) will be largely played out here, therefore suppliers must be adequately briefed/prepared to go about this work in the best way possible.

Suppliers are in the best position to do this given that they hold the relationship with the consumer, however it must be carefully managed. Our members also note that suppliers typically discharge their metering obligations through industry qualified metering agents, and these metering agents therefore have the potential to play an important role in co-ordinating the deployment of meters and developing metering service propositions that are attractive to suppliers, and which will be a factor the suppliers' prioritisation of rollout. This is important for Ofgem to be aware of in monitoring the roll-out.

Pilots

Several Intellect members, calling on vast international experience, recommend that deployment pilots should be undertaken to understand the potential complexity and challenge of the roll-out. Given the scale of the project, a flexible rollout strategy which is regulated and monitored, is essential which is able to incorporate the lessons learnt here.

Targets and Incentives

The use of appropriate targets and incentives for suppliers should be considered, and this should be done keeping the wider policy agenda firmly in mind. It is important that with any targets, the approach to rollout and the mandate do not create perverse incentives, creating barriers to early movement. It is similarly important that incentives for local coordination are driven by a clear link to the realisation of identified benefits or the management of programme costs. For the most part, our members would support a 'net-benefits' led approach to the creation of any targets or incentives on suppliers and their agents for the deployment of smart meters.

Our members support the proposed approach to local co-ordination in the later stages of the programme and emphasise that co-ordination, at a local level, of communication with consumers has an important role to play in the process by increasing the realisation of the consumer benefits identified in the Impact Assessment. Furthermore, our members have perceived growing evidence that the use of social media and ICT can be used to generate sustained interest in managing energy. By using the appropriate medium to communicate with different communities, the messages can be tailored to maintain the interest of people within those communities and therefore sustain the consumer benefit over the long term

Question 17*: Do you have any comments on our implementation strategy? In particular, do you have any comments on the staged approach, with rollout starting before DCC services are available?

Intellect members are generally in favour of an accelerated roll-out and believe the staged implementation strategy is a pragmatic response to the need to commence the smart meter rollout and the time taken to develop a Smart Energy Code and the DCC licence.

However, our members emphasise that the period of parallel activity with roll-out underway but with no DCC needs to be kept to a minimum, and we have received many comments that the proposed timescales (following the establishment of the DCC) for procurement and implementation of the infrastructure may be unrealistic and should be given further analysis. Indeed, we encourage Ofgem to plan for how they could operate the interim service for a longer period and across a larger meter base – i.e. how to continue rollout momentum if there are DCC problems.

To help minimise problems while there is no DCC service will require more governance support from the ICT industry – which sections of our membership feel has been lacking thus far. Indeed, sections of our membership warn this will have the result of creating a sense of two camps which will drive behaviour increasingly along contractual and commercial lines, at the expense of a broader strategic view. The result may be that suppliers become reluctant to implement their own communications medium pre-DCC and rely on the existing reading cycle processes. This may, depending on other factors, create an environment that could delay the rollout.

Consideration needs to be given to governance of smart meters installed ahead of the Smart Energy Code (SEC) and DCC, and capture of ‘smart’ metering system administration data. Failure to do so is likely to result in a need for ‘back-filling’ and validation of smart data and introduces an increased risk giving rise to data quality issues following DCC Go-Live.

Building on this, some Intellect members have also suggested a more aggressive rollout *would* be achievable, while also emphasising that the time required to test, develop and fully activate a DCC which must be able to engage with industry, write and implement a procurement process, integrate various interim solutions, novate contracts and manage the risk and complexity associated with launching and integrating a long term centralised solution, should not be underestimated and may take longer than the prescribed window.

For example:

- one of our larger business technology services providers suggests that this could be done via an obligation on the DCC to ‘grandfather’ non-DCC compliant smart meters. This would require that the DCC should also be required to support a set of interim interoperability arrangements that would enable smart meter installation and the benefits associated with this to be realised now.
- another of our large members in the communications space suggests the end to end communications solution should be procured as a whole, including end to end centralised security, rather than procuring in parts to avoid delays in the process having

a knock on effect on the next activity. This member, among others, proposes an alternative approach, consisting of parallel activities to develop the regulatory framework; establish the technical specifications via RFI process; appoint the DCC, and procure the central communications service provider, including WAN and security. Whilst this needs to be managed carefully, this member estimates a saving of up to 18 months compared to the prospectus high-level implementation plan and a saving of over 2 years given the risks of delays in the current plan.

More information on these suggestions from our members is available upon request.

Question 18*: Do you have any other suggestions on how the rollout could be brought forward? If so, do you have any evidence on how such measures would impact on the time, cost and risk associated with the programme?

