

Firm Frequency Response Review 2011



22nd August 2011 - Workshop

Agenda

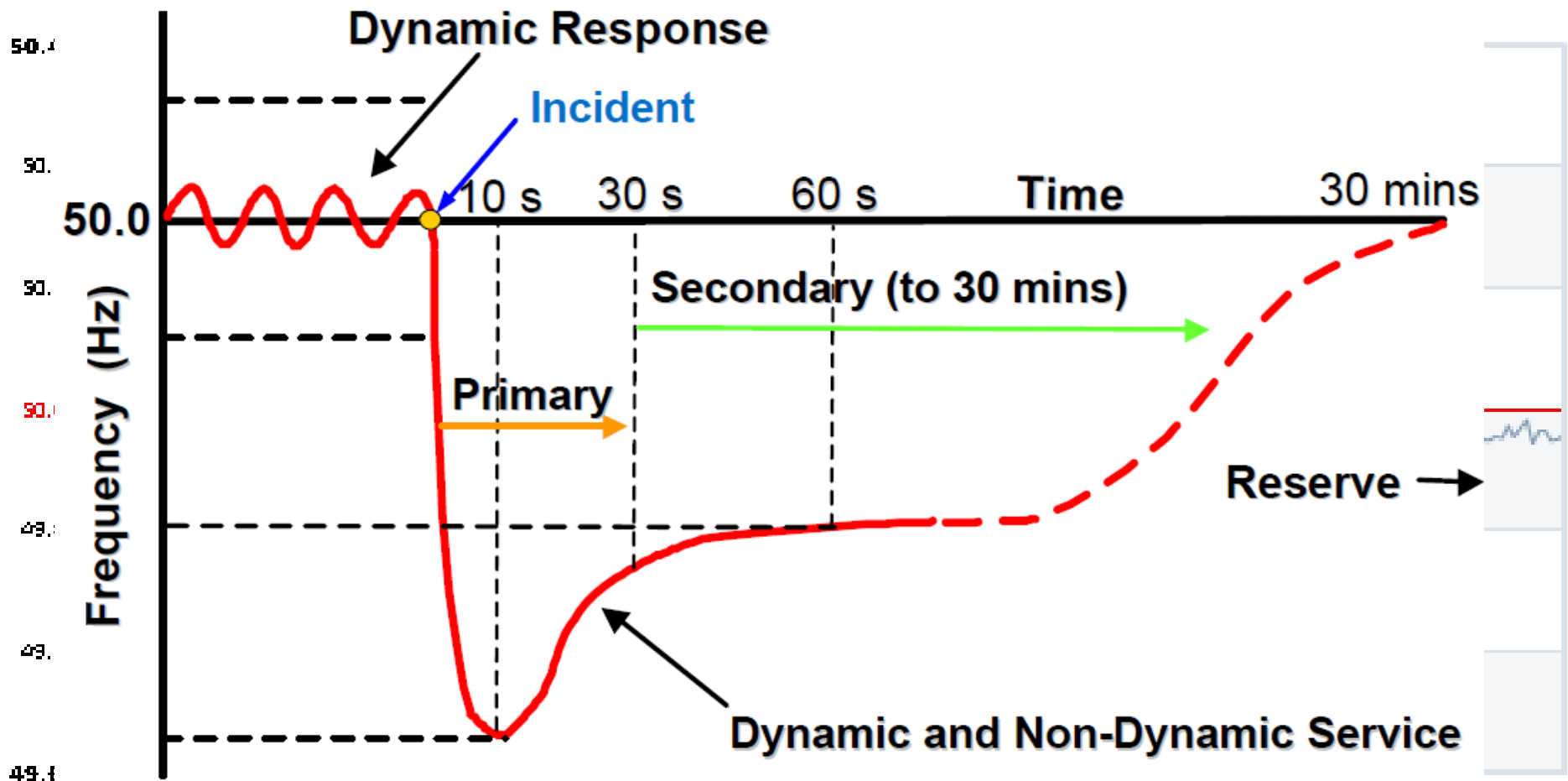
- Introduction to FFR and Objectives for the Day
- Tender Process
- Lunch
- Performance Monitoring
- Non-Dynamic BM Service
- Market Information Report
- Further Issues

