

# Indexed contracts

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## Indexed contracts : agenda

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- Why do we forward contract
- Types of contract
  - Comparison of indexed and fixed price contracts
- Future Transparency
  - What we propose to publish going forward

## Why do we forward contract

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- Greater certainty over price and avoids potential counter-party price movement
  - Duration could be up to 4 months
- Overcomes risk of on the day scarcity
- Allows us to tailor a requirement that may be difficult to obtain using standard on the day procurement options

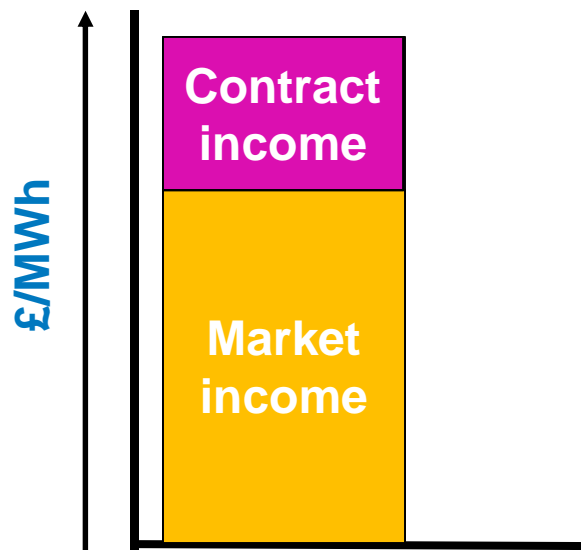
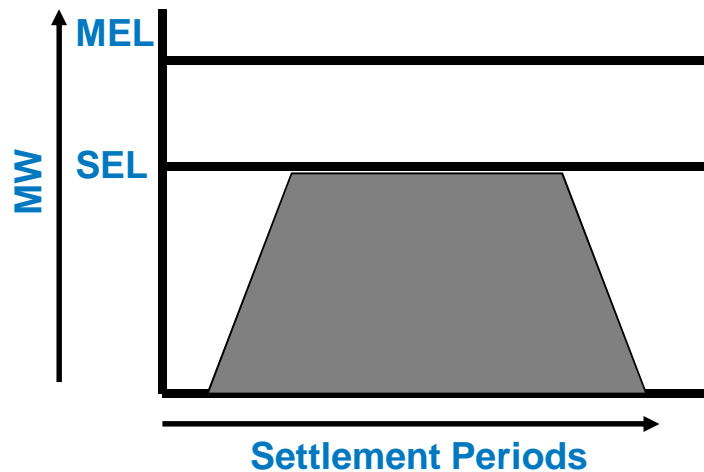
## Considerations when striking contract

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- Tender or Bilateral
  - Is requirement Locational?
- Is requirement bespoke – shape, conditions
- Contract may require unit to run regardless or whether in or out of merit in the market
- Call off Firm/Optional
  - E.g dependent on day ahead signals (wind forecast)
- Contract covers costs and reasonable profit margin

**Consumer Value, Provider Risk, Market Impact**

## Contract – structure & pricing



- Physical requirement to energise unit to the network
- May require it to have a fixed duration or fixed load level
- Financial Contract – We don't trade actual MW
- Assume Counter Party will sell their MW in the Forward Market
- Contract payment should reflect difference between market price and counterparty required returns