Suggestions from Intellect members include:

- define in the near future what qualifies as a smart meter installation
- set up the DCC as a priority
- open a prototype smart meter register
- pursue as a priority the development of common standards, such as communications protocols and service levels agreements in order to give suppliers the required certainty to make the necessary capital investments sooner.
- pursue optimisation of existing meter point administration data as a common resource for the whole market will bring efficiencies into the SMIP as a whole.
- a potential benefit to the rollout plan might be a national view of the premises to be covered – indeed, within the electricity sector, the Electricity Central Online Enquiry Service (ECOES) already provides a single consolidated view of all electricity supply points, which could be a useful starting point (on the basis that not all premises will have a gas supply, but electricity is universal).
- a greater use of pilot deployments in the early stages, with a potential of 5-10% of meters installed in this way. This would enable learning of the key factors for a successful deployment with the costs spread out.
- some Intellect members suggest giving suppliers, or metering agents, the confidence to commence smart meter rollouts at scale through ‘grandfathering’ of pre-DCC smart meters is likely to accelerate the rollout and reduce the stranded asset costs resulting from pre-DCC statutory meter changes. Since the majority of benefits identified in DECC’s impact assessment can be realised by current smart meter functionality, an accelerated rollout will deliver these benefits earlier. The cost of putting in place the interim interoperability arrangements necessary to support pre-DCC meters is required regardless of whether or not grandfathering happens. Allowing the rollout of smart meters to commence early also mitigates against the risk that delivery of the DCC slips by enabling early benefits realisation
- it may be unwise to recommend early roll-out using a fully competitive approach when this will likely result in multiple WAN and HAN solutions, thus creating a complex environment for the DCC to unpick - centralised communications may be preferable.

More information on these suggestions from our members is available upon request.

Question 19*: The proposed timeline set out for agreement of the technical specifications is very dependent on industry expertise. Do you think that the technical specifications can be agreed more quickly than the plan currently assumes and, if so, how?

Intellect members have offered the following thoughts for consideration which they believe could lead to the technical specifications being agreed more quickly:

- Hiring a full-time, appropriately experienced team to deliver the technical specifications agreement as well as engaging further with relevant EU processes, especially in reconciling the differing timescales.
- Make better use of existing metering products and build more intelligence into the HAN, remaining under the governance of the metering programme, with industry involvement issue-by-issue.
- Make use of international lessons of smart meter deployment where relevant – whilst recognising the specificities of the UK market.
- Prioritisation of the standards for the WAN, HAN and meters, with Ofgem taking a lead role in coordinating the various industry initiatives underway.

Question 20*: Do you have any comments on our proposed governance and management principles or on how they can best be delivered in the context of this programme?

Intellect appreciates the work put into this Prospectus and commends the direction of the programme which our suggestions and comments hopefully build on. We encourage the refinement of important details be prioritised as soon as possible and practical in order for industry to take the project forward.

Intellect represents a very broad cross-section of the UK technology industry, encompassing over 750 companies across the sector and we have received an incredibly high level of interest in the smart meter deployment and smart grid possibilities. This illustrates the importance and relevance of this work to the ICT sector, and the strong contribution to the debate these companies can provide.

Given this, we **do** feel there is a lack of representation of the communication and IT sector in the governance and management of this programme – Intellect appreciates the opportunity to participate in Ofgem’s expert groups and specific sub-groups and is doing so actively, and we would emphasise the value our sector can offer in every stage of the process.

Security remains a critical component of the programme. Both in terms of customer perception and (private) central governance of new functionality – indeed, security concerns and data protection must be embedded into the system design from the outset. Moreover, it is important to treat the requirements of data protection (i.e. privacy); security of national infrastructure (i.e. cyber-threat); data resilience and integrity (i.e. data quality) equally with customer data protection and privacy and our members are keen to continue working with Ofgem to ensure this is the case.

In relation to governance for the later stages of the programme, the Smart Energy Code will be the cornerstone to ensure the new smart metering systems arrangements are effective. A large proportion of our members believe that there is a case for the governance model to have clear separation between the DCC’s responsibilities and the governance of the SEC.

The Master Registration Agreement (MRA), Distribution Connection and Use of System Agreement (DCUSA) and Supply Point Administration Agreement (SPAA) provide comparable models of best practice for governance of industry codes and could form an appropriate model for the development of the Smart Energy Code.

We finally urge Ofgem to consider the duration of the programme and the governance challenges which that creates. The pace of innovation in technology, particularly communications technologies, among our member companies and in the development of the market and consumer expectations could have a dramatic effect on the benefits case, as well as on the energy and wider policy objectives in which the smart meter communications and information infrastructure holds influence. The governance arrangements therefore need to address the provision of sufficient certainty to secure the required investment, whilst maintaining flexibility to respond to changing market demand and take advantage of technological innovation

Intellect contacts

Please do not hesitate to contact us if you would like any further information; we would be more than willing to host a workshop with our members to discuss this in more detail.

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