



Gaz de France ESS

Gas Demand Side Opportunities

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GAZ DE FRANCE ESS

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Demand Side Credentials

- Gaz de France ESS (Special Markets) are market leader in provision of Demand Side products for Electricity
- Gaz de France ESS supply the most interruptible supply points in the UK
- 9 years experience in Standing Reserve/ 7 years in Frequency Response
- In summer 2003, we developed a NISM load management service which was later adapted into Demand Turndown by National Grid
- Gas Commercial Interruptions
 - Part of our standard catalogue products
 - DA customers can self interrupt

Electricity Demand Side Products (1)

- 3 main products all for customers who can load manage (or generate)

- Standing Reserve
 - Most popular
 - 3 MW minimum load reduction
 - 20 minutes notice
 - 2 hours duration
 - Utilisation/ availability payments

Electricity Demand Side Products (2)

Frequency Response

- Instantaneous interruption
- Availability payments only
- 3 MW minimum load reduction
- 30 minutes duration

Turndown

- Developed from NISM product in conjunction with NG
- Emergency service
- Pay as bid
- Agent aggregates volumes

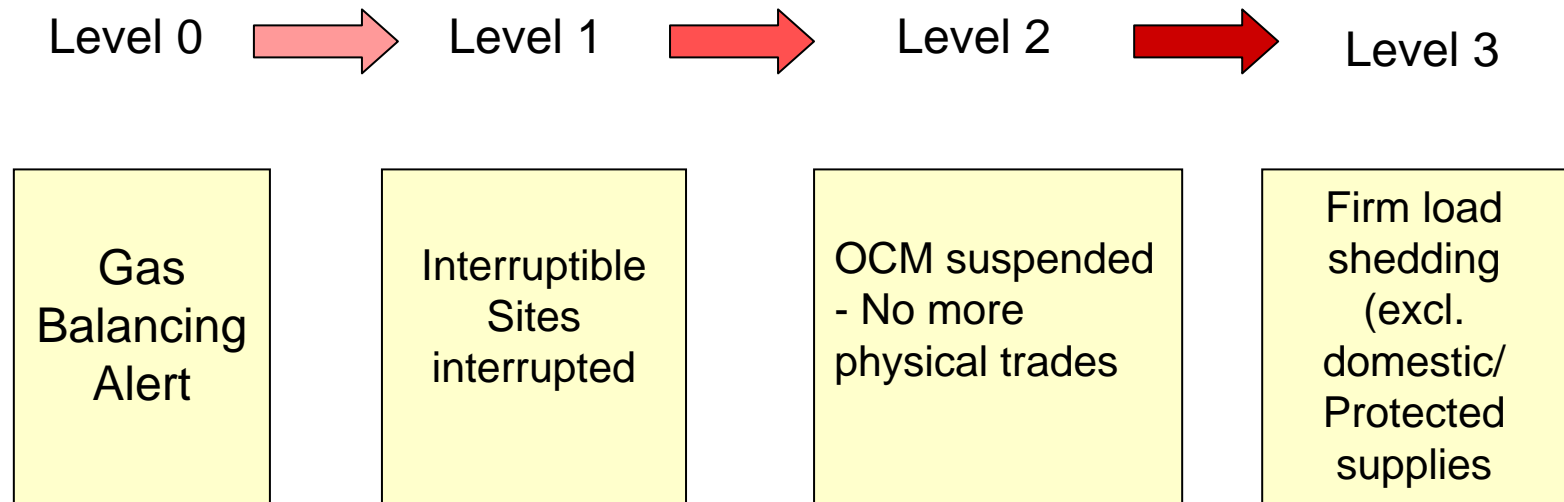
What's new in terms of gas regulation

- NG cannot interrupt customers for supply/demand reasons apart from under emergency conditions
- Top-up has been removed and replaced with safety (storage) monitors. Monitor breaches can trigger an emergency
- Gas Balancing Alert defined to signal potential for demand side action to aid system and prevent gas deficit emergency
- Facilitate multi-day demand side actions traded via OCM and OTC

What's new

- Gas Balancing Alert issued if demand is forecast to be higher than trigger level
 - dependent on NG's base case supply assumptions.
 - Supply can be adjusted according to storage stocks and potentially shortfalls in offshore deliveries.
- Gas Balancing Alert notified to shippers and customers via NG website
- Acts as a trigger to encourage demand side participation to be rewarded for contributing to security of supply

Emergency Procedure



Product Proposal

Our thoughts on how a product might operate

- Bid Structure
- Interface with National Grid
- Instruction to interrupt
- Who can participate
- Timelines

Features: Bids

- Bids would cover either single days or multiple days (part days could be considered also but adds complexity)

- For a specific period, each participant will provide a “bid” detailing:
 - forecast volume
 - volume they are able to reduce
 - the notice period required to enact the reduction
 - the maximum and minimum interruption period
 - price they are prepared to interrupt for (including the cost of gas)

