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The regulatory and commercial framework for strategic water resource solutions– a consultation

Dear [redacted]

We welcome the opportunity to comment on this consultation and for the opportunity to be involved in the development of the commercial and regulatory framework for the SRO projects. It is helpful that RAPID are starting this process early as these strategic projects are vital for securing long-term national water supply resilience for customers. It will be important that there is clarity over the framework as the projects move from the feasibility stage to the delivery stage, to avoid any delays.

The genesis of these SRO projects was as resilience projects that would only be operated in severe drought situations and therefore would only be in operation infrequently. However, over time the assets could form important elements of an increased water trading network. It will be important therefore that the commercial and regulatory framework is clear enough to ensure the projects can be financed, while allowing flexibility for commercial negotiations to allow increased trading, should circumstances permit over time.

In this context our initial view is that a more general bulk supply agreement in a code, allied with a bespoke bulk supply tariff would be appropriate. However, these agreements should be designed to allow further market opening and multiparty trading. The current agreements do not, which could potentially "freeze" the initial trading position between buyers and sellers and lead to sub-optimal outcomes in the long-term. The commercial framework agreement must also grapple with the degree of observability of costs including pricing items that are not normally placed into existing bulk supply tariffs, other than a standard *force majeure* clause for non-delivery.

We are also aware that the agreements will require some standardisation to avoid discrimination between parties to provide the framework to efficiently allocate capacity.

Obtaining finance for these major projects, which are essential to provide customers with water supply resilience, will not be straightforward. These are long-life assets with significant and wide-ranging risks. It will be important therefore that there is a very clear risk allocation.

The correct identification and value of risk is likely to be contentious for all parties. Various models could be explored including the insurance model to provide an alternative market-based mechanism that could be developed into a code. This is also true for pricing the environmental impact. There have been several schemes to tackle the problem that can be explored, for example, the Wessex OBER or the Victoria Environment Commission in Australia, which set an initial allocation of abstraction rights and then market participants had to trade in the water market to sell and buy them with other competing uses.

With regards to financing the projects, we have been thinking about alternative regulatory models for large complex infrastructure projects. Investors will need a good understanding of risk allocation and be appropriately renumerated for the risks they are taking. We have commissioned Economic Insight to consider regulatory models for complex and large infrastructure projects that will address this problem by using existing and well-understood financing models. We will provide you with copy of the report when finalised and publish it on Ofwat's Future Ideas Lab.

The differences in approach between the Welsh and English systems also needs consideration. The Welsh Government use an explicitly public policy-based approach including criteria for "benefiting Welsh people." Clarity on what the Welsh Government will accept as a fair value for water coming out of Wales is important, as this is a key element in a number of potential SRO schemes.

We are supportive of the overall contents of the consultation, and we are keen to continue to be actively involved in the associated workgroups as they evolve to tackle the commercial issues associated with the development of the SROs. It is important to give companies as much freedom as possible to develop new commercial trading arrangements, balanced with proportionate regulatory oversight, to have the greatest chance for workable solutions to emerge.

Our detailed comments on the specific consultation questions are presented in Annex 1. We welcome further discussion on this consultation. If you have any queries on the response, please do not hesitate to contact [redacted] or me.

Best regards,

[redacted]

Director of Strategy and Regulatory Affairs

Annex 1

This annex provides our comments on the specific questions in the consultation.

Q 2.1 Planning for long term outcomes/ Best value/aligning incentives

Are there other barriers and challenges to best value planning that have not already been identified in the May consultation on PR24 or that apply differently to the types of solutions being considered by RAPID? What needs to be done to address these issues?

We broadly agree with the issues identified in the consultation, which reflects discussion in the quarterly meetings and workgroups.

In our view the key barrier to conclusively demonstrating best value is lack of clarity over the environmental aspects, as highlighted in Table 1 (p24 of the consultation) which could substantially change the economics of projects and, when built, the economics of sourcing water resources.

Q 2.2 Development activities /Other regulatory barriers to investability

Should the option for a future gated process for new strategic resource solutions be kept open at this stage? If additional regulatory intervention is required, which is the preferred option proposed?

