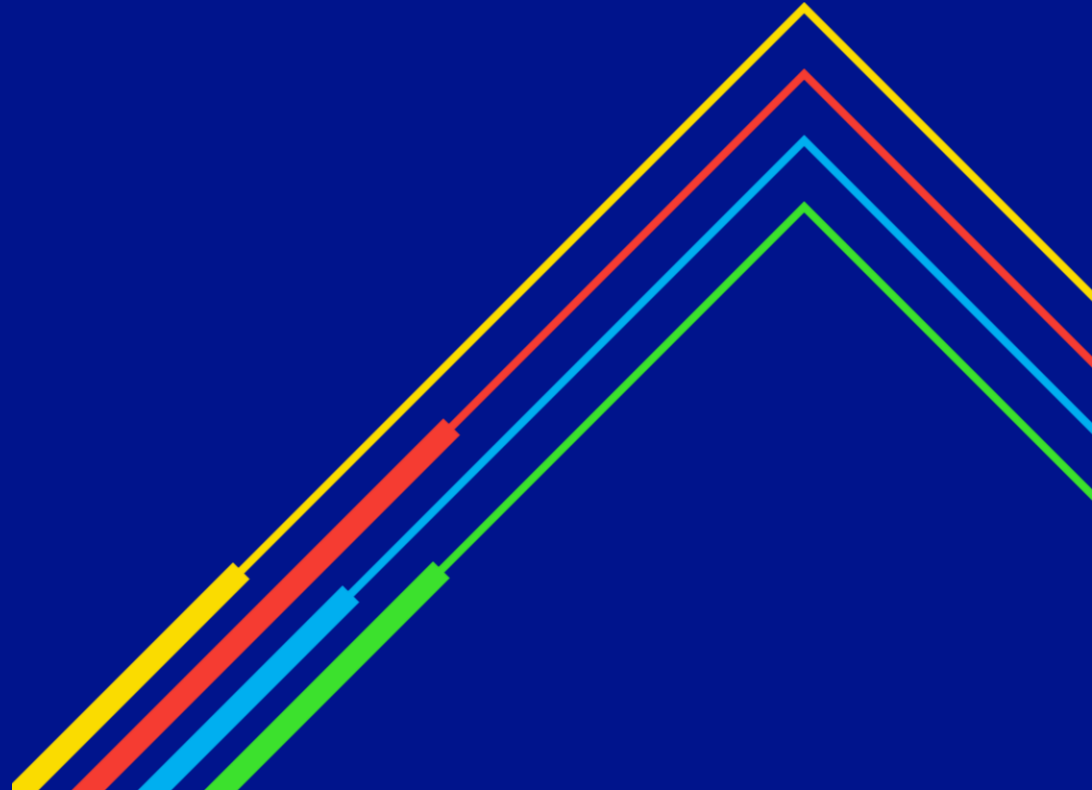


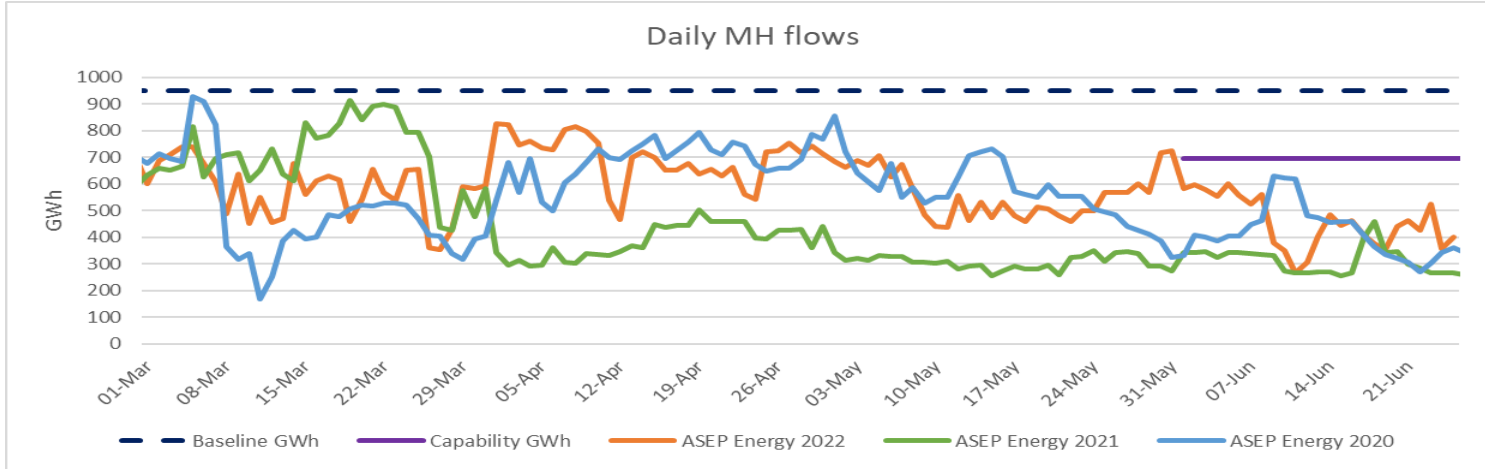
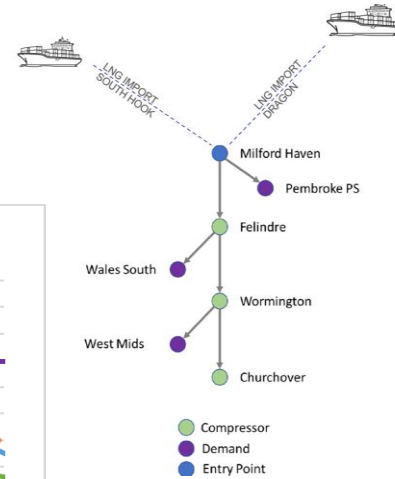
Milford Haven Risk

