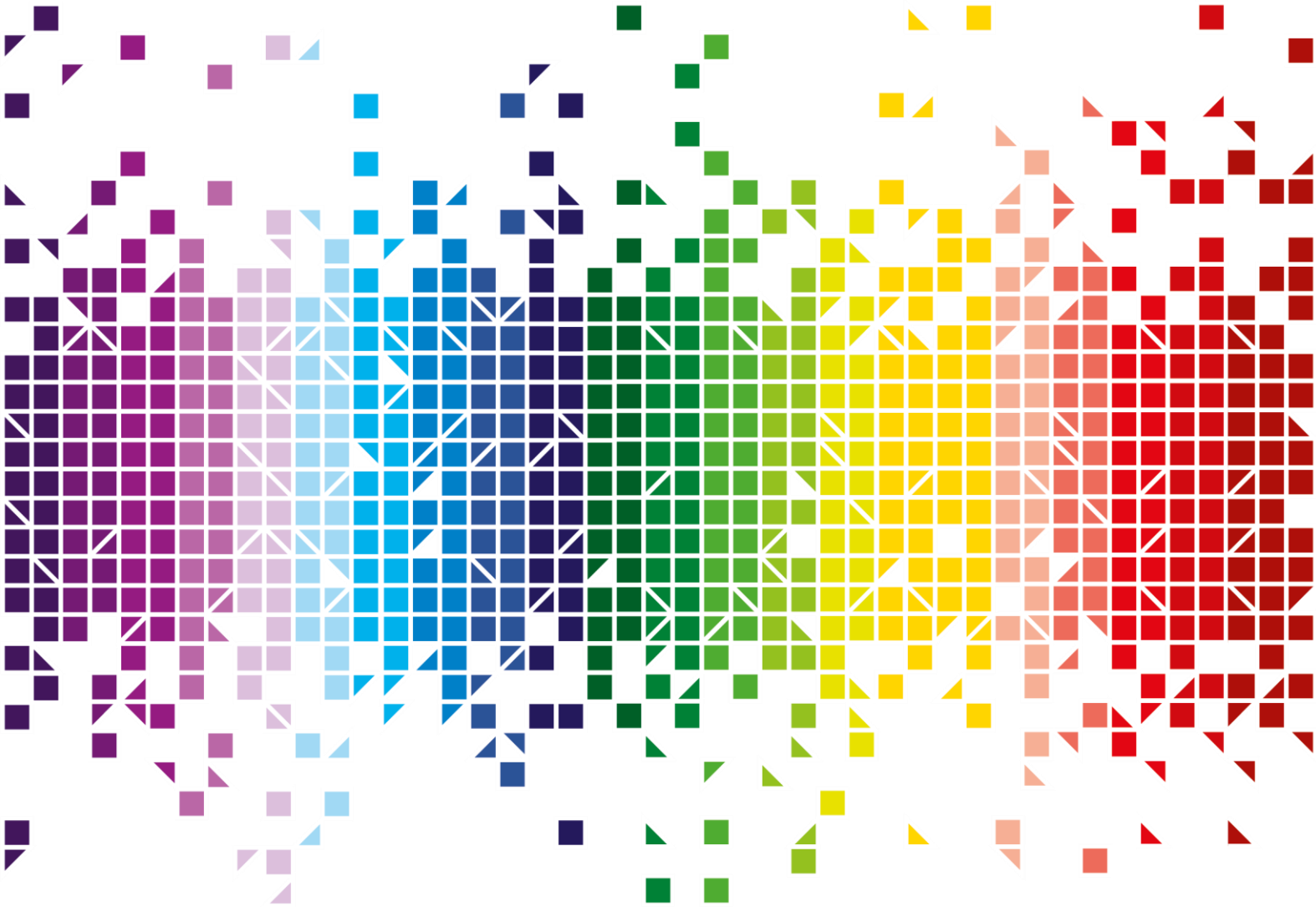
Performance Assurance Framework Risk Register Guidance

12 December 2017



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1. ABOUT THIS DOCUMENT

This document sets out guidance on the Performance Assurance Framework (PAF) Risk Register and the supporting Risk Register Templates.

