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25 June 2023

Dear Joe,

<u>SGN Non-Operational IT Capex Re-Opener Draft Determination</u>

Thank you for the meeting last week with both Neill and yourself. It was helpful to have the opportunity to clarify some points raised in Ofgem's draft determination with respect to our Digitalisation re-opener submission.

We have responded to Ofgem's consultation response on our needs case, which overall confirms that our proposals will deliver genuine business and consumer benefit and provided greater evidence and clarity around the points that you have raised.

We remain concerned that the draft determination will constrain our ability to deliver the customer benefits attributed to following the Data Best Practice Guidelines on an enduring efficient basis. We are the view that it is an artificial economy to reduce costs in the short term by putting less focus on enterprise architecture and 3rd party APIs today as this will result in higher costs and risk more cumbersome and less sustainable processes in the future. We have included additional evidence in this response to provide the additional insights regarding our original submission.

Yours sincerely,

David Handley
Director of Regulation & Strategy
SGN

In copy: Neill Guha

Section 2 Needs Case

Q1 Do you agree with our Draft Determination on SGN's needs case?

2.9 SGN needs to improve its policies, processes, and governance against the DBP Guidance, in order to comply with its licence obligations (Special Condition 9.5) and stakeholders' growing expectations.

2.10 SGN's proposals will deliver genuine business and consumer benefits beyond what it has been funded to deliver through its existing RIIO-2 allowances.

SGN's Response:

SGN agrees with Ofgem's statements regarding the needs case put forward. It is important that efficient funding is permitted to enable the licensee to deliver the obligations set out within the licence. This reopener provides an opportunity to enable this, however, we are concerned that the amounts provided for within the draft determination may increase the overall 'lifetime' costs by not permitting appropriate focus on effective long term delivery.

Section 3 Optioneering

Q2. Do you agree with our Draft Determination on SGN's optioneering?

3.7 SGN has provided optioneering that considered a limited range of options. The first option, to do nothing, has been correctly rejected. This would lead to SGN being unable to meet the requirements of its licence conditions, which is unacceptable to us.

SGN's Response:

SGN agrees with Ofgem's statement regarding the first option put forward and recommended rejection.

3.8 The second option, waiting for industry to arrange a centralised or partially centralised service, has also been rejected by SGN. Whilst SGN considers this as an option, there is minimal explanation of how this could work or what SGN have done to explore this option. However, we are not aware of any existing industry move towards creating a centralised service, so we do not see this as a viable option at this time.

SGN's Response:

SGN proposed this option on the back of previous industry-wide initiatives (Open Energy Data) to look at centralising Open Data exchange service. Whilst this proposal did not develop beyond its feasibility stage, we felt it relevant to include this option, albeit not recommended to take forward.

3.9 SGN's optioneering therefore concludes that the only option (Option 3) is to undertake all the work identified, at a cost of £9.15m. We agree with SGN that there is a clear needs case that should be addressed during the current RIIO-2 price control period. However, as part of our assessment our data experts have explored whether some elements of Option 3 could be excluded, reducing the cost to consumers, whilst still allowing SGN to meet its licence obligations and stakeholder expectations. We break down this analysis of Option 3, among other potential cost savings, in Paragraph 4.4 in the Cost Section below.

SGN's Response:

SGN has responded on each point raised within Section 4 Costs

Section 4 Costs

Q3 Do you agree with our Draft Determination on SGN's costs?

4.1 The submission breaks the proposed costs down by year and by type of spending (eg. staff, contractors, software, environment project costs etc). However, it only has one paragraph dedicated to justifying the efficiency of these costs. SGN explains that these projects are based on costs from framework partners and previous project experience, but that its current plans are high level and subject to change in both scale and complexity. In response to Supplementary Question 311, SGN provided some additional information, breaking down the external roles it would be aiming to fill and what each role would be focused on.

SGN's Response:

We recognise that limited information was provided to justify the efficiency of these costs. This is because of the early stage within the project lifecycle and that at this stage we have not gone through the procurement events necessary to establish the appropriate trade-offs between cost and outcomes delivered. In the absence of direct procurement information the costs provided were based on expert judgement and recommendations of advisors.

