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28<sup>th</sup> October 2010

Dear Andrew,

## Re: Ofgem's Smart Metering Prospectus October Update

Thank you for the opportunity to comment on Ofgem's Smart Metering Prospectus. We are happy for our comments to be shared with other interested parties.

Our response builds upon our September submission and as previously noted we welcome the open and inclusive approach taken by both DECC and Ofgem in engaging with the wider industry. As a member of ICSSS Gazprom has been party to the work of the Smart Metering Design Group (SMDG) and the SMDG Technical Issues Sub Group (SMDG3).

Despite the significant amount of work and short timeline we believe the industry groups are generally working well and we look forward to continue to support the program. We believe that Ofgem should continue to utilise these groups on a more formal basis as the program continues into later phases.

## Non Domestic

As Gazprom operates in the Non Domestic sector we are particularly concerned with the impact of the Prospectus on the Non Domestic Sector. In the UK Gas Market we believe this to represent approximately 2 million plus Meter Points / Assets.

Figure 1: Non Domestic Asset Population

Meter Size	Estimated Population
U6	1,500,000
U16 and above	500,000

In the Non Domestic sector we have seen the roll out of Automated Meter Reading (AMR), see Figure 4, which allows the meter to be remotely read using a “module” attached to the existing metering system. Based on information provided at meetings we believe the prevalence of AMR solutions on Non Domestic sites to be approximately 140,000 instances.

This is rapidly increasing due to Government initiatives such as the Carbon Reduction Commitment (CRC) and Supplier Licence obligations.

## Functionality

As previously stated we believe the Smart functionality required for Non Domestic customers in the Prospectus is achievable utilising existing AMR equipment. We therefore believe the test of whether a site is Smart should be an assessment of the equipments functionality against the baseline functionality set out.

We therefore generally use the term Business Smart to denote equipment fitted to Non Domestic sites which provide sufficient functionality to meet the high level functional requirements set out in the Prospectus.

It is important and valuable to recognise that delivering “Smart” functionality does not always require the removal of the in situ metering equipment and that a meter and appropriate ancillary equipment e.g. AMR can deliver “Smart” functionality.

As previously noted we welcome the decision to recognise the inherent differences between the Domestic and Non Domestic markets and in particular the decisions: -

- To not require a valve on a Non Domestic site
- To not require an In Home Display (IHD) in a Non Domestic site
- To not require mandatory participation in the Data Communication Company (DCC) for Non Domestic Suppliers

We also welcome Ofgems inclusion within the work Groups terms of reference of an obligation to consider the Non Domestic sector when making any recommendations. We are firmly of the view that by not requiring the Valve, IHD and not mandating the DCC then the majority of existing AMR equipment that is already deployed is compliant with the High Level functionality as set out below and are Business Smart solutions (see figure 2 below)