The PAF Risk Register sets out operational and financial risk to gas settlement. The PAF and subsequently the PAF Risk Register is limited to energy and supply points within Local Distribution Zones. It does not extend to energy transported through the National Transmission System and supply meter points connected to it.

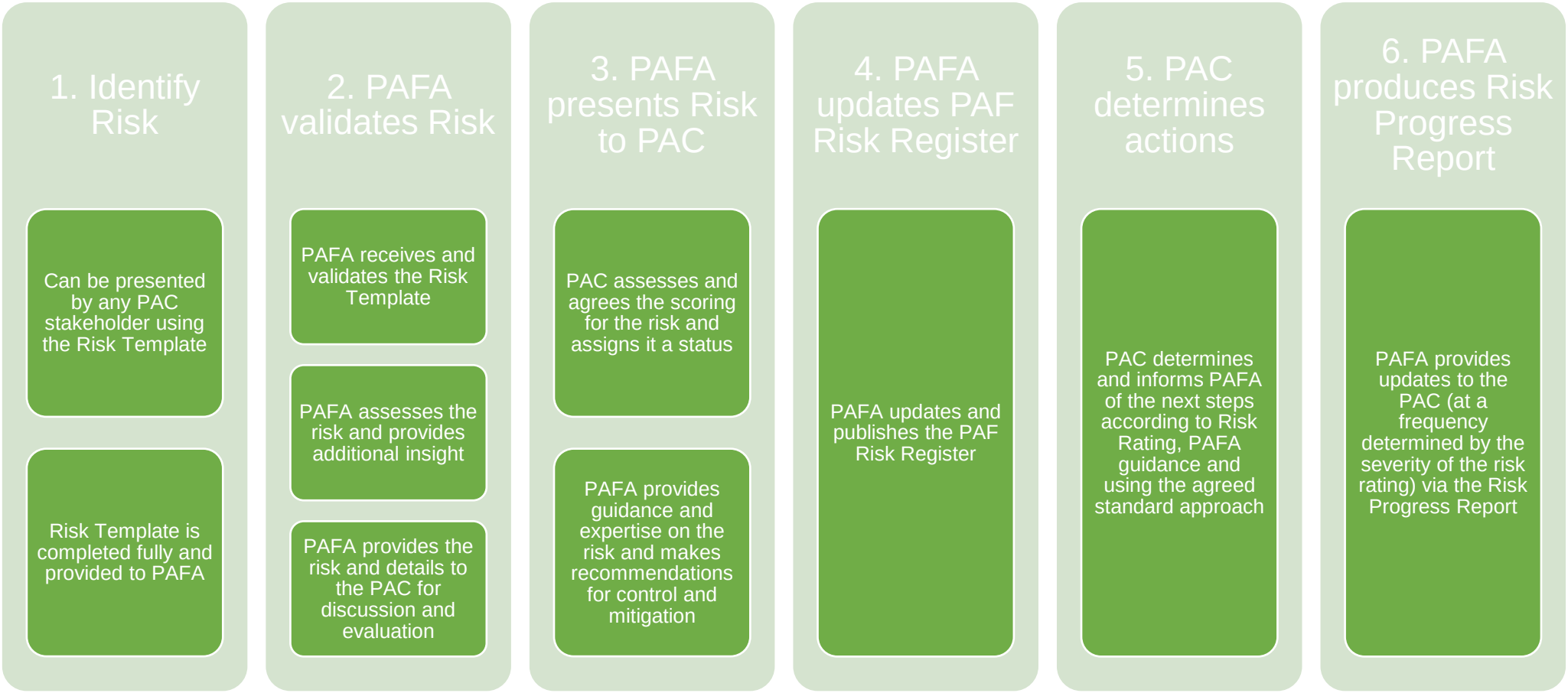
A risk can be defined as an uncertain event or set of events that, should it occur, will have an effect on the achievement of objectives. For Performance Assurance a risk is the probability that an event or action may adversely affect the performance and Gas Settlement arrangements. To highlight a risk for investigation is to ask the question "*what may be going wrong and what can be done about it?"*

Risk Management provides a framework within which business-critical risks can be identified, assessed, managed and reported in a visible, structured, consistent and continuous manner. Effective Risk Management will help to create and focus management action plans to mitigate against risk.