Introduction to Firm Frequency Response



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Frequency Response



Response Requirement

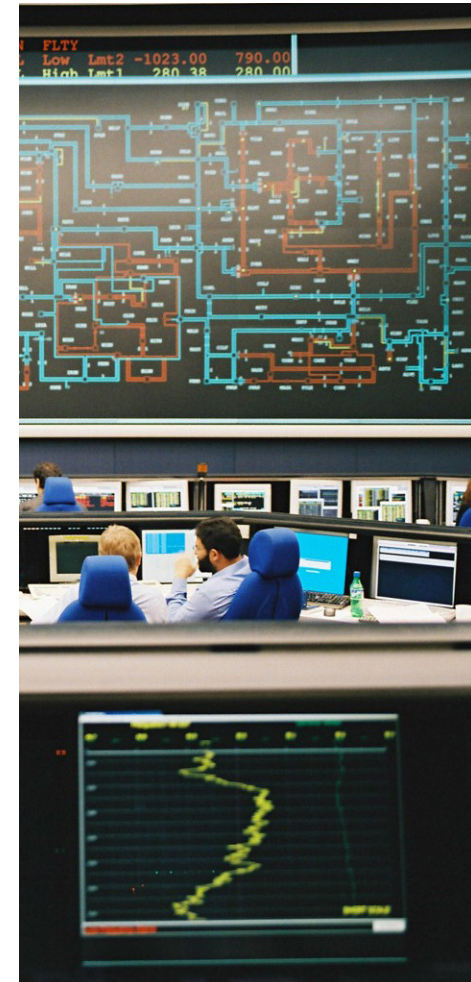
	Current Requirement (MW)	Forecast Requirement (MW)
Primary	600	1000
Secondary	1000	1600
High	400 1000 (summer overnight)	400 1000 (summer overnight)

Largest loss increases from 1320MW to 1800MW in 2014/15

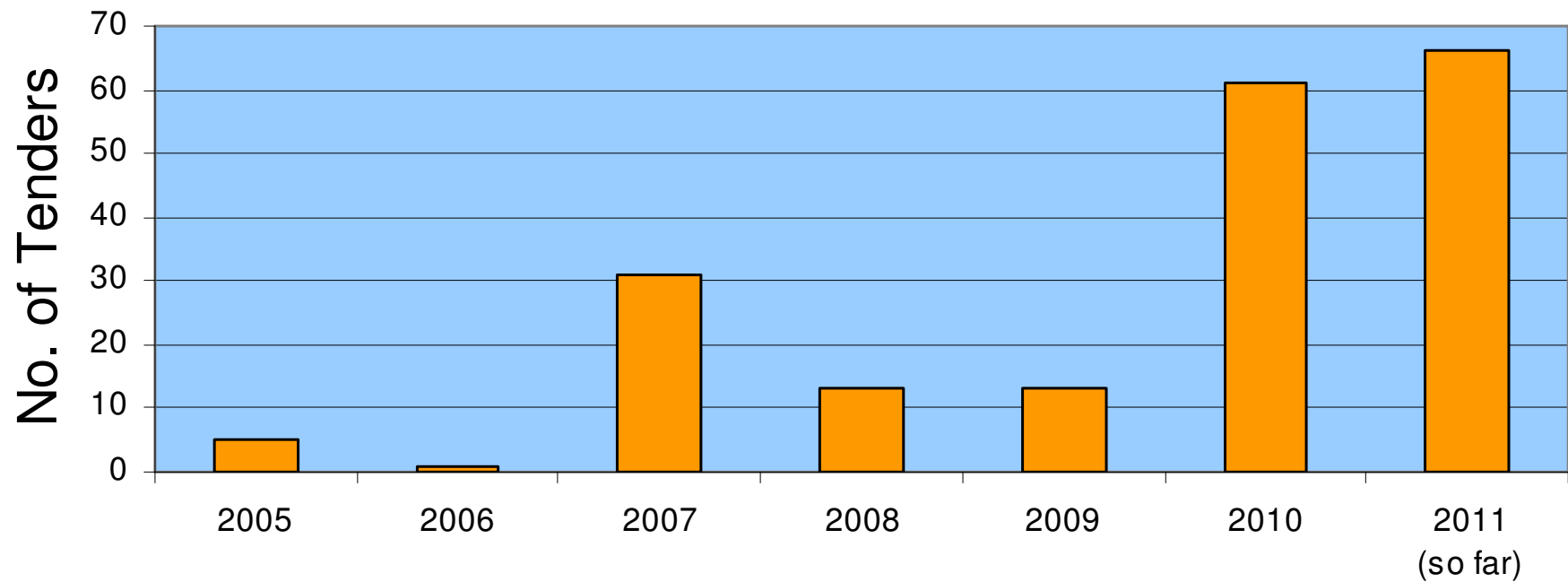
- £54million spent 2010/11 on Mandatory Frequency Response
- £84million spent 2010/11 on Commercial Frequency Response