## Fixed price contracts & limitations

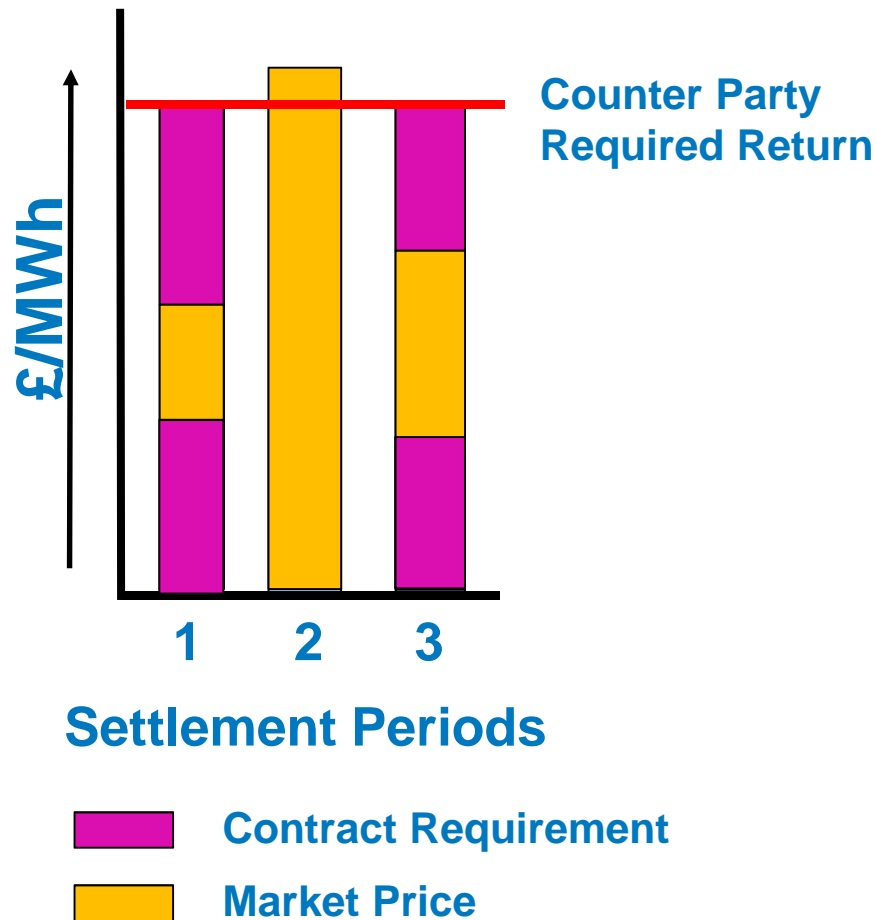


### Settlement Periods

- Contract Requirement
- Market Price
- Inefficient Cost

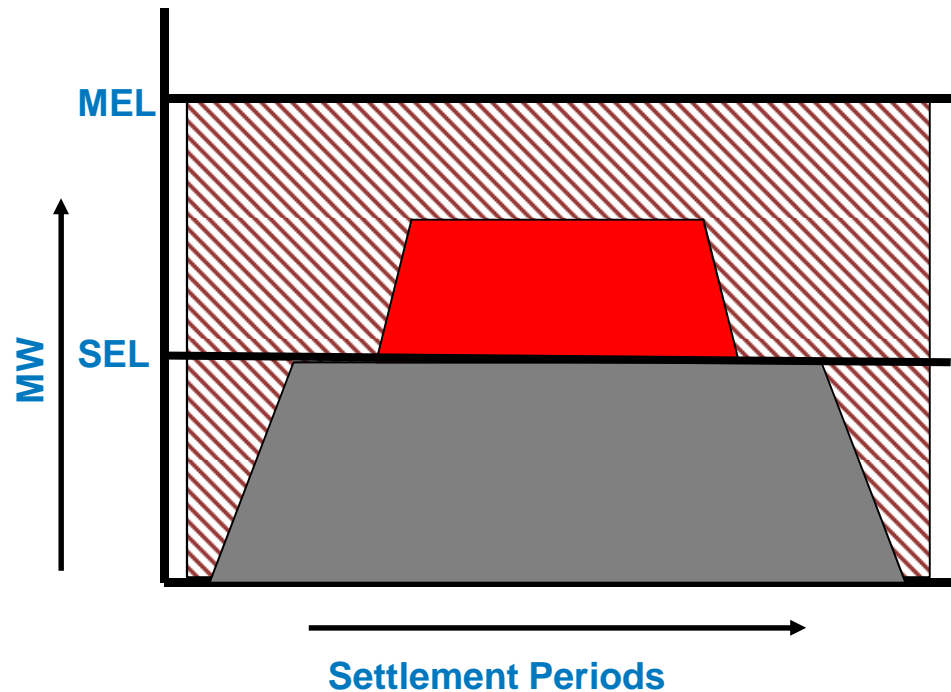
- Assume 3 month contract
- How do we set strike price?
- Need to predict market price on settlement period basis up to 3 months in advance
- Inherently strike price will include a premia for market price forecast risk
- Bespoke shapes make hedging uncertain