Below are details of the initial risk process for use within the PAF. This document uses the Performance Assurance Committee (PAC) Risk Register Approach as it's basis to form guidance on the PAF Risk Register.

2. PAF RISK REGISTER PROCESS

The process for identifying and managing a Risk is shown in the below diagram.



3. IDENTIFICATION OF RISK

Potential risks can be identified by a Uniform Network Code (UNC) party or statutory body and submitted to the Performance Assurance Framework Administrator (PAFA). To do this a standard Risk Template is provided in Appendix 1. A guideline for completion of the Risk Template is available in Section 4 and an example of a completed Risk Template is available in Appendix 2.

The Risk Template should be populated with all the information necessary to aid the PAFA to validate the risk and then provide this to the PAC for the next stage of the process. Should there be insufficient information to document the risk, the PAFA will need to liaise with the Risk Originator to obtain the relevant information.

4. POPULATING THE RISK TEMPLATE

The Risk Template is designed to provide sufficient information for the PAFA to facilitate discussions with the PAC and recommend updates the PAF Risk Register therefore it should be updated to the best of the party's knowledge.

The following fields are mandatory and should be populated. Any fields that have not been populated will result in a delay to the updating of the PAF Risk Register.

Item	Description
Date	Date the risk is raised
Raised by	Originator details, including a method for communication should the PAFA need additional information and for on-going communication regarding the progress of the risk
There is a risk that…	A description of the source of the risk, i.e. the event or situation that gives rise to the risk. A succinct sentence of what the risk is. For example, "*there is a risk that formulae year AQ is not being calculated for all Supply points*"
Because of…	Identify the cause of the risk, what could pose a risk. For example, "*because reads are not being submitted by 10 Shipper organisations*"
Leading to …	The consequence of the risk should it occur. For example, "*allocation of gas is not accurate and incoming Shippers may be burdened with an incorrect AQ when there is a transfer of ownership*"
Risk Scores	Score the risk based on estimated ratings for: • Energy Throughput • Likelihood of occurrence
Scores	The scores are calculated by taking a score from the Throughput impact should the risk occur, multiplied by the Likelihood of occurrence happening, multiplied by the Control Factor.

Current Controls Identified - Explanation	Any identified controls that already exist to mitigate against the risk
Any additional information/supporting information (optional)	Additional information that can be presented to the PAC to aid discussions and form actions; this may include example scenarios of the risk

Each risk is assigned a rating for both Energy Throughput and Likelihood of occurrence using the matrix below. The risk rating is scored based on the financial impacts and the likelihood of the risk occurring. The Cost (£'000) column has been added to provide an estimated monetary amount that relates to each Energy Throughput banding.

Rating	Energy Throughput (GWh)	Cost (£'000)	Likelihood Description
1 *(lowest)*	0 – 49	850	Remote Probability – <10% chance
2	50 – 249	4,250	Less Likely Probability – >=10% and < 40% chance
3	250 – 499	8,500	Equally unlikely as likely Probability – >=40% and < 60% chance
4	500 – 999	17,000	More likely Probability – >=60% and < 90% chance
5 *(highest)*	> 1,000	42,500 (no upper limit)	Almost certain Probability – >=90% chance

The matrix represents the risk ratings

A rating of 1 represents the lowest rating that equates to either an Energy Throughput of between 0-49 GWh or Likelihood of less than 10% probability. Conversely a rating of 5 represents the highest rating that equates to either an Energy Throughput of above 1,000 GWh or Likelihood of more than or equal to 90% probability.

The scores are calculated across 3 separate categories:

- Current risk - The current position of the risk based on the analysis you have undertaken.
- Target risk - Where you would like the risk to be in the future once controls have been put in place. For a risk to be minimised you would anticipate a control opinion of green even if the score is not zero.
- Inherent risk – The worst case scenario should the risk occur.