Firm Frequency Response

- Facilitates Non-BM providers to provide a response service
- Enables BM providers to agree a firm contract to provide response
- Response can be procured more economically so reduces balancing costs

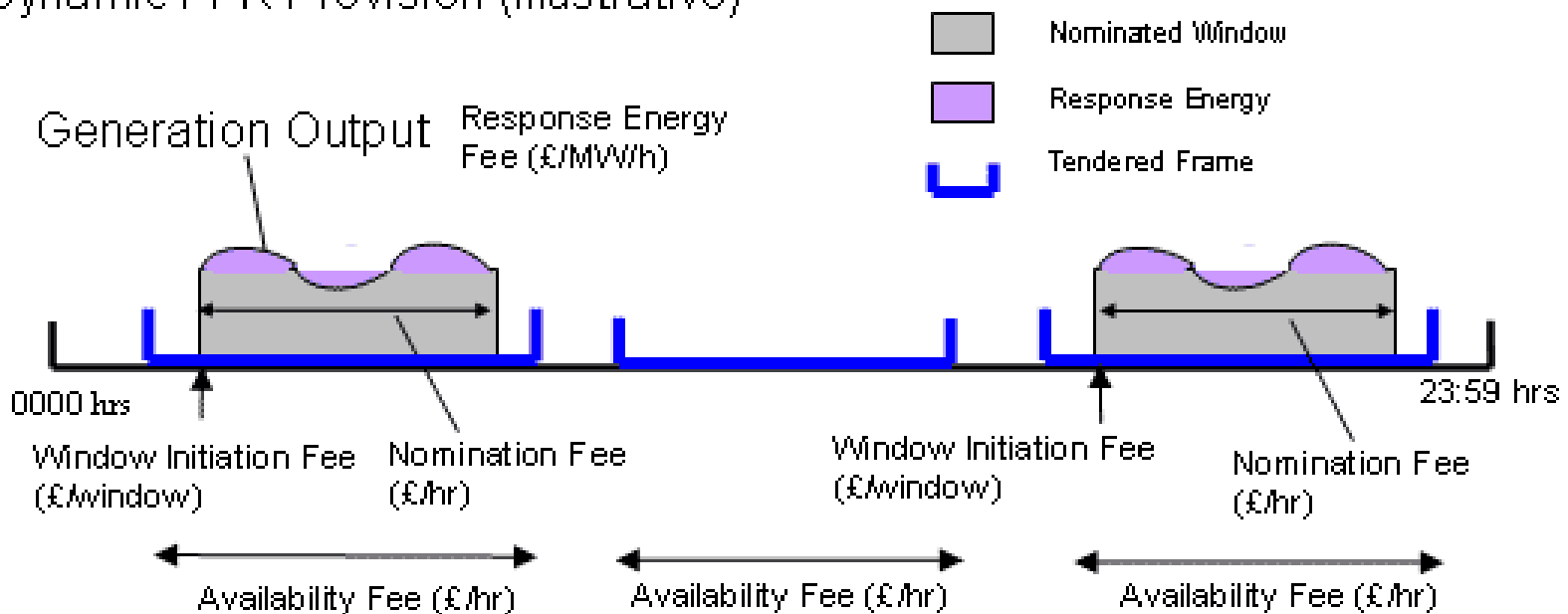


Firm Frequency Response Tenders

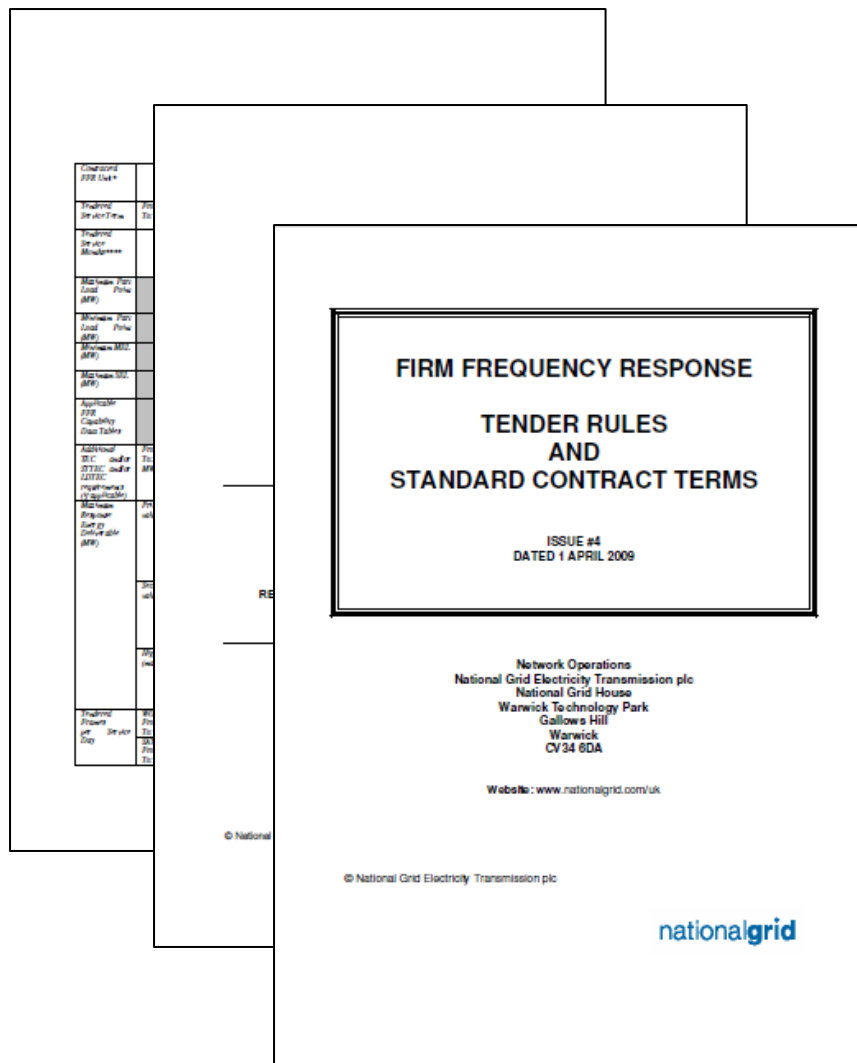


Firm Frequency Response Service

Dynamic FFR Provision (illustrative)



Contractual Framework



- **Tender** covers parameters specific to time and unit
- **Framework Agreement** covers details specific to individual Stations or providers
- **Standard Contract Terms** cover the “rules” for the service for all providers

Review Timescales

- **August/September** – Initial discussion
 - Workshop 22nd August
- **End September** - Outline change proposal
- **End November** – Detailed change proposal
- **1st April 2012** - Implement

Review Objectives

- Review and update the Firm Frequency Response Standard Contract Terms
 1. Resolve areas where there are issues with the current terms
 2. Develop terms to broaden the service

Today's Objectives

- Develop shared understanding of current issues with terms
- Consider possible solutions
- Consider possible developments

Firm Frequency Response Tender Process



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Current Tender Process

Three Months Prior to Service month

BD1 Market day Long term-tenders

BD5 Industry notified of Long-term Tender

Two months Prior to Service month

BD15 competing long-term tenders submitted

BD18 Market Information Report published

One Month prior to service month

BD1 Market Day for single month tenders

BD3 Market Day for short-term

BD5 Tender Report

BD10 Results and Post Assessment Tender Report for single month and short term tenders

BD14 Window Nomination

BD15 Results and Post Assessment Tender Report for long term tenders

Tender Process Issues

- **Issue One** – Unnecessary complexity in tender dates
 - Align tender dates

- **Issue Two** – Lack of direct competition in medium term tenders
 - Rationalise medium term tender process

Issue One - Align Tender Dates

SERVICE MONTH -1					
Monday	Tuesday	Wednesday	Thursday	Friday	Sat/Sun
1 MARKET DAY	2	3 TENDER REPORT	4	5	6
8	9	10	11	12	13
15	16 RESULTS DAY WINDOW NOMINATION	17	18	19	20
22	23	24	25	26	27
29	30	31			

- Single Market Day [BD 1 for all tenders]
- Single date for Results Day and Window Nomination [BD 12 for all tenders]

Over to you...

