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Customer Requirements within RIIO-T1 Period

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Background

- As highlighted future development of the NTS via uncertainty mechanism may be triggered by customer requirements.
- Following discussion with customers/feedback received through RIIO-T1 Stakeholder Engagement process we wrote out to stakeholders asking for views on:
  - How use of the network might change
  - How these changes should influence the design and operation of the gas transmission network during RIIO-T1 and beyond
  - Whether there is scope for new products that may meet future within-day requirements for flexibility

Agenda

- Presentation will look at:
  - responses to open letter issued December 2011
  - Scope for new Products:
    - NTS Exit – DNOs
    - NTS Exit – Others e.g. Direct Connects
    - NTS Entry
  - Issues
  - Way Forward

The context – types of products, access to and issues

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- We have talked previously about “Rules, Tools & Assets” concentrating primarily on “Asset”, here we intend to focus on “Tools”.
- We intend to go into more detail on the following as these are the areas that our customers have been talking to us about:
  - DN - NTS Exit (Flexibility) Capacity & Pressures
  - Other NTS Exit connections - Ramp Rates and notice periods detailed in the NEXA plus the Frequency Response service in UNC TPD J5.8
  - Entry Connections - Ramp Rates and notice periods

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Open Letter issued December 2011

Key messages from customers

- Full responses are contained within Appendix 1
- This is an issue that should be considered in consultation with the industry and the Transmission Workgroup is the correct forum.
- Existing governance arrangements are most transparent means of developing new products which should be customer driven
- The current processes are on the whole sufficient although there would be merit in looking at the provision of information/monitoring of OPNs and flex usage
- The case for new investment/products/services has yet to be made although wind intermittency / changes to electricity balancing market / rigorous application of NEXA terms may require this to be re-examined

Scope for new Products

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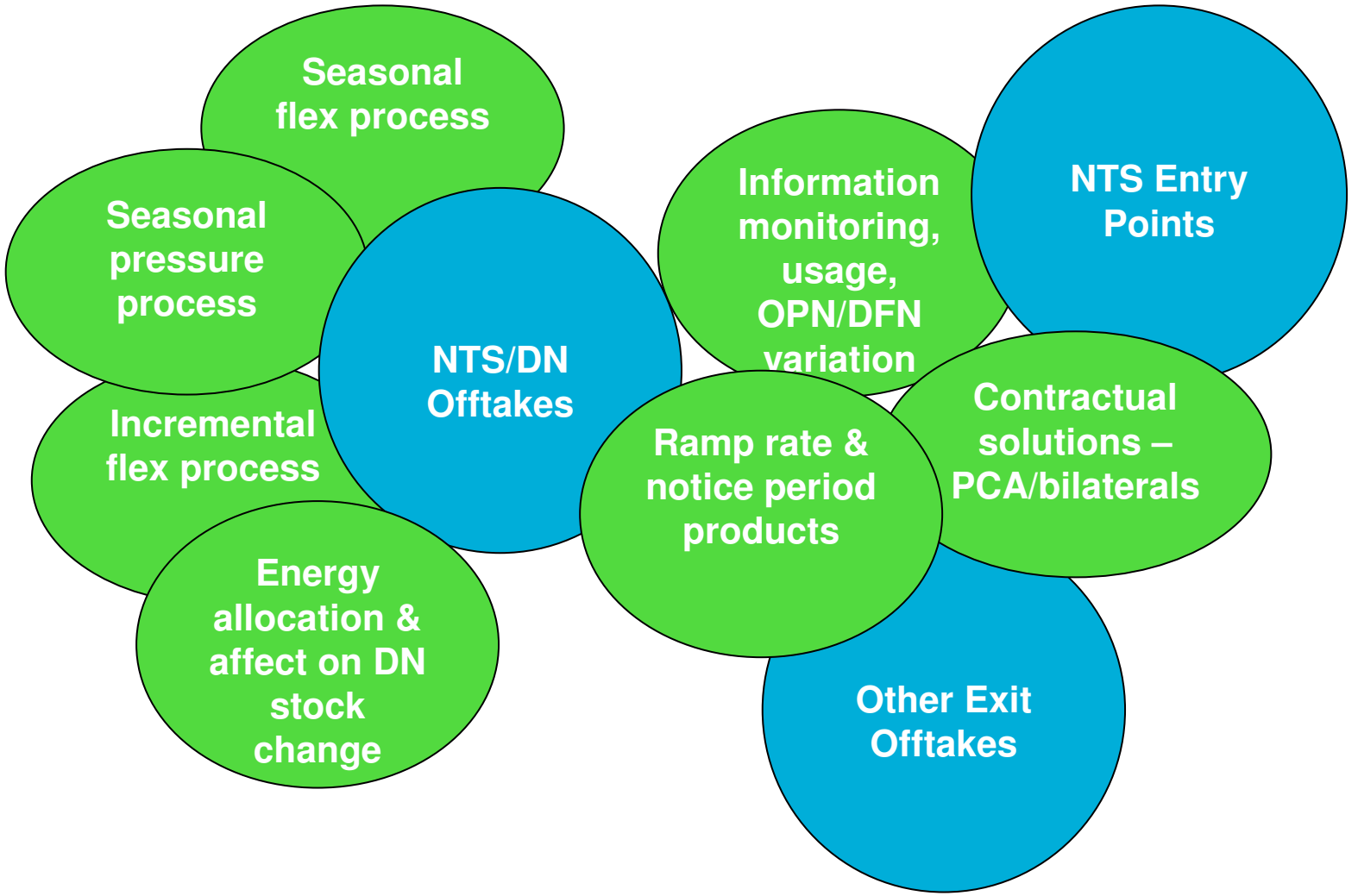
Existing Products