The risk scoring matrix looks at where this risk score is currently, what the worst case scenario could be should the risk not be addressed, and the target for the risk score following the expected mitigation actions.

All risk ratings and scores are subject to review and amendment by the PAC.

Risk Control	Control Factor	
Effective	x0.6	Key controls have not been established or are deemed to be ineffective. Action plans to rectify the fundamental weakness have still to be fully identified and agreed.
Partially Effective	x0.8	Key controls are in place but have either not been subject to suitable assurance activity or testing reveals that some control improvements, not deemed to be fundamental, are required.
Not Effective	x1	Key controls are in place, are tested periodically as appropriate and are deemed satisfactory. This testing includes independent challenge where the risk is deemed significant (e.g. from Internal Audit or another independent assurance provider).

Table of Risk Control and associated Control Factors.

4.1. RISK EXAMPLE

If a risk was identified that posed a financial risk of 100 GWh, and was less than 50% likely to occur, the Gross risk score would be: Throughput (2) x Likelihood (3) = Gross Score (6): 2 x 3 = 6.

Multiplication by the control factor would then produce the Net risk score.
If the risk had Partially Effective Controls, the Net risk would be:
Gross risk (6) x Control Factor (0.8) = Net risk (4.8): 6 x 0.8 = 4.8.

5. VALIDATING A RISK

At this stage, the PAFA receives the completed Risk Template and conducts the initial assessment of validating the risk. This will include reviewing the risk description, causes and consequences to ensure that the risk identified is not a duplication of an existing risk. The review will also look as the risk scoring and controls to see if the risk needs to be added to the PAF Risk Register and review any additional information.

The PAFA may approach the Risk Originator to gather additional information to further elaborate on what has already been provided in the Risk template.

Once the Risk Template is validated, the risk is given a score.

5.1. RISK EXAMPLE

If a risk was identified that posed a financial risk of 0.5 GWh, and was deemed less than 10% likely to occur, the Gross risk score would be: Throughput (1) x Likelihood (1) = Gross Score (1): 1 x 1 = 1.

Multiplication by the control factor would then produce the Net risk score.
If the risk had Partially Effective Controls, the Net risk would be:
Gross risk (1) x Control Factor (0.8) = Net risk (0.8): 1 x 0.8 = 0.8.

This risk would be deemed too low to be added to the PAF Risk Register, but would still be presented to the PAC for discussion.

6. RISK RATING SCORING

The risk rating scoring for Energy Throughput and Cost is based on the dynamic model developed by a third party (Engage Consulting) which simulates the Gas settlements process. The model simulates the settlement arrangements for an averaged sized Local Distribution Zone (LDZ) with seven Shippers operating in a competitive market.

To assess risk, the model uses an error distribution to identify the 1 in 20 worst-case event and quantify the inaccuracy that it would create if it materialised. The risk in kWh per day is run through the model to determine the Value at Risk (VAR) and how it is distributed among Shippers in the LDZ. The energy will be distributed to Shippers' based on an approximation of consumption over 12 months.

The VAR is the monetary amount associated with a risk if it were to happen. It is determined as the difference between the cost incurred between where there are no risks and the scenario where the cumulative probability of the scenario happening is 95%.

To determine the VAR, the average System Average Price (SAP) across the period of October 2012 and November 2016 of 1.7p was used. The energy volumes associated with the risk is multiplied by the SAP to determine the VAR.

6.1. RISK EXAMPLE

If a risk was identified that was less than 50% likely to occur and posed a financial risk of 79 GWh to Allocation and 0 GWh to Reconciliation, the VAR would be: Allocation (79 GWh) x SAP (1.7p) = VAR (£1,350,000): 79,000,000 x 0.017 = £1,350,000.

This risk would have an Energy Throughput and Cost banding of 2.
This risk would have a Likelihood banding of 3.

The Gross risk score would be: Throughput (2) x Likelihood (3) = Gross Score (6): 2 x 3 = 6.

Multiplication by the Control Factor would then produce the Net risk score.
If the risk had Partially Effective Controls, the Net risk would be:
Gross risk (6) x Control Factor (0.8) = Net risk (4.8): 6 x 0.8 = 4.8.