4.2 We note that SGN have highlighted that these costs are operational costs (opex), which will be used to support its capital baseline allowances (capex). We appreciate that modern digital programmes are delivered using a blend of capex and opex and do not have any specific concerns with licencees requesting opex providing it is in support of larger capital programmes and is not for business-as-usual activities, or for activities already funded via existing RIIO-2 allowances.

SGN's Response:

SGN acknowledges Ofgem's response in point 4.2 and appreciate the clarity that this provides.

4.4 However, there are elements of work that either our data experts do not consider contribute towards meeting the DBP Guidance, are not necessary at this time, or that need further evidence to demonstrate a user need. These areas could be reviewed for the next price control period. Additionally, many of the costs proposed are relatively high. We therefore propose to disallow some of the allowances requested for the following elements:

(1) The Enterprise Architecture work and third-party API costs are poorly justified from a user-needs perspective, and it is not clear why these projects need to be completed during the RIIO-2 price control. SGN should look to build an evidence base that demonstrates a user need for these components and then explore whether they would be suitable for its business plan for the next price control period. In line with this we propose to remove the total third party cost allowance requested. Proposed adjustment -£1.481m

SGN's Response:

We have responded to both Enterprise Architecture and 3rd party API costs separately below.

Enterprise Architecture work

The national data strategy (National Data Strategy - GOV.UK (www.gov.uk)) sets out the vision to unlock the value of data and emphasises the importance of investing in data foundations (can we give a reference). This emphasis placed here is to ensure the security of the data and the infrastructure it sits on.

The risk of not investing upfront in the enterprise architecture is that solutions that will be deployed are short term and tactical rather that long-term strategic solutions that provide enduring solutions for the consumer over the longer-term.

By structuring the enterprise architecture correctly at the outset, this will form the basis from which open data can be delivered in a broader and deeper manner, for example an effectively defined enterprise architecture will enable

1. A structured approach to data standards and patterns that support and underpin the FAIR data principles at the core of the Data Best Practice Guidance. Including compliance with data regulations, and cyber security requirements.
2. A strategic approach to data storage and data engineering, which provides the foundations for automating the production and publication of repeatable datasets in future
3. Discovery work to establish a data sharing platform which underpins the ability for third-parties to access the data through automated means (e.g. through APIs or regularised batch-download of datasets)

If the enterprise architecture is not defined upfront then the risks associated with not having strategic architectural effort are

1. That insufficient effort is dedicated to ensuring that the data shared is compliant with UK protective marking protocols, that it complies with any data protection regulations, and that the mechanism used for sharing it is secure-by-design and does not increase the cyber security risk profile of SGN and the sector.
2. That provision of open datasets continues to be a manually intensive process which affects both the volume of data sets and the frequency which they can be updated.
3. That datasets do not have robust metadata which follows a standard taxonomy, meaning that datasets are not interoperable. This would mean that part of any future funding would have to be spent reworking these datasets and their associated metadata to meet common

standards.

4. The publication of these datasets would exacerbate the proliferation of data storage, integration, reporting and analytics technologies on the SGN technical landscape, reducing overall business efficiency and increasing the costs to support the estate.

As a result, we believe that it is clearly in consumers interests with strong stakeholder evidence, that an appropriate and effective enterprise architecture is defined at the outset of the project.

It should be noted that the risk of defining the enterprise architecture later in delivery (ie to incorporate it under GD3 funding rather than at the outset) are;

1. Decreased business efficiency through increased complexity of the IT estate.
2. Increased cyber security risk by not ensuring that external data sharing is secure-by-design
3. Building "data debt" by not establishing clear standards, patterns and guidance at the outset
4. Creating a labour-intensive publishing process which diverts our data experts' effort from the strategic effort needed to fully implement all the measures in the Data Best Practice Guidance.

Conversely the benefits of investing in Enterprise Architecture work now rather than waiting for GD3 include:

1. Greater economic, social and societal benefit created by being able to release larger and more frequently updated data sets that consumers of this data such as innovators and other utility firms can use to build new services, deliver infrastructure work in a more coordinated and managed way and make strategic investment decisions.
2. Reduced cyber-security risk because the right protocols, standards and platforms enable us to design-in cyber controls
3. Increased long-term efficiency of SGN operations because the same resource level will be able to manage the release of many more datasets.