- DN Offtakes – currently access flex product via OCS & OPN processes
- Other Exit Offtakes – currently access “flex” via contract terms & flow variations & notify via OPN process
- NTS Entry Points currently access flex via contract terms & DFN flow variations
- We have been approached by some customers indicating that these tools alone are not sufficient
- Concern has also been raised that issues would arise if terms of existing contracts are enforced

Scope for new products



NTS Exit - DNOs

Current UNC Flex & Pressure Processes

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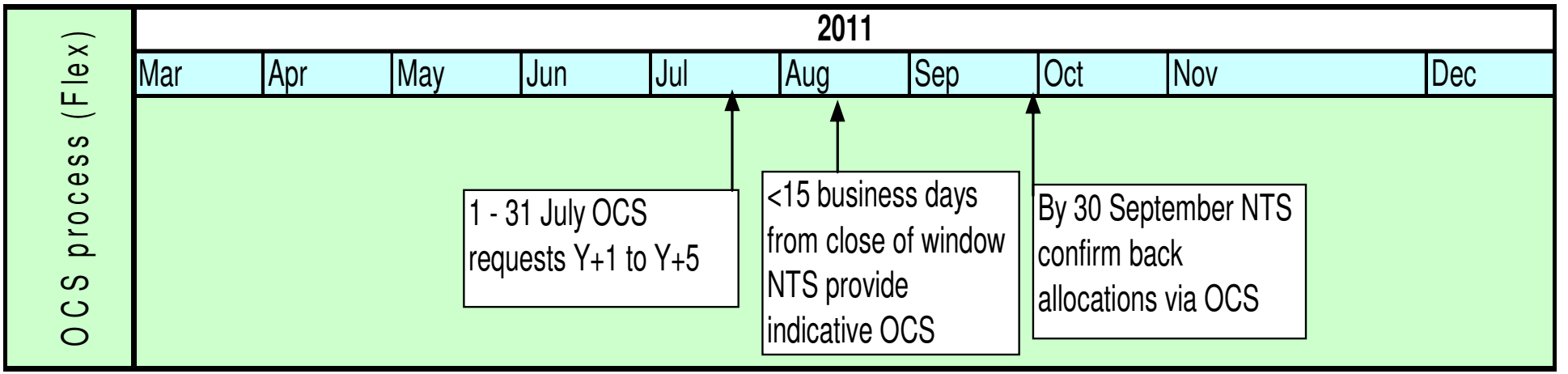