7. RISK PRESENTED TO PAC

All risks will be presented to the PAC to clarify and quantify. The PAC is responsible for assessing and agreeing on the score.

The PAC will discuss the nature of the risk, reviewing the risk description, causes and consequences to ensure that the risk identified is not a duplication of an existing risk. The review will also look at the risk scoring and controls to see if the risk needs to be adjusted based on the PAC's views. The PAC may request for additional information on the risk from the PAFA, who may contact the Risk Originator for more information.

All scores are subject to review and amendment by the Performance Assurance Committee.

Once the PAC agrees all aspects of the risk, the risk would be considered approved and would be added to the PAF Risk Register.

8. PAF RISK REGISTER

Once the necessary information is captured and the risk is approved by the PAC, the PAFA will translate the risk into the Risk Register Record. A copy of the Risk Register Record template can be found in Appendix 3.

A copy of the latest PAF Risk Register is available at the PAFA file sharing portal.
An example of a completed Risk Register Record is available in Appendix 4.

A definition of the components of the PAF Risk Register can be found below.
The following fields are mandatory and should be populated.

Item	Description
Risk Number	Unique Risk Number for identification (assigned by the PAFA)
Risk Description / Title	A concise title of what the risk is
There is a risk that…	A concise definition of what the risk is (not to be confused with what the risk consequence may be)
Effective From	The date at which the PAC approved the risk
Effective To	The date at which the PAC closed the risk
Raised by	The Originator of the risk to ensure they can be informed of progress
Risk Status (Active/ Monitoring/Closed)	The status of the risk Active – Risk is currently active on the PAF Risk Register Monitoring - Risk is currently active on the PAF Risk Register with Low scoring and has Controls in place Closed – Risk that has been Closed
Risk Energy and Financial Estimate - Allocation (GWh)	The estimated amount of energy in Allocation that is associated with the risk (in GWh)
Risk Energy and Financial Estimate - Allocation (£ '000)	The estimated amount of energy in Allocation that is associated with the risk (in £'000)

Risk Energy and Financial Estimate - Reconciliation (GWh)	The estimated amount of energy in Reconciliation that is associated with the risk (in GWh)
Risk Energy and Financial Estimate - Reconciliation (£ '000)	The estimated amount of energy in Reconciliation that is associated with the risk (in £'000)
Risk Scores	Risk scores are based on: • Energy Throughput • Likelihood of occurrence
Scores	The score is calculated by taking a score from each column based on the risk for each category. Based on the throughput impact should the risk occur multiplied by the probability of occurrence multiplied by the control factor
Control	This is based on the controls in place – categorised with a scale of Not Effective, Partially Effective and Effective based on the matrix. Control factors are applied to the risk based on the strength of the controls.
Gross Risk	The risk score based on Throughput and Likelihood that does not consider any controls
Net Risk	The risk score based on Throughput and Likelihood that does consider any controls
Risk Review Date	A review date of when the risk was last reviewed
Associated Risk	If this risk links to any other risk(s) within the PAF Risk Register this will list the linked Risk number(s)
Risk Type	Indicates if the risk is a Shipper risk, Transporter risk or both
Category	An indicator on whether the risk is related to Allocation, Settlement or both
Potential Causes of the risk	Identification of all the causes that may be creating the risk
Potential Consequences of the Risk Event Occurring (e.g. Because of …)	Detailing the consequences should the risk occur
Controls	For every potential cause of a risk a control needs to be identified to mitigate against the risk. Where there is no control an action will be created
Actions	The actions are identified to reduce the risk of occurrence based on controls identified. The actions are specific and have an identified owner and target date of completion. All actions are required to be reviewed and updated quarterly as a minimum. The result of a completed action is that a control has been implemented which in turn will reduce the risk score and may influence the risk status
Owner and Target Completion Date	Identification of an owner to complete the action. In some scenarios, this may entail all industry parties; in other scenarios this may be one organisation or may be the PAFA

The scores are calculated across 3 separate categories:

- Current risk - The current position of the risk based on the analysis you have undertaken.
- Target risk - Where you would like the risk to be in the future once controls have been put in place. For a risk to be minimised you would anticipate a control opinion of green even if the score is not zero.
- Inherent risk – The worst case scenario should the risk occur.