Figure 2: DECC High Level Functionality

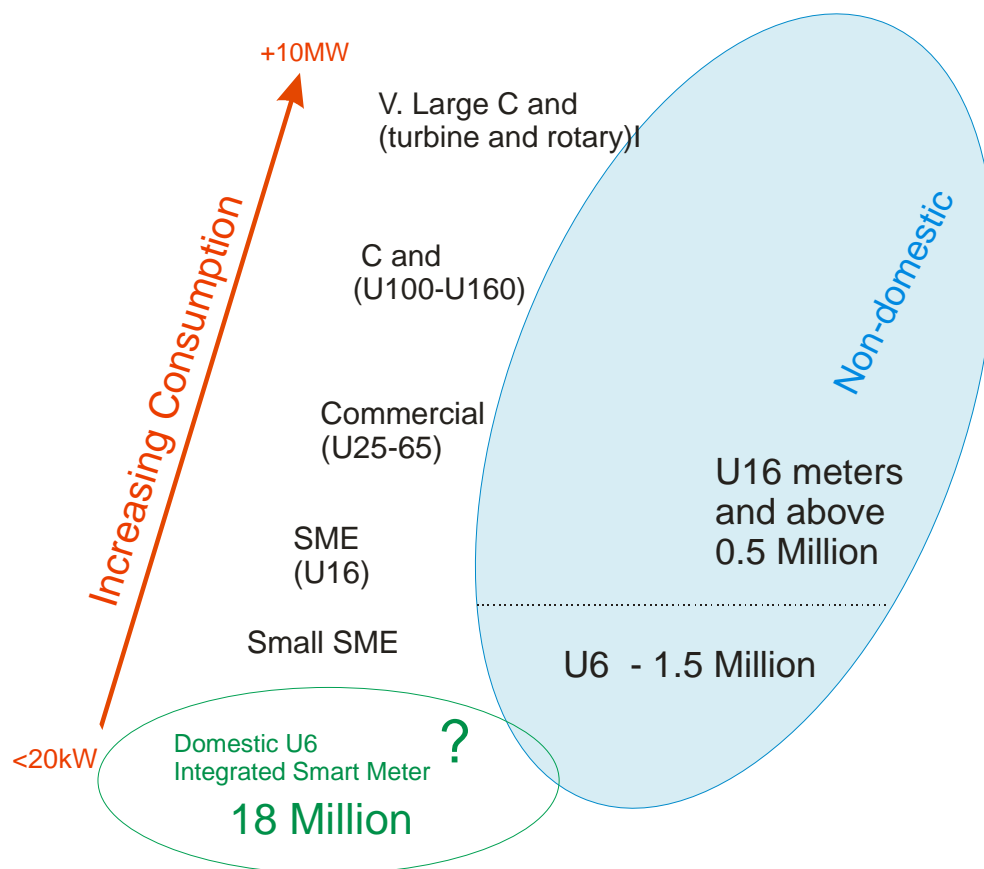
	purposes
E	Load management management • ability to remove sophisticated c
F	Remote disablement • that will support and prepayment
G	Exported electricity • measure net e
H	Capacity to communicate within a microgrid • receive, store, billing

## Business Smart

We believe that by supporting the concept of Business Smart the Non Domestic sector can deliver significant benefits to the overall impact assessment by creating a larger early adopter population and leveraging efficiencies in the Program which we discuss in more detail later.

As previously discussed we believe that the Non Domestic Gas market is structured as set out below. With the increasing focus on energy costs we have seen the market for Business Smart solutions growing to encompass all market sectors and all meter sizes.

Figure 3: Structure of the Non Domestic Sector



We believe that by continuing to provide assurance that modular solutions can be considered Smart significant early mover benefits can be added to the current business case. By not requiring the replacement of in situ assets retro fit equipment can be deployed thus avoiding the early replacement of the in situ meter. Based on our experience of rolling out Business Smart modules across the Non Domestic sector approximately 60% of existing equipment, including U6 domestic sized meters, are capable of supporting retro fit solutions as they provide a viable pulse output.

For the remaining 40% a number of options are available including the use of optical readers or as a final option a meter exchange.

Based on our understanding of the Market Size it is probable that at least 60% of the U6 Meter Stock or some 900,000 could support the Business Smart solution without and exchange.

Exchanging fit for purpose in situ meters is in itself inefficient and expensive however it also creates a number of associated additional costs which can be mitigated by a retrofit: -

Customer disruption – the loss of Gas may cause unnecessary inconvenience and could adversely impact the consumer's in situ appliances. A modular solution can be installed without interrupting the supply.

Upgrades - As retrofit installations do not involve carrying out any invasive work on the installation upgrades to the existing installation do not have to be undertaken.

Competence - The installation process is not as onerous and therefore does not require the same skill set as a meter exchange thus allowing more efficient deployment of scarce installer resources.

Resourcing - By facilitating a parallel roll utilising different skill sets we can benefit from parallel Domestic and Non Domestic roll outs which do not require access to the same skills sets and therefore the same finite installer resource.

Customers own energy monitoring equipment can be retained in a chain or by providing a pulse splitter the existing equipment can have its own data feed.