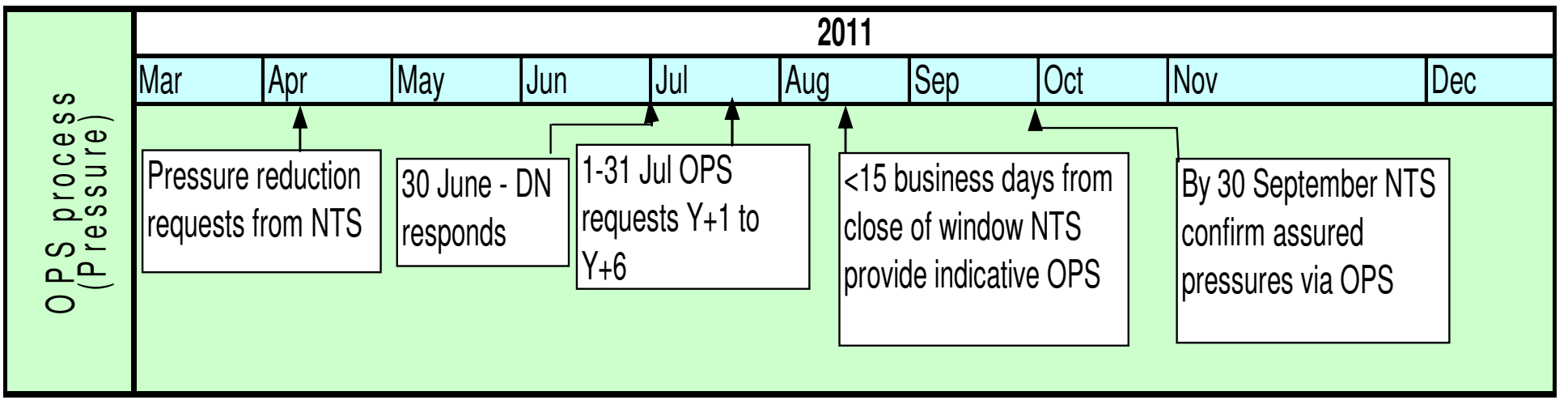

Issues Identified

- NTS Exit (Flexibility) Capacity – No process to establish trade-off between NTS and DN costs where a request for additional flex cannot be met by the NTS.
  - If the NTS were to invest would need to consider formal signals, user commitment, charging, funding, UIOLI.
- Assured Offtake Pressures – No process to establish trade-off between NTS and DN costs where a request for additional pressures cannot be met by the NTS.
  - If the NTS were to invest would need to consider formal signals, user commitment, charging, funding etc. Equally applies to the DN for pressure reduction requests.
- No consideration of requirements at different demand levels

RIIO business plan process used for July 2011 (1)

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- As part of the RIIO business plans:
  - DNs submit proposals for new investment on their networks, proposals to be supported by reference to alternatives considered
  - Where NTS Exit (Flexibility) Capacity is an alternative to DN investment, information concerning the availability of this capacity provided by NTS including the cost implications to the NTS
- Pressure also considered in the same way as NTS Exit (Flexibility) Capacity with business plans to contain similar level of information as outlined above
- NTS determined offtake specific information (flat, flex and pressure) needed from DNs to carry out analysis over the price control period at a variety of demand levels
- Agreed the modelling assumptions underpinning the analysis up front with all involved (including Ofgem)
- Constant dialogue between the parties during the process due to the interactivity of the requests

RIIO business plan process used for July 2011 (2)