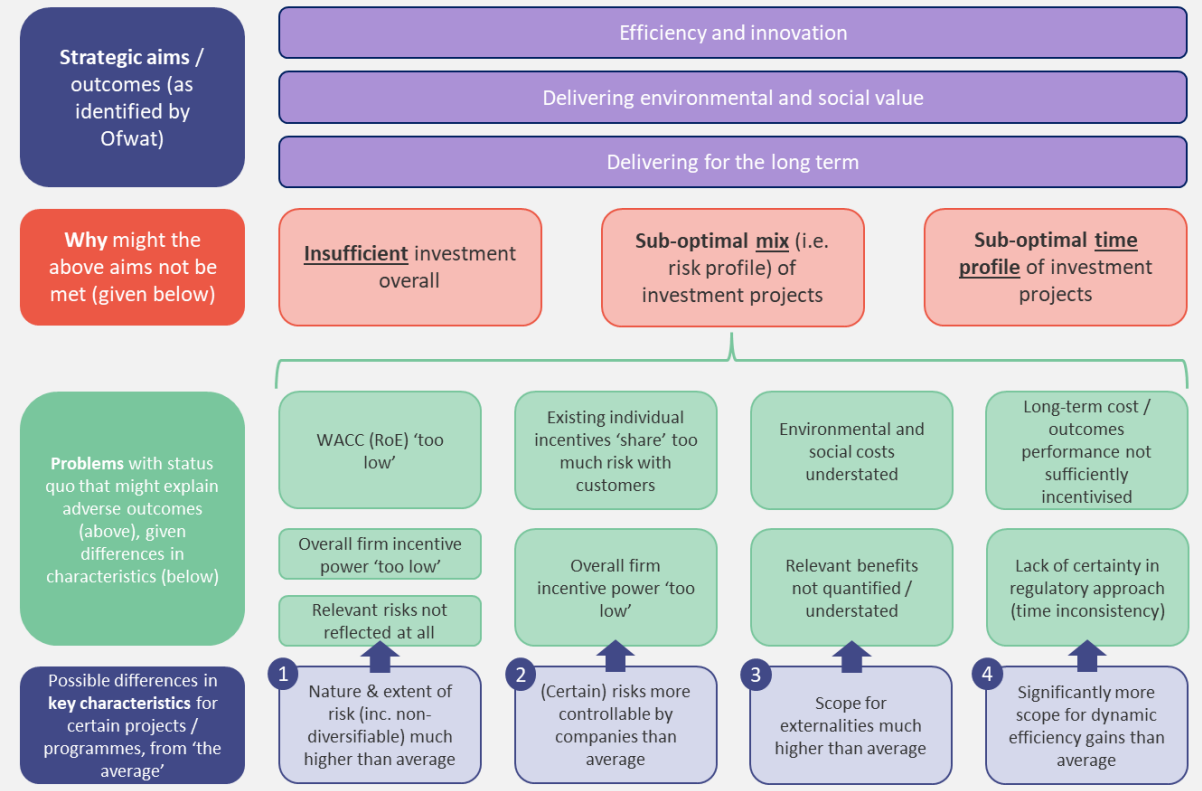
We are comfortable with continuing the gated process to demonstrate that a project is strategic and commercially and technically possible. We would suggest three tweaks:

1. Allow different timescales, reflecting the relative complexity of each project including planning, engineering (e.g. membrane availability for reuse) and size.
2. Each gate should agree the funding for the next stage.
3. It would be possible to collapse gate 1 and 2 for new projects going forward into a single stage and possibly merge later stages too, although this may only become apparent when the existing projects are further advanced.

Are there other approaches for procurement we should consider, or other pros and cons? Do you prefer one approach and if so what and why?

With new regulatory models and highly complex risk sharing there are significant financing challenges that should not be underestimated. We have been considering options for the regulation of large complex projects and commissioned Economic Insight to consider the issue. Figure 1 below shows the potential impact of projects with significantly different characteristics from average projects on the achievement of Ofwat's strategic aims for PR24.