Risk Control	Control Factor	
Effective	x0.6	Key controls have not been established or are deemed to be ineffective. Action plans to rectify the fundamental weakness have still to be fully identified and agreed.
Partially Effective	x0.8	Key controls are in place but have either not been subject to suitable assurance activity or testing reveals that some control improvements, not deemed to be fundamental, are required.
Not Effective	x1	Key controls are in place, are tested periodically as appropriate and are deemed satisfactory. This testing includes independent challenge where the risk is deemed significant (e.g. from Internal Audit or another independent assurance provider).

Table of Risk Control and associated Control Factors.

9. PAC ACTIONS

For every potential cause of a risk, a control needs to be identified. Where controls do not exist, an action will be created to reduce the Likelihood of occurrence of the risk. Some of the current risks in the PAF Risk Register have controls around producing and reviewing performance reports to monitor Shipper and Transporter performance on a monthly basis. The specification for the current suite of reports is defined in Performance Assurance Report Register.

The PAC will decide on the course of action to be taken for the identified risk and delegate these accordingly. Some of the currently actions in the PAF Risk Register is to investigate issues associated with each risk.

All actions will have an assigned owner who is accountable for them with a defined target date. The PAFA will support the PAC to monitor and update the actions within the PAF Risk Register and will therefore liaise with all parties and owners of actions. The PAFA will recommend updates to the actions either monthly for high scoring (above 15) risks or quarterly for low scoring (less than 8) risks and inform the PAC. Any actions incomplete will be subject to regular scrutiny from the PAC.

The table below shows the nature of action activities required based on the risk score.

Risk Score	Description
> 15	Any risk score above 15 requires action with frequent monitoring and monthly reporting to the PAC
8 - 15	Any score between 8 and 15 will be actioned and monitored but will only be reported into the PAC on a quarterly basis
< 8	Any scores below 8 will result in the risk being closed

10. RISK PROGRESS REPORT

A risk review date is provided on the PAF Risk Register to indicate when the risk was last reviewed.
For high scoring risks, this will be monthly; all other risks will be reviewed quarterly.

All risks are submitted to the PAC and will be subject to a Risk Progress Report. The Risk Progress Report is to provide an update of planned actions and risk management activities to help shape the target risk score and action progress. The PAFA will provide the Risk Progress Report to the PAC as required with recommendations on actions and risk management activities to take.

Risks will be given a status based on the score (Active/Monitoring/Closed). Where the risk is deemed to have little or no impact it will be closed and the Risk Originator will be informed, along with a suitable explanation. Risks that are identified as having a low score with controls in place may require monitoring and therefore may remain open with a status of 'monitoring'. As and when required, the PAC will update the risk score and determine the next steps, e.g. to escalate or close the risk.

The PAFA is responsible for administering and maintaining the PAF Risk Register. The PAFA will recommend updates to the PAF Risk Register based on the outcomes of the PAC risk discussions, actions and controls, and where necessary will close the risks.

11. CLOSING A RISK

Risks are closed based on the result of the actions and the controls put in place. The Risk Progress Report may highlight that controls are in place and subsequently the PAC may amend a risk score. Where risk scores have reduced or have met the target and are no longer deemed to be a risk to Gas Settlement performance, the PAC may choose to close the risk. The PAFA will recommend updates to the PAF Risk Register accordingly and notify the Risk Originator of the actions completed and the outcome of the risk raised.

Where the risk is deemed to have little or no impacts it will be closed and the Risk Originator will be informed, along with a suitable explanation.

Appendix 1 - Performance Assurance Risk Template: Please complete the template with as much information as possible that to aid the registration and initial investigation of the proposed risk. All fields are mandatory unless otherwise specified. Please refer to the guidance notes.