Transmission Workgroup
7th July 2022

nationalgrid



Capacity booked and flows



*June 2022 data not closed out

How do we manage a constraint?

There are a variety of operational and commercial tools we can use to manage a constraint. Generally, we use the tools from left to right, though not all can be applied to every situation.

1) Operational Tools (internal)	2) Operational Tools (external)	3) Commercial Tools	4) Network Integrity
Reconfigure the network	Agree pressures	Scaleback interruptible/off-peak capacity Restrict further sale of within-day firm capacity	Operating Margins
Optimise the compressor fleet	Flow swaps	Locational Energy Actions Buy Back Firm Capacity	Terminal Flow Advice (TFA) – for entry
Manage outages	Enforce contractual offtake rules	Offtake Flow Reductions Constraint Management Agreements	Critical Transportation Constraint Gas Balancing Notification

Commercial Tools	Current Rules	Revenue/Cost Distribution
Scaleback interruptible/off-peak capacity	Can be applied at any time following the allocation of any Interruptible/Off-peak Capacity at 15:00 D-1, with a min of 60 minutes notice for Entry constraints and 4 hours notice for Exit constraints. Users are expected to revise nominations in order to avoid overrun charges.	No compensation
Restrict sale of within-day firm capacity	Applicable to NTS Entry/Exit Points. Can be initiated at any time within day. No notice required	N/A
Locational Energy Actions	<p>This process allows National Grid NTS to trade gas in and out of NTS linepack at specific NTS Entry and Exit Locations.</p> <p>Following NGG's request, offers can be posted on the OCM Market within the APX trading platform for assessment/selection by National Grid NTS.</p> <p>Once a trade has been accepted, Users re-nominate in the Gemini system in line with the accepted trade and revise physical entry/exit flows accordingly.</p>	Locational Buy/Sell – cost/revenue feeding into the Capacity Constraint Management (CCM) Incentive
Buy Back Firm Capacity	<p>Before we can buy back a User's Firm NTS Entry Capacity entitlements, the User must offer to surrender it. A Firm Capacity Surrender offer will relate to a specific Gas Day only and can be posted at any time by Firm Capacity entitlement holders in the Gemini/Gemini Exit systems for any given Gas Day from 06:00 D-7 up until 02:00 on the Gas Day.</p> <p>Offers will be assessed and allocated in relation to the NTS Constraint risk being managed. National Grid NTS can only accept Firm Capacity Surrender offers from 15:00 D-1 up until 02:00 D. Users need to revise nominations and revise physical flows to avoid overruns.</p>	Cost feeding into the CCM Incentive

Commercial Tools	Current Rules	Revenue/Cost Distribution
Offtake Flow Reductions	<p>National Grid NTS may require offtake Users to reduce demand for a set period of time by requesting offers for Offtake Flow Reduction at NTS Exit Points in NTS Exit Zones</p> <p>NTS Exit Users in the affected NTS Exit Zones will have the option to make an offer to National Grid NTS by entering the location, price and potential flow reduction into the Gemini Exit system</p> <p>Once offer is accepted, Users must send a revised OPN 30min ahead of planned reductions</p>	Cost feeding into the CCM Incentive
Constraint Management Agreements	<p>Prearranged agreements – allow for the reduction of flows when longer term constraint is forecasted</p> <p>Formal tender process – approx. 3-6 months to set up</p> <p>Legal agreements between NGG and Users (not processed on Gemini)</p> <ul style="list-style-type: none"> • Forward contract - a User surrenders Firm NTS Entry Capacity to National Grid NTS over a forward period of days • Option contract - User grants an option to National Grid NTS upon the exercise of which National Grid NTS may accept the surrender of Firm NTS Entry Capacity 	Cost feeding into the CCM Incentive