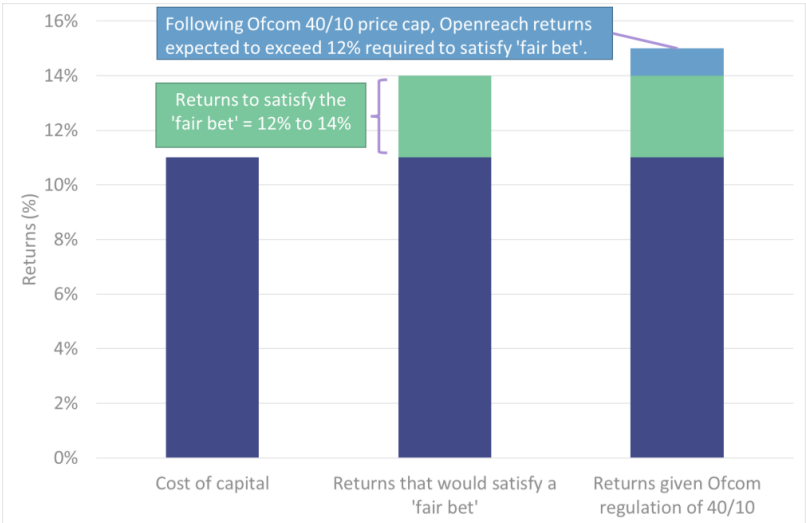
Figure 1 The case for a differentiated approach



Source: Regulatory Options for Complex Projects for Thames Water, Economic Insight 2022

This suggests a regulatory model following the design of Ofcom's 'fair bet' approach to fibre roll-out, which could be applicable as that had similar characteristics of SRO projects as described in the consultation (para 2.4.1). Given the risk, Ofwat would allow returns above (or below) the WACC, so long as they lie within its view of a 'fair bet'.

Figure 2 Fair Bet in practice



Source: 'Wholesale Local Access Market Review: Statement: Annexes 1-9'. Ofcom (March 2018).

What is your view on the policy options set out (or any others) to incentivise water trading?

The existing trading arrangements appear only to envisage a bilateral trade with no interconnection or storage charges. This indicates that at best the incentive could apply to a simple transfer project only. For anything more complex we believe the incentive requires amendment. We are supportive of the measures taken by Ofwat for the Havant Thicket reservoir although we are concerned that by agreeing a long-term contract, there is a risk that capacity is effectively "sterilised" and cannot be traded at some future point when market conditions may encourage multilateral trading, as happened, for example, in European gas contracting before liberalisation.

We are interested in exploring the "new approach" to incentivise trading hinted at by the consultation (page 20). The advantages outlined of using a one-off calculation seem persuasive. We would like to add another. Without protection, the seller could exercise market power given the scope for distressed purchases. The second suggestion for the "new approach" to link ongoing optimisation as an adjustment in the price control might be harder to develop. It would need to balance respecifying prices with long term certainty and could be an interesting option for reuse projects.

NERA's suggestion is more economically "purist", but this depends on costing the alternatives to the trade and determining the mark-up. This could lead to some high margins if there are significant differences between alternative sources (i.e. inframarginal rents).

How should we incentivise companies to deliver the optimum solutions whilst securing investment and in particular on how they support best value outcomes, including any differences for alternative procurement models or multi-sector projects?

We suggest that a light touch regulatory regime is an excellent solution to many of the allocation of risk and return issues.

Best value will be assessed over an extended timeframe for what might be an option competing against other assets or even demand reduction incentives. This highlights the importance of optimisation aspects of the regional planning processes.

Another model that could be considered in the development of commercial arrangements is the insurance market model. Water companies could be required to have not only a certain level of water supply contracted but also a certain level of "insurance". This would be delivered by means of capacity payments. In part, it would also reveal different ways of providing that insurance e.g. compensation for lack of supply. This should mean water companies have an efficient level of capacity provided but not the level of capacity that would remove all supply risk.

What incentives should be applied to assets where there may be low utilisation and how should stranding risk of strategic water resource options be managed?

The fundamental basis of most of the SRO projects is to provide resilience to extreme drought conditions. They will therefore be rarely used by design and exist primarily as an option or resilience measure. It would therefore be incorrect to consider low utilisation as being inefficient or a cause to think the asset is stranded. There are numerous examples of this in other sectors and countries. This includes gas storage requirements for energy suppliers in France, market for standing reserve/ SQSS standards for generators and in networks the Grid N-1 standard in the UK. There are also infrequently utilised assets. For example, some electricity generation assets may well only be used for the three winter months of the year. Grid can contract for reserve though

this energy is rarely called upon. As can be seen there are circumstances of low utilisation across regulated utility networks.

It therefore seems a good fit with the notion of insurance that prevents the catastrophic consequences of not having the asset and to see the charges in the same way as an annual fixed premium.