Figure 4: Examples of a Business Smart retrofit Solution



### ESTA Code of Practice

With large numbers of Non Domestic customer seeking more frequent reading information the demand for Business Smart solutions has been growing rapidly and as previously noted approximately 140,000 installations have already been undertaken.

The industry recognised that no existing Governance structure was in place to support new market participants and Gazprom has both by itself and as a member of both ICOS and the Ofgem Interoperability Group been active in developing the Automated Meter Reading (AMR) Service Provider Code of Practice (ASPCoP) with ESTA. We believe this Code of Practice provides a useful baseline for self governance of AMR Service Providers (ASP's).

ESTA has also been developing proposals for a centralised Data Hub to support ASP's, Suppliers, MAM's and Consumers.

## HAN

In terms of the Prospectus we would like to clarify the scope of any obligations in respect of the HAN requirements. As previously noted for non Domestic customers the IHD is not mandated and thus in Non Domestic scenarios the HAN becomes redundant as data is provided via Web interface, PC, Mobile or other application i.e. directly via the WAN.

We would welcome confirmation that provision of a HAN capability is only required in the Domestic Market or were the customer specifically requests the provision of an IHD device.

## Data Communication Company (DCC)

While not directly party to the workgroups looking at the DCC we are party to the work of the Group through our ICOS representation. We continue to believe the Data Communication model should be as “thin” as possible as the DCC will be a licensed monopoly activity and therefore the services it provides will not be open to competition.

By ensuring the “thin” or fit for purpose model is adopted we give the program the greatest chance of meeting its deliverables while supporting innovation in a competitive environment.

While some discussion has taken place on the Governance of the Smart Code we currently believe that the Code is best managed under the DCC which is subject to its Licence obligations.

## Retention of Pulse Functionality

While in the Non Domestic sector we believe that the pulse will continue to be the primary link between the meter and the Smart Module we also believe that consideration needs to be given to retaining the “pulse” at marginal cost in the minimum Functional Requirements as this would enable competition and innovation and provide redundancy in the event of a HAN failure.

Currently when we install Business Smart equipment at a Customers site we must, in accordance with IGE GM7, as the party utilising the pulse make available a pulse for any third party requiring access to the data from the meter.

Therefore, in the absence of an alternative, we must ensure that access to the HAN does not become restrictive and that if a HAN is present the customer or their agents must be able to access information locally if required.

## Smart Metering Design Group

As previously noted we have participated in the work of the Smart Metering Design Group (SMDG) as well as the SMDG Technical Issues (SMDG SG3) and we look forward to continuing to support the work of these Groups.

The SMDG SG3 has highlighted a number of issues which need to be addressed and ICOSS members have set out their top 6 issues arising from the Groups list of issues. These top 6 ICOSS issues are set out below: -

### Issue 44 - How is loss of HAN and WAN comms reported and dealt with?

Communication failures could result in operational and customer services issues. The DCC and/or Supplier cannot address a failure until they are notified of it. Mitigation proposals included designing communications monitoring into the meters e.g. a message via WAN to inform Supplier than HAN is down. Or, a message via HAN when WAN has failed. Requirements for Supplier/Customer notification should be clarified, and then incorporated in designs subject to CBA. Requirements on DCC should be clarified. The impact of taking no action could be that Smart meters or SMS components could become "islanded" as a result of comms failure, and could remain so for a long time without a reporting mechanism

### Issue 51 – Battery Level – 15 year life is challenging

The ability of the asset to support a 15 year life will be dependant on the frequency of operation. This will be materially impacted by nature of operation i.e. the proportion of time the meter is likely to operate in pre payment or pay as you go mode. A definition is required for Gas Meter operating conditions in order to design suitable products to meet the 15 year life.

Mitigation proposals include if the battery can be replaced in the field the need for a costly asset replacement program could be avoided. We utilise in field replaceable battery and the device has a second small back up battery so no data is lost.



As it is likely that pull for higher degrees of data granularity will continue then it would be wise to recognise that in field replacement of batteries could address concerns.