It is for these reasons that we consider the Enterprise Architecture work to be an essential pre-requisite for efficient delivery at a later stage.

3rd Party API costs

Establishing 3rd party APIs upfront are essential to:

1. Promote the automated integration of our systems with data consumers such as our contract partners, other utilities and telecoms firms, regulators, and those who seek to create public value through innovative use of our data. As an example, the Greater London Authority (a significant user of SGN data) has specifically requested API delivery of data to make its data ingest more efficient. Similarly, in response to Storm Erwin the National Energy Outage Platform (a government sponsored initiative) has a requirement for near real-time data on gas network outage, delivered by API and within the GD2 time horizon.
2. Manage the volume and the frequency of the datasets that we publish.
3. Create seamless and frictionless data pipelines throughout the broader ecosystem of systems that enable value to be created at a sector and national level.

By not having them in place at the outset the risks are;

1. That APIs have to be retrofitted later to meet the demand of data consumers, which is considerably less efficient than designing for APIs in the first instance.

2. That insufficiently detailed or timely data is used be data consumers to make business decisions.
3. That without automating data flows, we fill the gap by putting in place manually intensive processes that introduce human error and are expensive to run.

This will bring about a worse customer outcome because in a landscape of increasingly data-driven decision making, our data consumers will be basing those decisions on data which may be incomplete, untimely, or contains errors associated with manual handling.

Conclusion

Whilst we do not have access to the detail of the Cadent reopener application, we note that this does not appear to have significant coverage of either Enterprise Architecture or 3rd party API costs. We think that this is inconsistent with National Data Strategy guidelines and ultimately will lead to either a higher cost to the consumer or a worse consumer outcome in terms of the delivery of the open data objectives.

SGN wants to avoid developing tactical solutions in pursuit of maturing our capability, as these will introduce additional costs and inefficiencies in delivering and maintaining these sub-optimal products and services. Only proper effort in defining the enterprise architectural roadmap will assure our stakeholders that investment is aligned with our regulatory and business outcomes and that we are avoiding building technical debt into our future landscape. In essence, we need to assure and be assured that we are not deepening the complexity of our IT estate, and that we can drive towards efficiency and technology convergence. This can be linked to mission 4 “Secure, Efficient and Sustainable Technology” of the Cabinet Office national roadmap for Digital and Data which promotes investment in long term sustainability of technology, reduction of technical debt and designing-in security and sustainability(Transforming for a digital future: 2022 to 2025 roadmap for digital and data - GOV.UK (www.gov.uk)).

The Enterprise Architecture work and third-party API costs are foundational requirements in the development of our digital and data products and services, particularly when we are being clearly steered towards accelerated compliance with DBP Guidelines which prevents our ability to defer this essential work until the next price control period.

SGN wants to avoid developing tactical solutions in pursuit of maturing our capability, particularly with reference to DBP Guidelines Principle 8 Interoperability as these will introduce additional costs and inefficiencies in delivering and maintaining these sub-optimal products and services. Only proper effort in defining the enterprise architectural roadmap will assure our stakeholders that investment is aligned with our regulatory and business outcomes and that we are avoiding building technical debt into our future landscape. In essence, we need to assure and be assured that we are not deepening the complexity of our IT estate, and that we can drive towards efficiency and technology convergence. This can be linked to mission 4 “Secure, Efficient and Sustainable Technology” of the Cabinet Office national roadmap for Digital and Data which promotes investment in long term sustainability of technology, reduction of technical debt and designing-in security and sustainability(Transforming for a digital future: 2022 to 2025 roadmap for digital and data - GOV.UK (www.gov.uk)).