Does the pathway for resolution of environmental barriers meet the requirements of stakeholders and are there other environmental barriers that need to be considered?

The environmental barriers are the central risk to the projects as described in Table 1 (p24) of the consultation. An assessment on the environmental impact of the projects moves within a national and not regional space.

We note that two of the issues will be resolved in December 2022 (reversing water and augmentation) after the submission deadline for Gate 2. This will have an impact on the level of detail that can be provided in the Gate 2 submission over these issues.

Q2.3 Construction/ Risk allocation between partners

What is the best approach for ensuring regulatory oversight for RAPID solutions beyond gate 5 into the delivery phase?

Beyond Gate 5 we would expect Ofwat to be the prime regulator providing regulatory oversight to the extent it is required – for example Ofwat have a role is various stages of DPC delivery - with clarity between its role and any remaining residual role for RAPID. Any ambiguity between the roles of Ofwat and RAPID could adversely affect investor sentiment and increase prices for customers. We would support an option that is more minimal version of option 3 - RAPID light involvement because:

- We would like RAPID to provide assurance to Ofwat to ease the project through the process between stages to smooth the path to funding.
- We think at this point the internal governance processes, legal framework and investor due diligence provides ample protections for cost overruns or other project issues.

Table 1 Degree of RAPID involvement beyond Gate 5

Option	Comment
Minimal involvement	This does not mean there is no involvement. It assumes that the projects fall under normal price control supervision by Ofwat not RAPID. It assumes that if major issues were identified with the project the regulator would be in a position to intervene successfully e.g. corporate failure of CAP. This option links to our ideas about fair bet where any excess return on the WACC range is passed back to consumers.
Enhanced coordination	This will only work if the regulator has the tools to correct what it identifies as issues. We note that the projects themselves will have their own governance structures and financial controls in place as a matter of company law and general requirements. Investors are highly diligent in this area. Joint regulatory oversight has some advantages in that it can prevent escalation of disputes. We need to be clear what extra element of supervision can be added at this point
RAPID light	Coordination between regulators is important during the development of the project. Not all regulatory solutions will require the same amount of oversight given their relative complexity. We would not want regulator issues creeping up during construction, they should have been addressed during the planning stages?

What are the types of incentive and regulation that would result in appropriate allocation of risk between the parties and ensure the right trade-offs are made?

Throughout the process we have assumed that the sellers have an ability to commit to the contract as there is fundamentally a surplus in the region. Equally we assume that there is a fundamental deficit for the buyers. It is this that will ultimately reveal incentives and allocate risk. RAPID could help players in what will inevitably be an immature market to understand the different dimensions of risk in their contractual arrangements including such issues as quantum, quality and firmness. This should help reduce transaction costs if the regulator provided a model contract (which could be the BSA) and some guidance on pricing. RAPID might also help – again acknowledging the immaturity of the market – if the regulator were to help identify and share learning as the market matures. But it would be critically important for the regulator to let the market play out.

1. *For construction and development stage of the SRO*

The allocation of risk must be linked to the ability to both control and the ability to bear it. If a regulator allocates a risk to investors that those investors cannot effectively manage this will result in a premium on the WACC with no corresponding improvement in the efficiency of management of that risk, so customers pay more and obtain no benefit. This could mean there may be some risks better borne by customers rather than companies and their investors.

However, using DPC will create a CAP that may well bear contractual risks with the appointee for construction, operation, maintenance, and to some extent financing. In a legal sense this may be clearly defined but the reality is that the appointee and its customers are taking the underlying risk even if this is not directly reflected in any contract.

2. *For the trading of water*

The development of a bulk supply agreement (BSA) with a regulated bulk supply tariff (BST) within it, is likely to provide one means of identifying the underlying incentives to trade. This may not solve the issues associated with correctly identifying cost formation but is a good start. It will also focus parties on reducing total risk as much as allocating it between parties. To identify incentives to trade you need market players to be able to offer water for sale at a price and to offer to buy water at a price.

We however are concerned that the allocation of risk may reflect the market power of the seller and not the ability to absorb risk.

Regulation based on sound principles is most likely to fairly allocate risk in the first instance. It is also possible from RAPID's perspective to assess the welfare functions of the trades as well as the standard assessment of costs that are used to approve a bulk supply tariff.

Q 2.4 Service delivery / Coordinated Operations

What is your view on the areas identified for standardisation of contracts? Are there any other areas that should be considered?