- Split into Groups
- Consider tender dates
- Report back any issues or alternative solutions

SERVICE MONTH -1						
Monday	Tuesday	Wednesday	Thursday	Friday	Sat/Sun	
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Issue 2 - Lack of Direct Medium Term Competition

- Tenders for up to [3] months ahead are already well contested
 - Continue monthly process
- Tenders for periods further into the future tend not to be contested
- Proposals...
 - Rationalise tender rounds; or
 - Extend notification mechanism used for long term tenders

Rationalise Medium Term Tenders

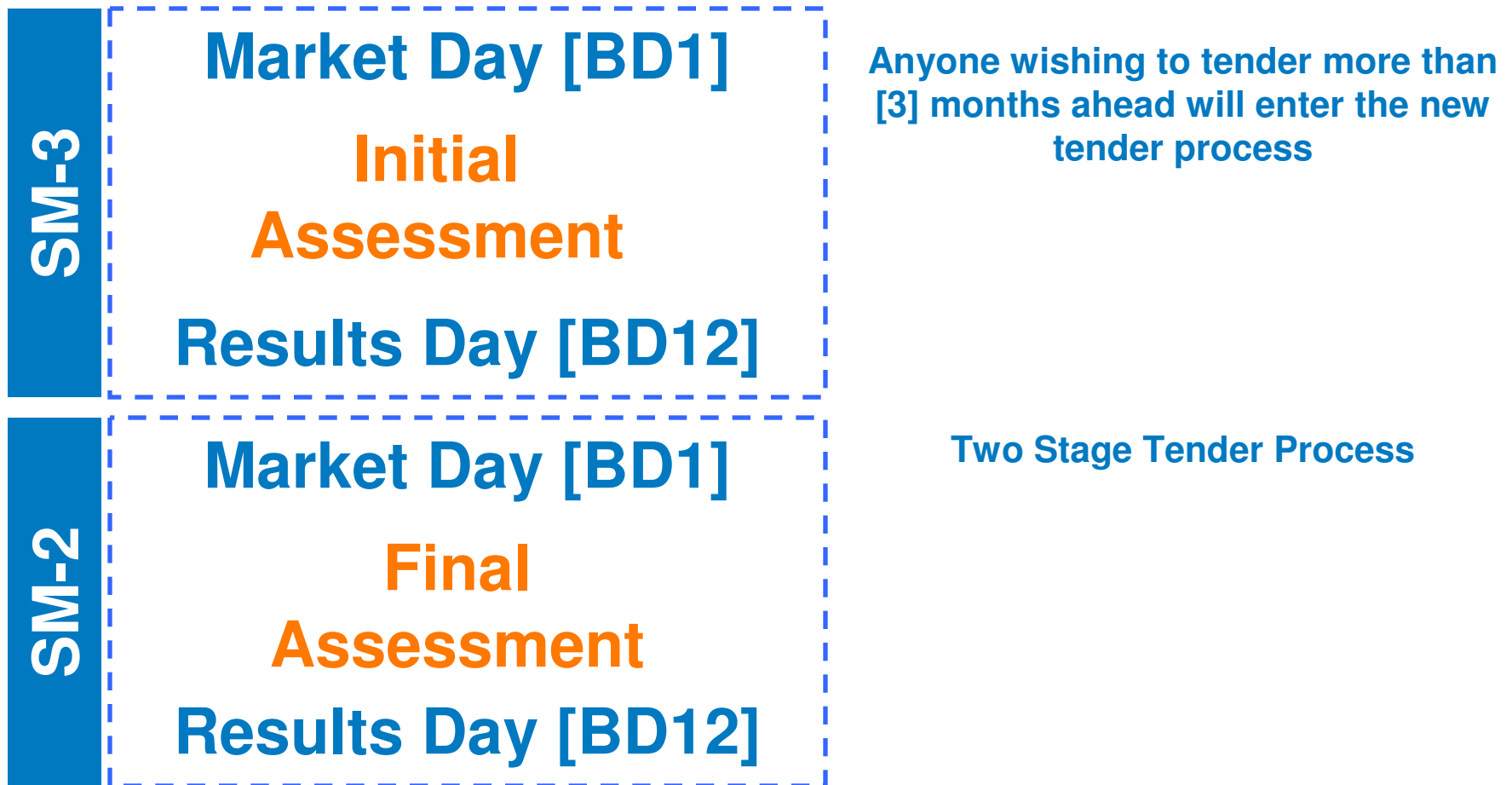
	Tender Month											
	J	F	M	A	M	J	J	A	S	O	N	D
Less than three months ahead	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Greater than 3 months ahead	✓	✗	✗	✓	✗	✗	✓	✗	✗	✓	✗	✗

Example

January Tender	Service Month											
	F	M	A	M	J	J	A	S	O	N	D	J
Less than 3 months ahead	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗
Greater than three months	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