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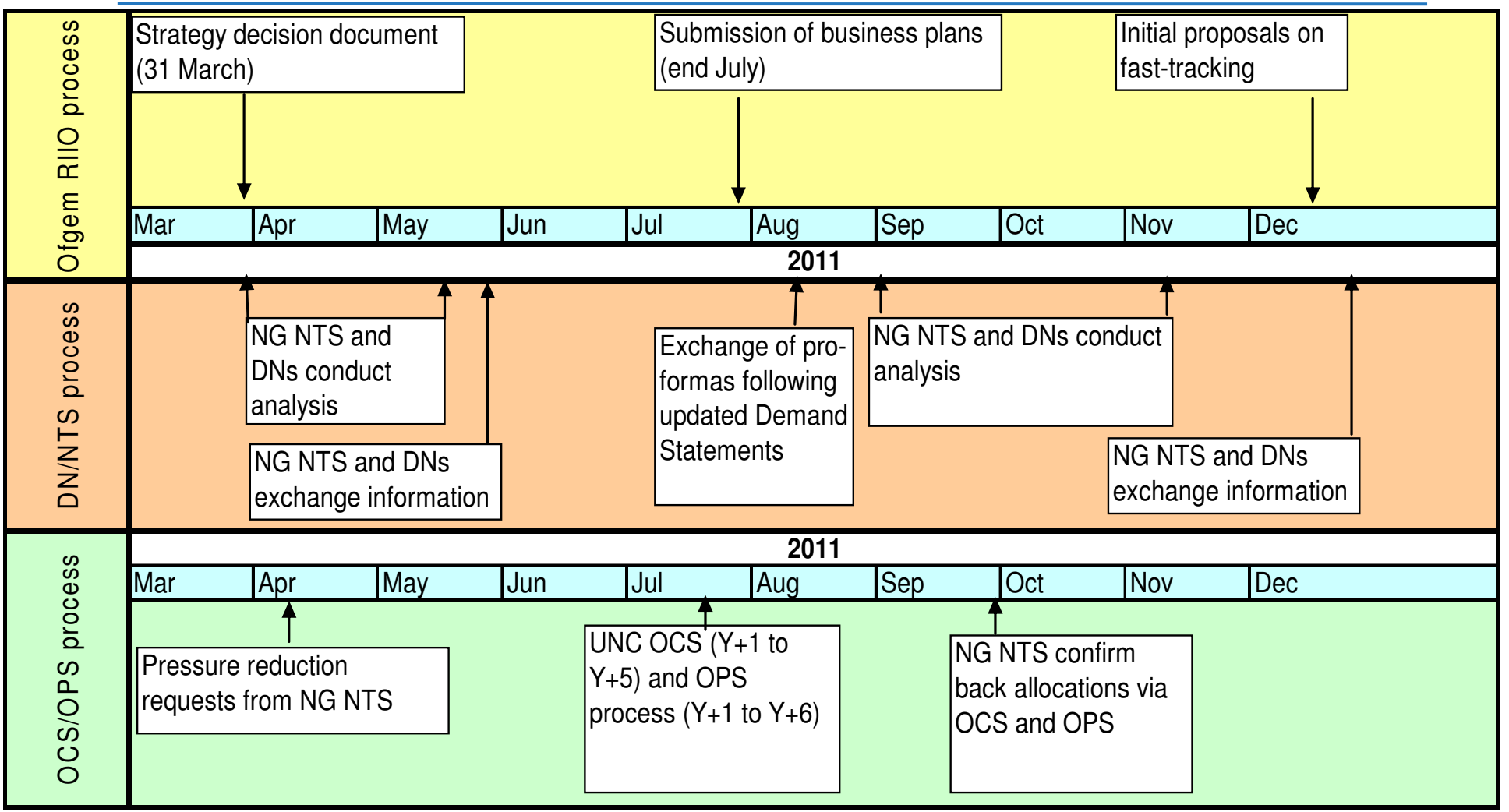

Results (1)

- Collaborative nature of process resulted in Flat/Flex/Pressure position that did not require NTS to invest for flex or the DNOs to invest for reduced pressures.
  - The NTS RIIO submission contained investment to maintain our 1:20 obligation in Scotland. Due to flex and pressures agreed as part of the NTS/DN process the associated CAPEX has been reduced.
- NTS view is that changes to the UNC OCS/OPS processes may still be required.

Results (2)

- May necessitate:
  - changes to the charging methodology
  - discussion of appropriate funding for the new arrangements:
    - Revenue Driver;
    - Capex allowance; and/or
    - Incremental flex incentive.

NTS Exit - DCs

Issues (1)

- The NTS has been designed to meet steady flows at entry and exit, where we can we meet requests for variable flows.
  - Assume a steady rate at all other exit points, but undertake ramp rate studies which ensure safe design of plant.
- Possibility that ramp rates are manageable in the system assuming that notice periods are agreed and observed & vice versa.
- Some customers have indicated that enforcing such contractual requirements would in itself be an issue
- High levels of profiling on NTS Entry / DN flex & ramp rates / notice periods not being adhered to, impacts upon National Grid NTS's ability and confidence to reconfigure the network in operational timescales, for large load / locational changes

Issues (2)

- Rapidly changing conditions on the NTS can create a problem, limiting factor is often the notice period
  - where a high ramp rate/short notice period is requested other options e.g. the ability of compressors to ramp up, may come into play / can affect neighbouring offtakes.
- Electricity Short Term Operating Reserve (STOR) contracts may require Power Stations to generate extra electricity at less than 1 hour notice (unless Frequency Response plant). Minimum NEXA notice period for a change is 1 hour
- Wind Intermittency - CCGTs expected to provide the backfill when there are unexpected reductions in wind generation will present new operational challenges for the NTS. May impact upon linepack and NTS ability to meet obligated Exit pressures.