Option	Pros	Cons
<p>1. Improve communication between NGG and Sub-Terminals/Shippers i.e.</p> <ul style="list-style-type: none"> • NGG to provide more detailed granularity with regards to capability • Users to provide weekly/monthly view of upcoming flows 	<p>NGG has early view of potential constraints and can be more reactive</p> <p>Sub-Terminals/Users have a better view of capability</p> <p>Potentially less constraints so reduced risk of costly constraint management actions (which would be passed on to customers and end consumers)</p> <p>Option viable to be implemented ahead of capacity auctions for summer 2022 (if no legal agreement needed)</p>	<p>Uncertainty over capability and flow which could still change</p> <p><i>In a forecasted constraint situation, NGG asks Sub-Terminals to reduce flows</i></p> <p>a) <i>If not a legally binding arrangement, nothing stopping Users not to turn down flows if there is a strong commercial incentive to flow</i></p> <p>b) <i>If flows need to come down, how would the quantity be split between the parties? Proportionally based on their capacity holdings?</i></p> <p>If legally bounding agreement needed, could take a long time to be developed</p>
<p>2. Agree cargo delivery plan between NGG and Sub-Terminals/Shippers</p> <p><i>Likely to require BEIS/Ofgem approval</i></p>	<p>Potentially less constraints so reduced risk of costly constraint management actions (which would be passed on to customers and end consumers)</p> <p>Users wouldn't be paying premium on SEC (all parties would know what the capacity bookings and flows are going to be)</p> <p>Option viable to be implemented ahead of capacity auctions for summer 2022 (if no legal agreement required)</p>	<p>Potential breach of the competition law</p> <p>Could reduce Users flexibility (i.e. flex cargo could not get delivered)</p> <p>Parties reluctant to reveal commercial positions</p> <p>Other market participants might be dissatisfied with potential impact on global/GB markets</p> <p>If legal agreement needed, could take a long time to be developed ((a) & (b) above adding complexity)</p>
<p>3. Put a cap on buybacks</p>	<p>Would protect the customers and NGG from high constraint management costs</p> <p>Timescales to implement could be tight ahead of Feb AMSEC auctions - UNC change would be required</p>	<p>If set too low, would not incentivise Users to put offers forward</p> <p>Risk of setting the cap at a wrong level considering swing in gas prices, flex criteria might be required</p>

Option	Pros	Cons
4. Seasonal baseline at Milford Haven ASEP only	<p>Reduced risk of high constraint management costs (which would be passed on to customers and end consumers)</p> <p>Commercial constraint management tools are in place</p> <p>Transparent process which is consulted on</p> <p>Unlikely to require a system change</p>	<p>Requires a Licence change</p> <p>Significant effort to conduct the analysis and time spent on consultation</p> <p>Might create a perception of scarcity of capacity</p> <p>Would reduce potential for substitution</p>
5. Turn-down contracts	<p>Existing commercial tool to enable management of constraint risk</p> <p>Could provide some financial compensation for any cargo delays / cancellations</p> <p>Option potentially viable to be implemented ahead of capacity auctions for summer 2022 (3-6 month tender process)</p>	<p>Potential high costs to the industry (even if contracts not executed)</p> <p>Risk of inefficiency due to uncertainty of flows</p> <p>Not a solution for every eventuality</p>
6. Increase overrun penalty in a constraint scenario	<p>Fair thing to do; penalise parties flowing without having firm bookings while capacity is scaled back/restricted</p> <p><i>N.B. exists for buybacks and turn-down contracts, but not locational actions</i></p>	<p>Would require system change therefore unlikely ready for summer 2023</p>

Factors Impacting Capability

Demand	Supply	Time	Pressure	Plant / Compressor availability
Greater levels of demand result in greater entry capability. Resulting in Seasonal changes in capability	Level of supplies coming in to NTS can impact capability and several terminals using the same sections of the network to deliver gas	Capability is continually changing throughout the gas day. Seasonal factors also play a large part	Maximum throughput is achieved through maximum pressure on upstream and minimum pressure on downstream of compressor	Pipelines and compressor availability play a key role in maintaining high levels of capability
	How sustained the flow is e.g. is it for a few hours or over multiple days. The longer the flow is sustained the more issues it can create	Time taken for gas to go from input terminal to customer / consumer. On average they will receive yesterday's gas	Distribution Network pressures – how low can the pressures be taken whilst satisfying the entry criteria for them. Changing throughput day	Planned maintenance during periods with lower throughput and often scheduled years in advance
	Flow profiling – are they a steady flow across the day or larger flows during sections of the day		Daily Linepack swing	Unplanned outages can cause major capability losses and could result in Terminals receiving TFA due to exceeding MOP
				Compressor vibrations / temperatures can cause tripping if they are being run close to their capability

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