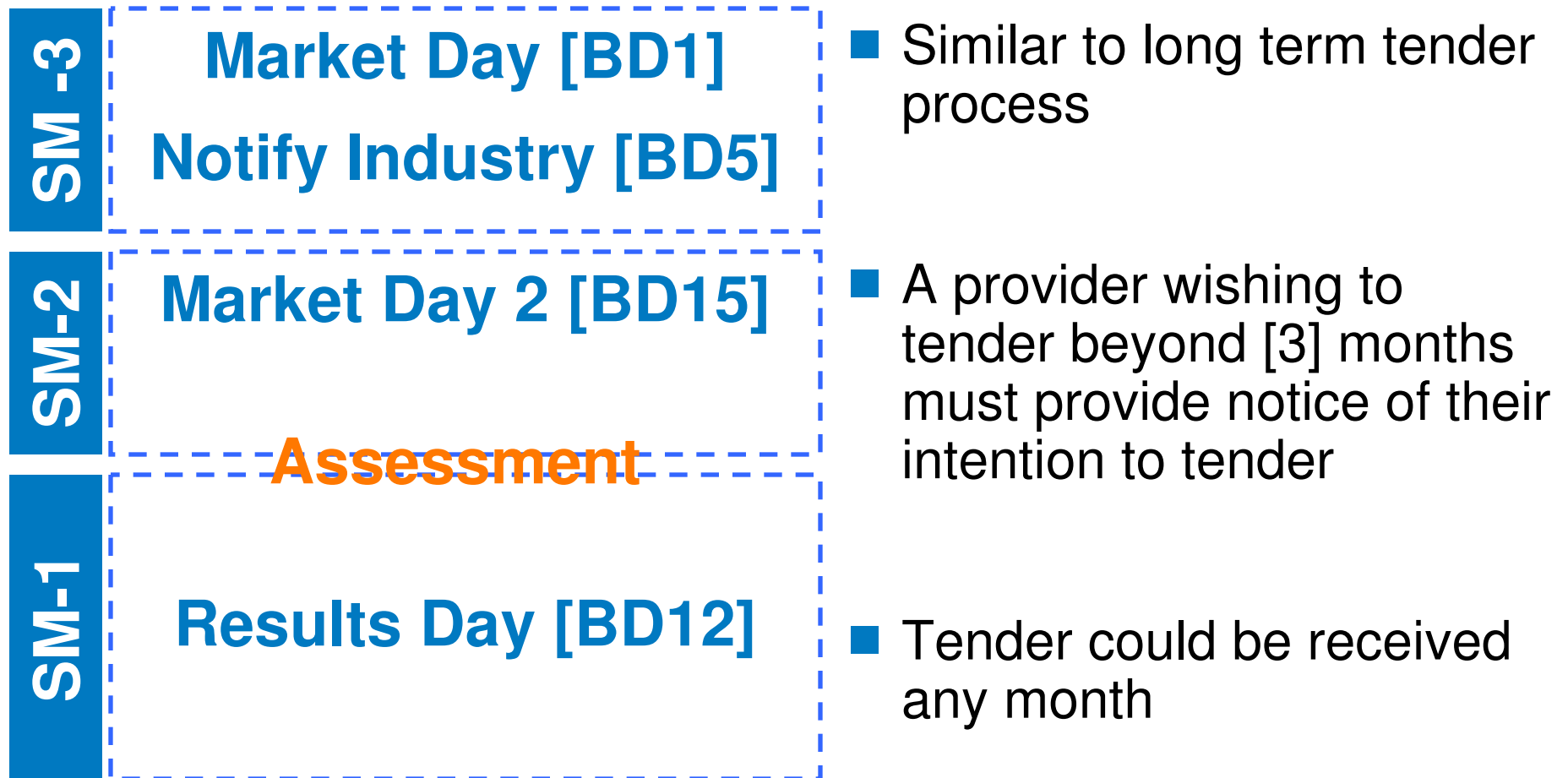
February Tender	Service Month											
	M	A	M	J	J	A	S	O	N	D	J	F
Less than 3 months ahead	✓	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗
Greater than three months ahead	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗

Two Stage Process



Long-Term tenders will require longer timescales due to more complex assessment

Alternative Solution – Notice Period

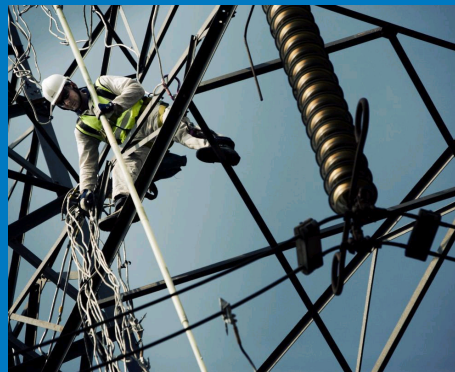


Over to you...