In theory, standardised contracts are desirable, but they run the risk of being generalised and require annexes for individual projects. A quick review of the degree of standardisation in utility markets for monopoly asset owners (Table 2 below) and buyers and sellers (Table 3 below) shows many aspects are standardised but there are significant aspects of contracts that are bespoke to

the deal. We note that the relationship between standardisation and the ability to make effective solution relates to the numbers of parties involved.

Another aspect of this is that the contents of the contracts are publicly available in many cases for example contracts with gas or electricity transmission. Equally the more bespoke a contract is with fewer parties the more likely the contracts are to be confidential. RAPID may want to reflect on this trade-off.

Our review supports the key areas where standardisation may be appropriate set out in the consultation.

Table 2 Degree of standardisation in contracts with asset owner

Contract type	Solution to what problem	Where could it be effective	Known faults	Examples
Rental Agreement *Standard contract*	Running of the asset in practice. Extensive case law covering many eventualities	In cases where the parties use a third party to build the asset but want to have some control of everyday operations	Sets up incentive structure to think about the value of the asset to the owner, not necessarily best social welfare outcome	Some CCGT power station equipment
Take or pay *standard contract* but has also been used for *bespoke deals*	Solves the commitment problem	Good for single buyer and seller where the seller pays for the asset	Will exclude any third parties using the service. Low usage may be an issue?	European gas before liberalisation
Price control (BAU) No contract involved costs are assessed and transportation charges set	Solves transaction, transition costs, certainty. Could easily be adapted to contract (similar to bio resources issues?)	Could be useful to solve uncertainty of revenue issues associated with infrequently utilised assets	Will never fully replicate the market outcome. Has been criticised from all sides too generous (consumers) too hard (regulated), too complex?	All UK's energy monopoly networks, Airports, railways…
Negotiated contracts under a reg framework *Bespoke contract*	Solves commercial issues between parties	Useful in cases where there are numerous projects	Limited shelf life in dynamic markets/ overtaken by events	Arrangements of bulk supply tariff Electricity, water

Table 3 Degree of standardisation in contracts with buyers and sellers

Contract type	Solution to what problem	Where could it be effective	Known faults	Example
Bulk supply tariff *Standard* and contract for open all participants	Solves commitment problem by negotiating volume (mostly)	Provides a stable price Well understood by contracting parties and investors	Not flexible Will reflect market power of buyer or seller Locks in charging methodology	UK Electricity CEGB contract to 1989
Addition one Take or pay contract can be bespoke or general	Solves commitment problem, provides stable revenue for seller	Allocation of seasonal storage, contracted volumes of water where there are two or more buyers/ suppliers	Will reflect market power of buyer or seller Locks in charging methodology	Radio spectrum, former Grid SO function, EU capacity markets, offshore transmission
Addition two Take or pay with destination clauses	Solves system operation issues	In cases where assets are shared defines capacity requirement	Will prevent resale/ secondary markets	Gas contracts USSR/ West Germany

Do you agree with the issues and options set out for the treatment of trades in future regulatory periods?

Treatment of trading revenues within the price control

The pricing of the trades relates to the cost base of the seller and its stability. This should drive the degree of regulatory intervention. We would want these trades to be calculated in a BST within a more general BSA. In this scenario we do not think the parties would qualify for extra scrutiny because they are already covered. The BST could be altered within the BSA framework at a point when changes in costs were triggered.

Associated works and the SRO project

It will be essential that expenditure by the water company that has a bearing on the project, while not being part of it, will be approved through the normal price review processes.

Do you agree with the options set out for charges associated with bulk supply agreements? Are there any other options that should be considered?

We fully support the use of bulk supply agreements and see the need for development work to produce the heads of terms for such an agreement across the different project types. The addition of a specific bulk supply tariff, within the agreement between parties, would ensure that the prices are fair for water companies and consumers.

Table 4 - Our views on the options presented in the consultation.