Such replacement visits could be aligned with scheduled safety inspections (required every 2 years) to minimize cost. Assumptions need to be made for prepayment. Therefore total number of valve operations, input of a vend code, and firmware upgrades need to be quantified.

Unless we take a realistic view of utilisation in different operating modes e.g. Pre Payment, Pay as You Go, Credit (daily read). Then we risk finding large numbers of meters failing in the field during the roll out program.

#### Issue 54 - Gas thermal calculations on gas meter

The issue relates to the ability to accurately reflect energy usage on the meter as the CV data is provided after the Day. Delivery is measured in Standard Cubic Meters and this is then converted to Kwh and then Money in the Suppliers Billing engines. Consumers are billed on the amount of kWh are used, and this is dependant on CV and PTZ which vary per meter point. Updates of CV are not available in real time, so costs on IHD and prepayment will be estimated at the meter point, and exact billing data will need to be managed via DCC and supplier systems

Options for mitigation include: 1. Update CV and adjust credit balance retrospectively 2. Include pressure and temperature transducers at the meter point 3. Have local measurement of CV

The impacts of taking no action include inaccurate prepayment and displays, poor customer experience and energy imbalance

#### Issue 56 - Inability to connect gas meter to DCC via a HAN (could result in 2 WAN modules, cost impact) - availability of solutions within reasonable cost

Is it the intent that the Gas Meter links to the WAN via the HAN. Isn't it logical that the Gas Meter connects with the WAN as it is the WAN which provides the conduit to the DCG? If the gas meter is out of range of the HAN, a second WAN module may need to be fitted to the meter to get connection to DCC and supplier etc

Options for mitigation include; 1 WAN connected variant of the gas meter. 2. Do not provide smart gas meters to 100% of gas consumers 3. Hardwire gas meter to the WAN module

The impacts of taking no action will mean that not all gas meters will be upgraded to smart meters consumers do not get the benefits of smart metering

Issue 65 - Non domestic installation - No valve or IHD required. To what extent will these visits involve smart functionality?

Clarity is required on the scope of Smart Functionality in a Non Domestic Scenario. In particular in the SME sector where Advanced Metering is not a Mandatory requirement

Options for mitigation include ensuring that the Minimum Smart Metering functionality does not compromise the existing roll out of Automated Meter Reading Solutions. This principle has already been adopted by not requiring the Valve or IHD as Mandatory in the Non Domestic Sector.

If the minimum mandatory functionality compromises the existing technologies deployed it will lead to large numbers of Assets (both metering and AMR) having to be replaced prematurely

Issue 66 - Customer uses pulse with own building energy management systems now

Customer currently makes use of pulse or similar via their own monitoring equipment. Mainly used by non-domestic; few domestic

Options for mitigation include; 1. Ensuring existing equipment can remain in situ 2. Re-installing dumb meter solution for domestic; retain dumb asset 3. Develop a smart meter variant 4. Utilise a visual clip on device if pulse exists 5. Require a pulse to be made available.

If the minimum mandatory functionality compromises the existing technologies deployed it will lead to large numbers of Assets (both metering and AMR) having to be replaced prematurely

## Summary

Gazprom are active in the Non Domestic Market in both Gas and Power and provide Business Smart solutions to the Non Domestic Gas and Power markets. We believe it is critical that any decisions that are made consider the implications on both the Domestic and Non Domestic markets and we welcome recent moves to explicitly reflect this in the Groups Terms of Reference.

As previously noted we continue to welcome the general thrust of the Smart Prospectus and believe if we focus on those key issues necessary to achieve roll out then we have a good chance of delivering a successful smart Program in both Domestic and Non Domestic markets.

We welcome Ofgems engagement with the industry through the workgroups and the recognition of the requirements for the Non Domestic sector. As the program starts to deal with more detailed issues we need to ensure that we remain focused on the goal and do not allow scope creep into the program. It is only by maintaining discipline that we will avoid a negative impact on the program and meet the policy objectives while maintaining an open and competitive market.

Should you have any questions concerning the content of response, please don't hesitate to contact me on 07590 [REDACTED]

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Yours sincerely

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