- Split into sub groups
- Complete worksheet
- Report back

FFR Tender Process		nationalgrid <small>THE POWER OF ACTION</small>	
	✓ Pros	✗ Cons	★ Enhancements
Current Process (Monthly Tenders)			

Performance Monitoring



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Current Performance Monitoring

	Dynamic	Non-Dynamic
BM	<ul style="list-style-type: none"> ■ Second by second data ■ Sample period ■ 70% threshold ■ Window payment lost 	
Non-BM	<ul style="list-style-type: none"> ■ Second by second data ■ Sample period ■ Banded threshold ■ Monthly payment reduced 	<ul style="list-style-type: none"> ■ Second by second data ■ During trip ■ Banded threshold ■ Window payment reduced

Performance Monitoring

- **Issue One** - Current performance monitoring terms not clear (eg. sample period duration)
 - Clarify Terms

- **Issue Two** - Terms are different for BM and non-BM providers
 - Align terms (where appropriate)

Proposal Dynamic

- Continuous monitoring
 - Monitored over [X] settlement periods
 - Affects payment for whole window
 - 70% threshold all or nothing
- Incident monitoring
 - Monitored over each incident where the frequency deviates outside operational limits for greater than [2] minutes
 - affects payment for entire month
 - Banded penalties
- Events of default accumulated for each underperformance issue
- [3] strikes could lead to termination

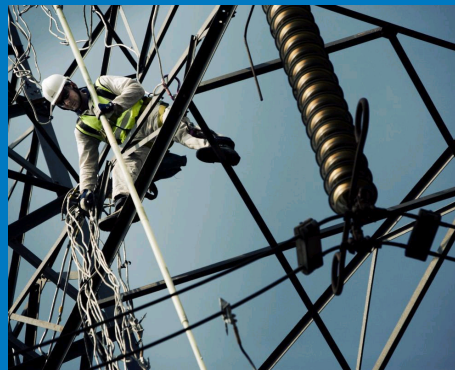
Proposal Non-Dynamic

- Incident monitoring
 - Monitored over each incident where the frequency deviates outside the preset trip level
 - affects payment for entire month
 - Banded penalties
- Events of default accumulated for each underperformance issue
- [3] strikes could terminate contract

Over to you...

Performance Monitoring		nationalgrid <small>THE POWER OF ACTION</small>		
	Continuous Dynamic	Incident Based Dynamic	Incident Based Non-Dynamic	Alternative
Data				
Sample Period				
Threshold				
Payment Impact				
Events of Default Threshold				
Notes				

BM Non-Dynamic



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BM Non-Dynamic Service

- Currently section 3A of the terms is blank

STC Structure	BM	Non-BM
Dynamic	Section 3 ✓	Section 4A ✓
Non Dynamic	Section 3A ✗	Section 4 ✓

- There may be BM providers who can deliver a non-dynamic response service more economically than a dynamic service

Service Specification

- Same generic rules as other FFR services
- Triggered by preset frequency deviation (TBA)
- Trip or fast deload (10sec)
- Must be able to remain at new output for at least [15]mins

Over to you...

- Would this service be of interest to you?
- What technologies could provide this service?
- Is it worth developing terms?

Market Information

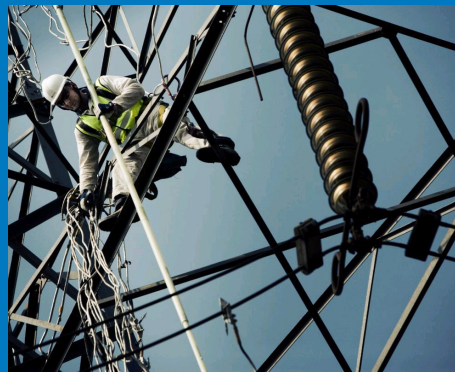


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Proposed changes

- New format presenting text side by side with the graphs they explain
- New section to highlight changes to previous information provided, dynamics of the last tender round, any other relevant news.
- The post-tender report will include a running total of existing contracts to complement the information provided in the report on contracted volumes.
- Option to provide the tables in the report in excel format to make it easier for readers to copy data.