Bid Template

- Bids would be submitted electronically to National Grid in the following format:

Customer	Site	Forecast Volume (therms)	Price (£/therm)	Duration	LDZ

- This would be emailed/ faxed to National Grid on a week ahead basis. Amendments by customers can be made up to D-1
- National Grid could then despatch by price, volume or location as necessary

Despatch

- When the national demand has exceeded the trigger level set by NG
- NG may issue a Gas Balancing Alert at 14:00 D-1; and again at 02:00 prior to the start of the gas day at 06:00
 - NG could take demand side bids via the OTC or OCM market
 - The product is designed to reduce demand
 - Participants will receive their bid value as payment for their demand management based on volume delivered

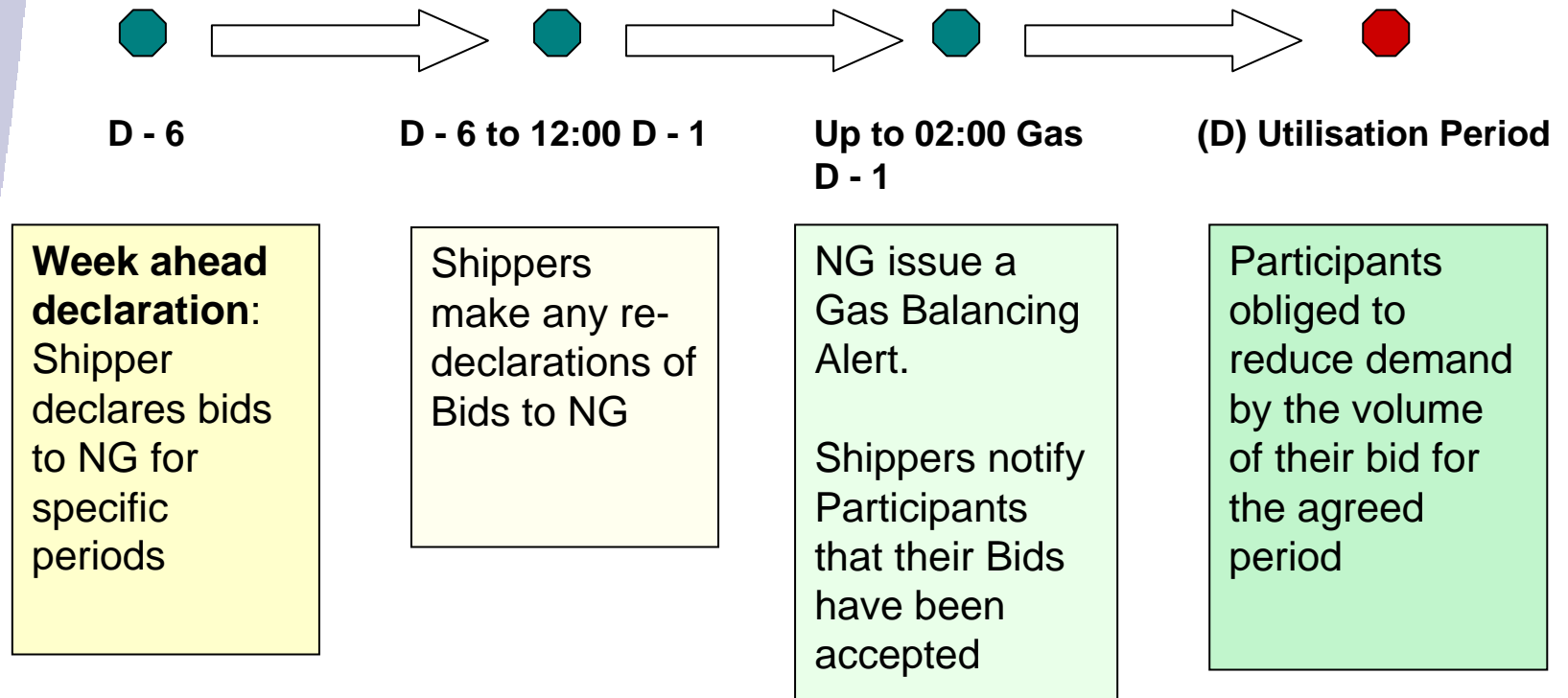
Features: Shipper

- Gaz de France ESS will manage the participant's bid in terms of:
 - Giving a route to market for smaller customers by aggregating bids for each utilisation period to create an "Offer"
 - Acting as single point of contact for multiple customers with NG
 - Instructing customers to interrupt on behalf of NG
 - Being the interface to the OCM or OTC
 - Monitor Delivery on behalf of NG
 - Managing invoices and payments