## Indexed contracts






- Strike Price Indexed to recognised Market Price
  - Day Ahead Auction price
- SO only pays what counter party can't achieve in market
- NG only pays the portion of the cost that the market doesn't cover
- Counter Party always gets required returns

## Mitigate unfair advantage



- Energise unit to the System for Minimum MW.
- Firm/Optional Call Off
- Provisions in contract to mitigate subsidising Generator Advantage in market
- Generation above or adjoining contracted shape leads to payment recovery

-  Contracted Generation Profile (PN submission)
-  Contractual Clawback boundary
-  Generation Output – triggers no payment



## Impact on market

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- Indexation Price can be tied to Day Ahead Auction
  - Counter Parties neutral to the out turn price
- Impact on Offer Stack Price Curve
  - Rest of Market not aware of this
- Appreciate this has impact
  - NG need to inform the Market when a contracted Volume is indexed to the Day Ahead Market

## Existing day ahead information published

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Contract volume enacted per settlement period.			
Positive: NG buy, Negative: NG Sell			
Issued:	03/10/2017		
Date	SP	Volume (MW)	
31/10/2017	48	0	
31/10/2017	47	0	
31/10/2017	46	0	
31/10/2017	45	0	
31/10/2017	44	0	
31/10/2017	43	0	
31/10/2017	42	0	
31/10/2017	41	0	

## Proposed day ahead information published

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Contract volume enacted per settlement period.			
Positive: NG buy, Negative: NG Sell			
Issued:	03/10/2017		
Date	SP	Vol Fixed Price	Vol Indexed (DaH)
31/10/2017	48	100	200
31/10/2017	47	100	200
31/10/2017	46		
31/10/2017	45		
31/10/2017	44		