Other Issues?



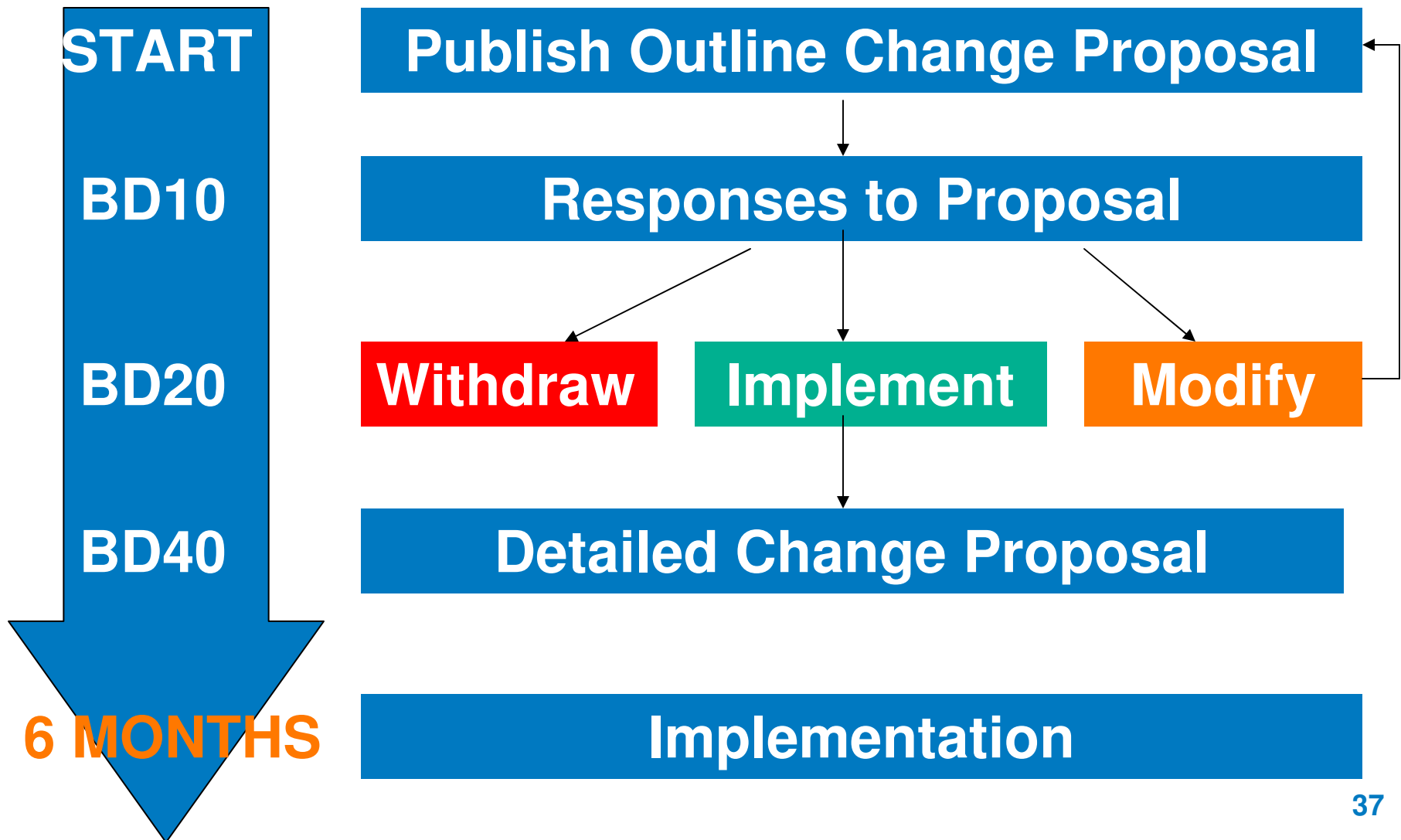
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Payment Simplification

- Can we simplify the payment structure by removing:
 - Window Initiation Fee
 - Window Revision Fee
- Fees have not been tendered since April 2008

Service Type	Participants	Availability Fee (£/h)	Nomination Fee (£/h)	Window Initiation	Window Revision	Energy Fee (£/MW/hr)
Dynamic	BM	✓	✓	✗	✗	✓ (CUSC)
	Non-BM	✓	✓	✗	✗	✓
Non-Dynamic	Non-BM	✓	✓	✗	✗	✓

Change Process



Other issues?

- Are there any further changes or developments you would like to see?

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