Issues (3)

- OPN Information – NTS could be reliant on the timeliness and quality of the information provided
- Issues could be resolved via a number of changes e.g.
  - Reasonable endeavours measure
  - Financial incentives/penalties around OPN Information provision/monitoring
  - Enhanced Contractualisation of ramp rates and notice periods via NEXAs/Bi-laterals

Potential Process e.g. we need to consider…

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- Use of Contracts - NEXA, SCA etc / Bi-lateral agreements with individual sites/Users:
  - Standard ramp rates and notice periods unless request shorter notice periods/higher ramp rates
  - NTS analysis to identify appropriate; commercial tools, operational solution, investment.
  - Lead times, for development of products and/or delivery of investment (taking account of the Planning Act)
  - If NTS investment is the most efficient outcome a number of issues need to be resolved:
    - User Commitment
    - Structure of charging

Potential Process continued

- Identify the revenue streams and feeds i.e. may require revenue drivers / licence changes.
- Phased process e.g. Users fund planning act analysis but can pull out up to a certain point, if they book design work costs refunded. Issue may be interactions between/impact on different Users' requests and other NTS sites in that part of the network.

- Socialise vs targeted funding
- User books but others access
- Opportunity for all

NTS Entry Points

Issues (1)

- Consistent with our obligation to maintain an economic and efficient system and due to customer request:
  - looking at the potential for new/enhanced products to provide certainty of Ramp Rates/Notice Periods
- Certainty in contract clauses, to:
  - provide assurance that not disadvantaged compared to other operators
  - ensure sufficient ramp rates to underpin investment case/view of future market needs.

Issues (2)

- Requires discussion on:
  - industry-wide need for products and, whether the costs should be targeted
  - Tools available to NTS to manage their operation
  - Financial incentives around DFN Information provision/monitoring

Aims (1)

- Would require Industry to:
  - establish process leading to the opportunity to contractualise certainty on entry ramp rates/notice periods
  - provide tools to support the operation of the system
  - establish appropriate framework to manage the operation of new products e.g.
    - tools required to manage the within day operational risk
  - achieve via process that avoids undue discrimination
  - establish principles of funding e.g. potential for socialisation.

Aims

- NG view
  - Transparent process
  - suitable analysis to back up any approval decision
  - clarity on the differentiation between what was social benefit and what was over and above this for any single project
  - how User booking and non utilisation is managed?
  - impact on others where previously NTS have been able to satisfy their requirements.
  - accommodate Developers and Users
  - appropriate within day constraint management tools
  - incentives upon both NTS and Users

Potential Process e.g. we need to consider…

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- Transmission Workgroup:
  - begin dialogue between NTS/Industry on entry ramp rates to develop process to:
    - establish options & tools available (including investment options)
    - understand required levels of flexibility, certainty around this figure and mitigations
  - reach agreement on outputs required:
    - tools / required capability / cost to deliver / social vs specific benefits

Issues for Consideration 1

- Need to make the case for new products, is there an issue?
- If no products are developed and they are required in the future, potentially there would be lead times to:
  - develop and implement contractual/commercial framework
  - system solution / investment
- How will products be defined and would Shippers want access to the same product as DNs?
- Will “holding” DFOs/Shippers to their ramp rates and notice periods via DFN/OPN rejection cause issues?

Issues for Consideration (2)

- Would Shippers want to be able to signal and pay for different ramp rates and notice periods?
- As a minimum changes to the UNC are likely to take 9-12 months early discussion of new Products will help establish whether system changes are required
- Charging will need to be considered
- Costs may manifest themselves in the electricity regime
- Additional complexity of regime and its operation
- Relationship between NTS Exit (Flexibility) Capacity, Pressures, Ramp Rates/Notice Periods and Network Flex

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Issues for Consideration 3

- Incentives on Users & compensation arrangements where NTS can't provide to the levels we have sold
- Bespoke solutions may impact NTS's ability to meet other Users' existing requirements.
- Licence changes may be required
- Funding of investments/changes

Next Steps

NTS view

- A proactive customer driven system operator will listen to its customers; based on what a number of our customers are telling us it seems prudent to initiate debate on new products/tools now
- Mod 407 and DN incremental flex and pressure requirement discussions to be discussed via OAD workgroup
- NTS Entry ramp rate and notice period bi-lateral discussions ongoing
- Look at options for further transparency/information provision around OPNs/DFNs
- Arrange further Transmission Workgroups?