(2) The submission does not include any internal staff and instead relies solely on the use of external contractors for the remainder of GD2. In response to Supplementary Question 2[12], SGN outlined that it needed to recruit skilled contract staff to initial establish its DataOps capability and to make rapid progress. We appreciate there is an immediate needs case and that it may take time to hire roles internally and to build up expertise. However, we have seen comparative project delivered by other companies at a lower cost. On this basis we are proposing to award the full funding requested for contracts for the first year (2023-24) but with a blanket reduction of two-thirds on all contractor allowances in years 2 and 3 of the project, to account for a more efficient resource spend once the project is up and running. Proposed adjustment -£3.139m.

SGN's Response:

Contractor vs Internal Resource

We recognise Ofgem's challenge on efficiency relating to the resourcing approach SGN set out within our original business case. SGN took this approach to mitigate the inherent risk of this project needing specific data skills from a very challenging job market. The roles identified are scarce and therefore there is risk of the knock-on impact to mobilising the Data Ops team in a timely fashion to deliver outcomes.

We do recognise that this is not a long-term solution and accept the challenge that SGN should be looking to embed more permanent resource over the course of the project; the contractor profile in the CBA is a mitigant for the challenges above.

We have provided a comparison of the roles referenced in the accompanying CBA to demonstrate the differences between Contract and Permanent role costs. The Labour Cost reduction achieved by introducing Permanent Staff in Years 2 & 3 rather than Contractor Resource is 33%.

Based on this analysis, we disagree that a two-thirds reduction is appropriate for the conversion from contractor to internal costs.

Data used has been provided by our internal HR team benchmarking provided by Towers Watson who are used by the energy & utility sector for resource comparison; the annual Hays report on technical roles and assurance feedback from PWC.

	Contract Staff		*Internal Staff*	
	**Annualised Cost (£'000s)*	*Day Rate (per CBA) £/day*	***Annualised Cost (£'000s)*	*Day Rate £/day*
Data Architect	*£232.6*	*£925*	*£104.2*	*£474*
Data Lake Platform Engineer	*£173.8*	*£835*	*£114.9*	*£522*
Data Engineer Technical Analyst	*£113.8*	*£430*	*£59.9*	*£272*
Governance and Compliance	*£113.8*	*£430*	*£96.7*	*£439*
Architect	*£240.7*	*£1,050*	*£101.8*	*£500*
Business Analyst	*£157.1*	*£670*	*£67.1*	*£305*
Solution Designer	*£192.3*	*£830*	*£89.9*	*£408*
Workstream Lead	*£163.7*	*£700*	*£107.5*	*£520*
Security Analyst	*£202.2*	*£875*	*£62.9*	*£286*
Programme Manager	*£194.5*	*£840*	*£115.2*	*£523*
Senior PM	*£180.2*	*£775*	*£85.1*	*£387*
Project Manager	*£163.7*	*£700*	*£73.1*	*£332*
Data Analytics Snr Developer	*£201.1*	*£870*	*£63.0*	*£286*
Technical CoE	*£159.3*	*£680*	*£92.0*	*£418*
Shared Services	*£117.5*	*£490*	*£59.9*	*£350*

*Contract Staff Annualised Salary included Agency Fee
**Permanent Staff Annualised Salary includes National Insurance 13.8% and Pension 6%