Aiming to Publish Information before Day Ahead Auction

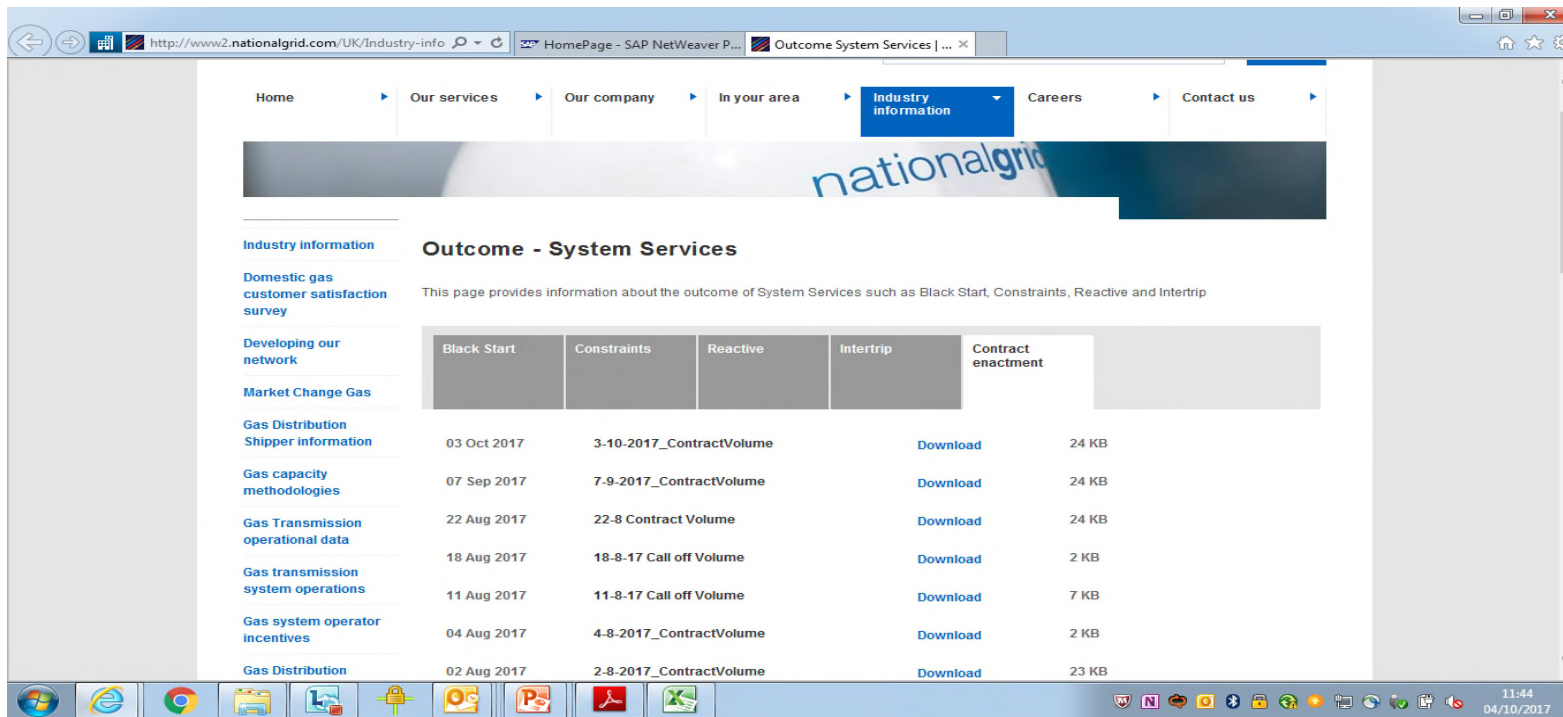
## Future publishing proposals

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- Going Forward – Subject to contractual or regulatory restrictions, & ensuring no risk of REMIT breach
- When Contract is struck
  - Duration of deal
  - MW of deal – (if applicable)
  - Reason code – System /Energy
  - Indexed to day ahead auction (Y/N)
  - Option/Firm

# Existing information published

<http://www2.nationalgrid.com/UK/Industry-information/Electricity-transmission-operational-data/Data-explorer/Outcome-System-Services/>



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## Industry information

**Outcome - System Services**

This page provides information about the outcome of System Services such as Black Start, Constraints, Reactive and Intertrip

	Black Start	Constraints	Reactive	Intertrip	Contract enactment
Gas Distribution Shipper information	03 Oct 2017	3-10-2017_ContractVolume		Download	24 KB
Gas capacity methodologies	07 Sep 2017	7-9-2017_ContractVolume		Download	24 KB
Gas Transmission operational data	22 Aug 2017	22-8 Contract Volume		Download	24 KB
Gas transmission system operations	18 Aug 2017	18-8-17 Call off Volume		Download	2 KB
Gas system operator incentives	11 Aug 2017	11-8-17 Call off Volume		Download	7 KB
Gas system operator incentives	04 Aug 2017	4-8-2017_ContractVolume		Download	2 KB
Gas Distribution	02 Aug 2017	2-8-2017_ContractVolume		Download	23 KB

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## Summary

3 Month Overnight 4 hour Contract to SEL	Fixed Price Forward	Index'd Price Forward	Short Term MW
Consumer Value	Yes but less So	Yes	Yes but Less So
CounterParty Price Risk	Yes	No	No
NG Actions Impact Market	Yes – could impact merit order	Yes – could impact merit order	Yes - Volume Sterilised could impact merit order

- Recognise greater transparency of our actions required to support market decisions
- We are progressing with immediate changes followed by more in medium term subject to ensuring we mitigate REMIT/compliance risk