Date		**Raised by (include contact details)**				
There is a risk that… (Risk Description)						
Because of… (Cause)						
Leading to… (consequence)						
Risk Scores		**Throughput (1-5)**	**Probability (1-5)**	**Control (Not Effective, Partially Effective, Effective)**	**Gross Risk**	**Total (Net Risk)**
	Current					
	Target					
	Inherent					
Current Controls Identified - Explanation			**Any additional information / Supporting information (optional)**			

Appendix 2 – Completed Performance Assurance Risk Template

Date	20/04/2015	**Raised by (include contact details)**	Stephanie Stephenson Theoretical Gas Ltd. Tel: 07000 1000000			
There is a risk that… (Risk Description)	Meter Read performance is having a detrimental impact on rolling AQ.					
Because of… (Cause)	Meter Read submissions are not as frequent as they should be for class 4 sites. 5 Shippers have not hit any of the UNC targets for their portfolios.					
Leading to… (consequence)	Where no reading is submitted the AQ cannot be updated therefore there is a risk to allocation and settlement.					
Risk Scores		**Throughput (1-5)**	**Probability (1-5)**	**Control (Not Effective, Partially Effective, Effective)**	**Gross Risk**	**Total (Net Risk)**
	Current	3	4	Not Effective (x1)	12	12
	Target	2	1	Effective (x0.6)	3	2
	Inherent	5	5	Partially Effective (x0.8)	25	20
Current Controls Identified - Explanation			**Any additional information / Supporting information (optional)**			

Appendix 3 – Performance Assurance Framework Risk Register Entry

Risk Number		**Risk Description / Title:**						
		There is a risk that…						
Effective From		**Raised by**		**Risk Energy and Financial Estimate**	**Allocation (GWh)**		**Allocation (£ '000)**	
Effective to		**Risk Status (Active/ Monitoring/Closed)**			**Reconciliation (GWh)**		**Reconciliation (£ '000)**	
Risk Scores			**Throughput**	**Likelihood**	**Control**	**Gross Risk**	**Net Risk**	**Risk Review Date**
		Current						
		Target						
		Inherent						
Associated Risk		**Risk Type**			**Category**			
Potential Causes of the risk		**Potential Consequences of the Risk Event Occurring (e.g.. Because of …)**		**Controls**	**Actions**		**Owner and Target Completion Date**	

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Appendix 4 – Completed Performance Assurance Framework Risk Register Entry

Risk Number	PACR002	**Risk Description / Title:**	Incomplete Meter Read Submissions					
		There is a risk that…	Meter Read performance is having a detrimental impact on rolling AQ					
Effective From	21/04/2015	**Raised by**	Steven Stevenson (Theoretical Gas Ltd.)	**Risk Energy and Financial Estimate**	**Allocation (GWh)**	-	**Allocation (£ '000)**	-
Effective to	01/01/8099	**Risk Status (Active/ Monitoring/Closed)**			**Reconciliation (GWh)**	150	**Reconciliation (£ '000)**	3
Risk Scores			**Throughput**	**Likelihood**	**Control**	**Gross Risk**	**Net Risk**	**Risk Review Date**
		Current	3	4	Not Effective (x1)	12	12	Initial discussions to be held at the PAC on 5th May and scores to be agreed
		Target	2	1	Effective (x0.6)	2	1.2	
		Inherent	5	5	Partially Effective (x0.8)	25	20	
Associated Risk	N/A	**Risk Type**	Shipper Performance		**Category**		Settlement	
Potential Causes of the risk		**Potential Consequences of the Risk Event Occurring (e.g.. Because of …)**		**Controls**	**Actions**		**Owner and Target Completion Date**	
Meter Read submissions are not as frequent as they should be for class 4 sites. 5 Shippers have not hit any of the UNC targets for their portfolios.		Where no reading is submitted the AQ cannot be updated therefore there is a risk to allocation and settlement.		Targets are set to mitigate against this risk: Monthly MRF: 90% per calendar month; SSP Annual: 70% in 12 month period; LSP Annual: 90% in 12 month period Further incentives may be required.	To be agreed at meeting 05/05/15.		To be agreed at meeting 05/05/15.	

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