Appendix 1 – Open Letter Responses

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Open Letter issued December 2011

National Grid NTS invited views on the following:

Q1. Do you agree we should be considering this issue in more detail? Do you agree the Transmission Workgroup the best forum in which to progress this?

Q2. Do the current processes provide your business with sufficient variability within day to manage future market trends?

Q3. Do the existing processes require refinement and potentially should new products/services be considered?

Q4. Are current ramp rate/notice period processes appropriate? If not, what sort of parameters would better meet your needs.

Q5. What additional services would you like to see developed?

Q6. Are there other approaches that we should be considering?

Q7. How would these services best be indicated to and met by National Grid NTS i.e. via potentially new processes, products, bi-lateral contractual terms etc.

Q1.Do you consider we should be considering this issue in more detail? Is the Transmission Workgroup best forum to progress?

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User A	Yes we agree that this issue should be considered in consultation with the industry. We also agree that the Transmission Workgroup is the appropriate audience with which to hold these discussions but note that the agenda for this meeting is generally fairly full and its remit is closely focussed on more immediate UNC issues so that a separate meeting or subgroup might be necessary if the issues are to be considered in detail over a period of time.
User B	Agree this issue should be discussed & monitored in more detail, the Transmission Workgroup would be a suitable forum.
User C	Yes. In fact, it is not clear how the current set of NTS capacity products (commercial measures) can support the level of flexibility forecast for the RIIO period. Therefore, it would be very welcome if NGG provide not only a view on the impact of wind intermittency on network flows but also some details on how current capacity products are (or not) suitable to facilitate shippers taking short-term commercial decisions; in particular, further clarity is needed on the release methodology of the Enduring Exit Flexibility Capacity product (and the eventual increase in interruptions due to substitution of baseline at the same point); Yes. We suggest organising an ad-hoc meeting of the UNC Tx workgroup to discuss these issues alone.
User D	This is a potentially complex area, and there is a need for more clarity (detail) as to what is potentially being considered. As discussed at the Transmission Workgroup (TW) on 5 January, specially convened TW meetings to assess these matters seems the most appropriate way forward.

Q2.Do the current processes provide your business with sufficient variability within day to manage future market trends?

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User A	No problems with the current arrangements have been brought to our attention. No specific problems are anticipated in the medium term
User B	We believe the UNC currently provides sufficient and adequate means to manage within day variability through OPN renominations. We do not believe that the case has been made that the network will be unable to manage future market operation resulting from variable entry flow or CCGT offtake to manage wind intermittency.
User C	In regard of entry capacity, we believe that current booking arrangements provide shippers the necessary flexibility to implement short-term commercial decisions; on the contrary, further clarity should be provided around the release of Exit interruptible products in the Enduring regime; also, a sustainable methodology should guarantee greater stability over actual capacity charges, minimising the difference with indicative ones.
User D	I'm not certain what is meant by future market trends. Our view is that the UNC allows for proposals to be raised which satisfy any commercial or regulatory based need. If there is insufficient variability, it is a safe assumption the party needing it would have raised a UNC proposal to seek it. If they haven't as yet, they will when it is deemed important enough to them.

Q3.Do the existing processes require refinement and potentially should new products/services be considered?

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User A	We consider that the case for new products or services has yet to be made. Currently the reasonable endeavours obligation to meet customers' needs provides adequate flexibility for CCGT operations so that it would be premature to consider such steps yet. It is also too early to assess how the proposed reforms to the electricity market, including a capacity mechanism and CfDs will affect the operation of the electricity market and consequences for CCGT operations and gas requirements. A holistic gas system perspective is required rather than focussing on exit or entry alone. We would propose that the monitoring exercise for flexibility indicators and OPN submission analysis should continue until the needs case is more firmly established.
User B	Given that we have not experienced any adverse issues with network operation and the case has not been made to demonstrate potential future issues we do not currently see the need for new products. The monitoring of flex usage and nominations on entry and exit should be continued and presented annually at the transmission workstream. This will highlight any trends that indicate future issues.
User C	Exit Capacity products in the Enduring regime cover evergreen and within day periods only: intermediate-periods should be considered for the purpose of covering a broad range of shippers' strategy timelines
User D	See question 2

Q4.Are current ramp rate/notice period processes appropriate? If not, what sort of parameters would better meet your needs?