Annualised Salaries Based on 220 working days pa

	Original Workforce Plan Yr 1-3					New Workforce Plan				
	Contract Staff Labour		*Internal Staff Labour*		*Total Labour cost*	Contract Labour Year 1		Internal Labour Year 2-3		Total Labour cost Year 1-3
	Days	*Cost (£'000s)*	*Days*	*Cost (£'000s)*		Days	Cost (£'000s)	Days	Cost (£'000s)	Cost (£'000s)
Data Architect	*1100*	*£1,017.5*	*0*	*£0.0*	*£1,018*	100	£92.5	1000	£474.0	£567
Data Lake Platform Engineer	*600*	*£501.0*	*0*	*£0.0*	*£501*	100	£83.5	500	£261.0	£345
Data Engineer Technical Analyst	*1950*	*£838.5*	*0*	*£0.0*	*£839*	200	£86.0	1750	£476.0	£562
Governance and Compliance	*1100*	*£473.0*	*0*	*£0.0*	*£473*	100	£43.0	1000	£439.0	£482
Architect	*150*	*£157.5*	*0*	*£0.0*	*£158*	30	£31.5	120	£60.0	£92
Business Analyst	*260*	*£174.2*	*0*	*£0.0*	*£174*	60	£40.2	200	£61.0	£101
Solution Designer	*260*	*£215.8*	*0*	*£0.0*	*£216*	60	£49.8	200	£81.6	£131
Workstream Lead	*80*	*£56.0*	*0*	*£0.0*	*£56*	30	£21.0	50	£26.0	£47
Security Analyst	*140*	*£122.5*	*0*	*£0.0*	*£123*	40	£35.0	100	£28.6	£64
Programme Manager	*380*	*£319.2*	*0*	*£0.0*	*£319*	80	£67.2	300	£156.9	£224
Senior PM	*630*	*£488.3*	*0*	*£0.0*	*£488*	230	£178.3	400	£154.8	£333
Project Manager	*600*	*£420.0*	*0*	*£0.0*	*£420*	200	£140.0	400	£132.8	£273
Data Analytics Snr Developer	*600*	*£522.0*	*0*	*£0.0*	*£522*	200	£174.0	400	£114.4	£288
Technical CoE	*600*	*£408.0*	*0*	*£0.0*	*£408*	200	£136.0	400	£167.2	£303
Shared Services	*120*	*£58.8*	*0*	*£0.0*	*£59*	20	£9.8	100	£35.0	£45
				Total Labour Cost	***£5,772***				**Total Labour Cost**	***£3,856***
									Reduction for using permanent staff	**£1,916**
									Percentage reduction	**33%**

(3) Project 2, preparing for the EDiT recommendations, is still at the early planning stage and is not sufficiently mature. We suggest that SGN reviews this request once it has a clear plan for responding to any future EDiT recommendations. Proposed adjustment -£0.341m.

SGN's Response:

SGN acknowledges Ofgem's position regarding the early stages of planning for the EDiT recommendations, given the stage of develop if we are happy to postpone this work until a future reopener window or until the GD3 funding round when the requirements are more clearly established, and the outcomes can be more clearly defined. We will also look for opportunities to progress under explorative innovation projects through the SIF.

(4) Project 3, preparing for RRP changes, like Project 2 is not of sufficient maturity to allocate consumer funding as there are currently no major changes to the RRP process, and we would expect changes to be handled as a business-as-usual expenditure. Proposed adjustment -£0.341m.

SGN's Response:

SGN acknowledges Ofgem's position regarding RRP changes the level of immaturity at this stage.

However, from the consultations we have attended relating to Future Systems & Network Regulation (FSNR) we are of the view that there is likely to be major changes required e.g. digital twin technology facilitating smart regulation and the balance between the different regulatory architypes being explored, elements of which SGN views as being over and above business-as-usual expenditure due to the significant changes being proposed.

Project 3 was proposed to enable SGN to understand the implications of this change in preparation for GD3. If Ofgem's preference is to postpone this work until requirements are more clearly established, then we can work within those confines.

(5) The submission requests a risk pot of 15.5%. Our initial view is that this is too high and does not align with similar projects. Across RIIO-ET2 determinations we used a capped average risk across projects at 7.5% of our assessed efficient costs, following a review of outturn risk on a number of RIIO-1 projects. We do not believe we have seen sufficient reason to apply a different approach in this case and propose using the same 7.5% here. This 7.5% will be applied to the new total following the adjustments proposed in (1)-(4). Proposed adjustment -£1.274m.

SGN's Response:

The risk amount of 15.5% identified aligns with SGN's internal guidelines on mitigating IT projects whereby hardware and/or software products and resulting services are developed and delivered. They have been calculated based on our previous experience and current assumptions made on scope given what we know now and the following costed risk data included in our original CBA.

Identified Risk to Budget Cost	Probability of Risk	Cost Impact	Probability x Impact	Percentage of Project	Mitigation Actions
Re-Work on opening data pipeline	75%	1,664,850	1,248,638	13.36%	Work closely during early phases of project to ensure design and build have adequate reviews done to minimise rework. Develop / agree fixed price work packages with vendors if applicable
Increase in Hosting Costs	75%	273,333	205,000	2.19%	Review the capacity assumptions when high level design is known and budget capacity model appropriately
* Ability to convert Contract Resource to Permanent Resource during years 2 & 3 to deliver efficiencies	75%	1,915,196	1,436,397	15.36%	Work with recruitment partners in Year 1 and 2 with recruitment campaign.