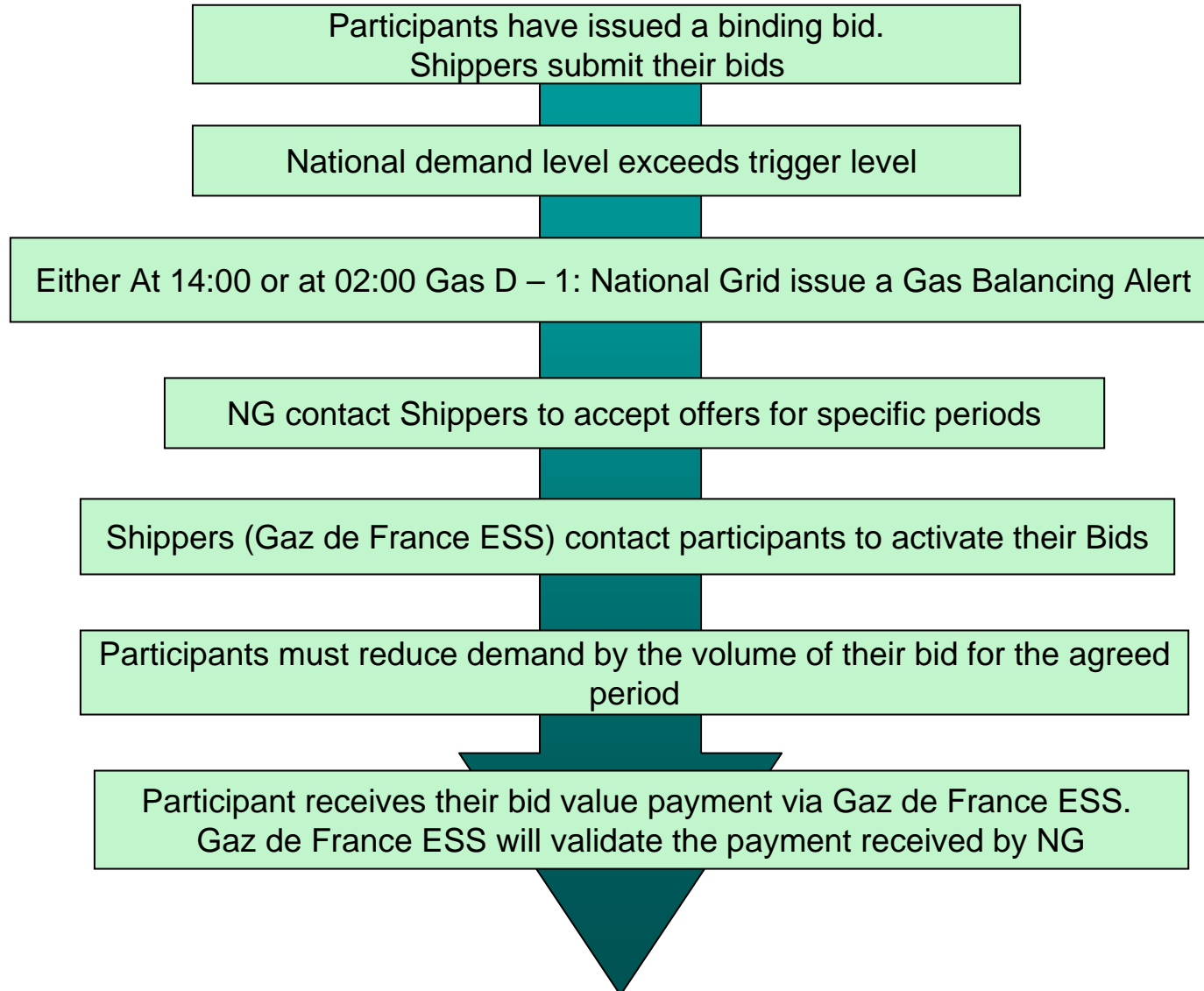
Participants

- Daily metered sites only
- **Firm** and Interruptible supply points
- Shippers could aggregate smaller volumes of gas so more customers with sites in the 2,000 to 25,000 therms per day range could participate.
- Gives a route to market for participants who can only offer multiple day bids

Timeline for declaring availability bids



Process Flow Chart



Other thoughts

- Contract structure needs to be simple
 - NG to shipper, shipper to customer
- Product can be ready to go as soon as regulatory framework is in place
- Payments will still be made even if a standard interruption is called after the acceptance of a bid

Issues

- Not suitable for all customers. e.g: day ahead and within day
- Still doesn't address the lack of a reserve market in gas
- Is this enough of an incentive versus commercial interruptions?
- Unusual for a demand side product to be limited to the supplier (shipper) only

The way forward

- Similar product still based on bid and despatch process
- To facilitate the development of a reserve market, payments made for availability and utilisation
- Incentivises maximum participation and offers a serious alternative route to interruptions of gas supply to CCGT's
- Allows agent competition
- Follows lead taken by NG in electricity

Summary and questions

- Product must incentivise customers more than normal commercial interruptions
- Product needs to be simple to encourage participation
- Product should remove likelihood of gas emergencies
- This will only work with NG/Ofgem support
- Customers
 - Is this a positive solution?
 - Would you participate?