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User A	The current processes are generally appropriate. However if all NExA parameters were to be rigorously applied, meaning that even small changes up or down require one hours notice, then this could lead to the withdrawal of all CCGT plant from the electricity balancing mechanism which may lead to price spikes or stability issues for the electricity network. The intermittency of wind generation and CCGT plant providing back up for that may give rise to larger changes which require two or more hours notice. However improvements in forecasting of wind generation and being able to anticipate changes in this, with changes not occurring simultaneously in all parts of the country, may mean that these notice periods are manageable.
User B	The current ramp rates in NEXAs are appropriate. The notice periods required for nominating changes to gas flow rates are believed to correspond well with the accuracy of wind forecasting at 4 hour ahead notice periods. If CCGTs provide balancing services to the electricity market, changes in offtake rates in excess of the NEXAs could be required. If OPN changes were rejected by NGG when CCGT operators & Shippers reacted to electricity market balancing instructions then the impact would be on the price & stability of the electricity market.
User C	We believe that the current minimum notice period of 1h for minor changes in the offtaking rate is appropriate.
User D	Modification 0407 is one example of where the existing notice period rules are deemed inappropriate. Any DN embedded large customers for example trading in the electricity market, are likely to require much shorter notice periods for rate changes, than our aggregate LDZ (ignoring such power station type customers) notice period, as our rate change is likely to far steadier and predictable.

Q5.What additional services would you like to see developed?

User A	At this time we cannot see the need for new services, but any services that are considered must be tailored to customers' needs, not create artificial constraints on commercial operations nor the wholesale market whilst recognising the interactions with European markets and the electricity arrangements.
User B	We do not believe that there is a need for additional services at this time
User C	Short Haul Tariff – concerned mod 348 is not the best way to resolve issues, would like to see further discussion on this issue. Balancing Alerts & Safety monitors – agree with proposal to raise UNC Mod. Believe that transparent credible timings of signals on system imbalance supports shippers quick decisions to divert from standard strategy Mod 373 – further arrangements should be included within UNC to deal with all aspects of the connection process. A new Mod to be developed to capture all industry relevant issues. In particular we do not understand how the proposed specific re-opener for entry/exit incremental capacity would work in the proposed phased approach
User D	

Q6. Are there other approaches that we should be considering?

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User A	There may be merits in considering additional information provision of expected nominations beyond D+1, reporting on OPN, DFN, SFN rejections with reasons by NG and DN operators and monitoring and reporting of the accuracy of NG wind generation forecasts
User B	To help demonstrate the case for change, monitoring and reporting of flex usage should be continued. In addition if OPN renominations were to be rejected then these should be reported too, along with the reason why.
User C	
User D	One area of this debate is whether any product or service is already provide/guaranteed contractually by either party, and is the current way of providing it the only way? For example, if NTS are contractually required to provide assured pressures to a GDN, then it is viable for NTS to satisfy that obligation by funding the GDN for its (GDN) provision of the service, if it is more economic than NTS continuing to provide it.

Q7. How would these services best be indicated to and met by National Grid NTS i.e. via potentially new processes, products, bi-lateral contractual terms etc?

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User A	Whilst we welcome NG seeking the views of stakeholders on the need for any new products or services, we believe the existing governance arrangements are the most efficient and transparent way of progressing the development of any such products or services. NG should have a supporting role in the development to help meet customer driven requirements rather than imposing new products on its customers. In addition any requirements or services that may be developed in the future may need to be specific to a particular offtake or type of offtake, so NG will need to be mindful of requirements for non-discriminatory approaches and the risks of not achieving an efficient outcome if system resources are disaggregated and allocated to specific users rather than being managed by NG as SO for the benefit of all users and customers.
User B	We do not believe that there is a need for additional services at this time.
User C	To be discussed
User D	All of these options are potentially in scope. How they are delivered (contractually) can be assessed once any appetite for new products is established through workgroup sessions