*The Contract to Permanent Resource risk has been added as a result of recent discussions with Ofgem on the Draft Determination.

The risk percentage applied highlights the number of uncertainty factors associated to changes in the scope around requirements, design and implementation that could transpire as government and industry continue to define its approach. It is for this reason that SGN had assessed it would be prudent to apply this level of contingency.

We do note that Ofgem hasn't rejected the projects themselves and for SGN to meaningfully mature our data operations capability to progress compliance with DBP Guidelines and to deliver user needs, investment in RIIO-GD2 is required.

We have reviewed Ofgem's Re-Opener guidance, which in addition to the delivery of Net-Zero pathways, points to engineering-based investment projects. SGN's digitalisation re-opener does align to Net-Zero, but clearly does not correspond to engineering-based investment.

We have also reviewed the Treasury Green book which provides exacting guidance on optimism bias for all projects. Their recommended risk allowance for Equipment/Development project capital costs is between 10% and 200% as per the table below and attached link. The guidance notes that IT projects fall under this categorisation, whereas projects with a high degree of civil works fall under the two preceding categories. While it may be fair to measure average risk across RIIO determinations at 7.5%, this will be a blend of civil and non-civil projects and therefore does not follow a normal distribution. SGN would ask Ofgem to consider that in the context of HMT guidance for risk, 10% would be a minimum that should be allowed, and the 15.5% previously submitted is clearly at the lower end of the HMT range of 10%-200%. As the 15.5% was calculated on the basis of SGN's experience and methodology, we would ask that this level of contingency be allowed.

Table 1: Recommended Adjustment Ranges

Project Type	Optimism Bias (%)[2]			
	Works Duration		Capital Expenditure	
	Upper	Lower	Upper	Lower
Standard Buildings	4	1	24	2
Non-standard Buildings	39	2	51	4
Standard Civil Engineering	20	1	44	3
Non-standard Civil Engineering	25	3	66	6
Equipment/Development	54	10	200	10
Outsourcing	N/A	N/A	41*	0*

* The optimism bias for outsourcing projects is measured for operating expenditure.

Microsoft Word - GreenBook_optimism_bias.doc (publishing.service.gov.uk)

SGN would therefore ask Ofgem to reconsider the percentage of risk applied, particularly given the need to progress capability and compliance alongside an emergent industry-wide landscape, and the risk associated with sourcing the resources required to deliver the Data Ops capability as outlined in section 4.4 (2) above.

4.5 Overall, we have assessed that the full allowances requested are not efficient and would not represent good value for money for consumers. **Table 1** sets out SGNs proposed costs, our proposed adjustments as set out in **Paragraph 4.4**, and our Draft Determination.

Table 1: Draft Determination

	SGN's Proposal	Proposed adjustments	Draft Determination
Allowances	£9.155m	-£6.576m	£2.579m

4.6 Splitting the total reduction proportionally across each of the three years remaining in the GD2 price control period provides our final Draft Determination position show in **Table 2**.

Table 2 Draft Determination, split by financial year (rounded)

Summary	2023/24	2024/25	2025/26	Total
Total (£m)	0.417	1.042	1.120	2.579

SGN's Response:

As set out above it is our view that the proposed adjustments would undermine the longer term sustainability of the solution being implemented by limiting the focus on upfront critical design work and the availability of resources to rapidly accelerated the delivery of the outcomes targeted in the design and best practice guidelines. It is our view that this will limit the consumer benefits that could be realised and will risk a more cumbersome solution being implemented with higher longer term operational costs.

4.7 Given the licencing requirements for SGN to meet the DBP Guidance, alongside a relatively limited amount of funding, we do not consider it necessary to impose specific Price Control Deliverables for these allowances.

SGN's Response:
SGN notes and agrees with the above.