Option	Problem solved	Drawback
Fixed and volumetric charges	By using fixed and variable charges activities generating costs are clearly covered. May act as an incentive for sharpening corporate strategy as costs are linked to activity. Costs of infrastructure are covered with a high degree of certainty	Some variable costs may also be incurred when the asset is not in flow mode
Charges calculated with reference to companies' published wholesale charges	Would seem to identify costs for what is conceptually another network and no different from a NAV	There are extra factors in play not relevant to NAVs such as losses that could be substantial. Issues associated with indirect benefit of connection if the seller's high pressure network (that benefits all) is upgraded to facilitate the trade but also helps resilience in general.
Charges set to reflect long run average incremental costs	Economically robust solution for pricing. Averaging addresses the issue of lumpy costs.	Will be difficult to isolate costs. Since incremental costs are highly stepped/ lumpy the average incremental costs will be high. These costs recovered when for much of the time the short run incremental costs will be zero.
Requirements take the form of principles	Principles allow flexibility to set charges and can be adjusted to specific contracts if necessary	In practice will share characteristics of other options. May be hard to demonstrate compliance.

Do you agree with our next steps for the development of a fair shares approach for the allocation of water during drought and operational events?

We agree with the principles outlined on page 37. The fair share approach has been used explicitly in gas or implicitly in electricity and in other utilities when systems are under stress. Many of the issues in the fair share discussion relate to the scenarios and drivers behind loss of supply. The drivers will have material impact on how the shares would be allocated in practice:

- Asset failure in the transfer
- Asset failure buyer/ seller
- Drought impacting both water companies but leaving the transfer intact (the common assumption)

Do you agree with the proposed next steps for co-ordinated operations? Are there specific barriers to regional co-ordination that should be considered?

We agree with the next steps for coordinated activities. The content on table 1 (page 25 of the consultation) is not an insubstantial list and will need significant effort given the suggested timescales.

How significantly might the optimal use of assets vary over their lifetime?

At this point in time, it is unknowable how they would vary over the asset's lifetime. For a strategic asset the rate of use the Thames Tidal Barrier could be an illustrative case study. Between 1983 and 1989 there were five closures of the barrier in total and with two years of no closures at all. In the last six years there were 28 closures in total. It was originally envisaged that it would close around three times a year. We can make some generalisations that are might hold:

- The rate of usage was not linear or followed a particular pattern but punctuated in stages. The rate of usage was stable for seven years, then there were a series of high usage (1993-96) a small period of stability then a much high rate of utilisation (2004- 2010) to the high levels we see now (2017-2022).
- The investment in the asset would have been viewed differently as for seven years of its life it looked like it would be called upon infrequently and would even have been potentially seen as a waste of money until the mid-1990's. It may eventually have to be replaced by a larger barrier
- Its effectiveness in reducing floods in the long term is *gradually* reduced

Similarly, it is possible that over time these initial SRO projects may have increased usage with other assets becoming the infrequently used resilience assets.

Over what timescale is it realistic to see a fully integrated water trading system at a regional level, with dozens of trades? How should these developments best be managed?

We do not know. We see the potential drivers for precipitating large scale trading as being:

- Changes in abstraction rights particularly in the South East,
- The impact of technology and market development that reduces the costs of water transportation. For example, solar production is often accompanied by hot weather and can be stored in batteries but there are still surpluses (especially when local distribution networks start exporting to the grid) demand.
- Changes in demand for water storage with multiple companies wanting to inject and withdraw water. This would potentially lead to netting off positions and balancing individual company positions. In this model the storage asset would act as hub for buyers and sellers.

If there is widespread trading, then the system we are developing now might not be able to cope with the complexity. This would *ultimately* imply:

- Commoditisation of water. In this case a volume of water at a specific delivery point time and price would be brought to a market for certain standard contracts This could be for a seasonal product e.g., summer 2025.
- Auctions of infrastructure capacity.
- Development of futures market
- Abstraction trading

We would suggest that the regulatory design should were possible assume multiple parties trading even if it is not the case now.

Are there any other circumstances where destination clauses would be appropriate?

Only one. If the water seller must transport water through a network not owned by the buyer. This changes the incentive structures on the buyer to route the water through a network that will not potentially use the water for itself but could do (as has happened in gas transportation between Russia and Germany via Ukraine).

Q 3. Next steps

We welcome views on our proposed next steps, including additional activities that we should be undertaking

There are some outstanding issues that RAPID and the working groups should address. There are at least seven commercial issues that will become important that should be developed as a matter of urgency:

1. Market power between buyer and seller
2. Treatment of losses in contracts
3. Calculation of transit fees
4. Resale pricing
5. Capacity rights and allocation for multiple party trading
6. What is the product we are buying in the context of abstraction
7. System operation and incentives mechanisms