

Schedule for incorporating Deloitte recommendations into DME's Energy Risk Management Policy and Operating Procedures

HIGH PRIORITY

	Capability	Sub capability	Recommendations	Addressed in Policy Update	Timing
1	Governance	1.1.1.R1 Risk Governance Hierarchy	Review Risk Policy. Reassess governance hierarchy	March report to Council / PUB	Phase 1
2	Governance	1.1.1.R2 Governance Hierarchy	Update Policy and Procedures to show daily, monthly, quarterly and annual practices	p. 5	Phase 1 (Operating Procedures will be updated separately in Phase 2)
3	Governance	1.1.2.R1 BOD oversight	Frequency of risk reporting to Council. Standing agenda. Pre-reads	pp. 8, 16	Phase 1
4	Governance	1.1.3.R1 Risk Management Committee	Consolidate to single RMC. Reconstitute Committee members	p. 8	Phase 1
5	Governance	1.1.3 R4	Regularly scheduled RMC meetings. Standard set of reports prepared and distributed by Chairman before meeting	p. 8	Phase 1
6	Risk Policy	1.2.1.R1 Risk Policy & Admin	Expand Policy Appendix A to include wider range of limits <ul style="list-style-type: none"> • Tenor Limits • Volume Limits by day, week, month • Risk limits Document process for monitoring and reporting non-compliance of limits	pp. 24-26 pp. 16-17	Phase 1
7	Risk Policy	1.2.1.R2 Policy & Admin	Update Risk Policy Appendix D specificity on permissible products and instruments. <ul style="list-style-type: none"> • Commodities authorized • Derivative instruments allowed • Non-derivative products allowed (CRRs) 	pp. 32-34	Phase 1
8	Risk Policy	1.2.1.R3 Policy & Admin	Update Risk Policy & Procedures. Seek formal approval by RMC and Council	p. 5	Phase 1 (Operating Procedures are approved by RMC only. No Council approval necessary)

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9	Hedge Program Design	1.3.1.R1 Objectives & Hedge Strategy Design	Discuss hedge strategy in Risk Policy including design processes, objectives, implementation, simulation testing and measures. Report failures to achieve objectives	pp. 8-9, 16, 21, 22	Phase 2
10	Hedge Program Design	1.3.2.R1 Risk Profiling & Hedge Strategy Analysis	Quantify DME risk profile. <ul style="list-style-type: none"> • Risk exposure – w/ & w/o hedges • Volume exposure • Price exposure • At risk metrics 	pp. 9, 11-17, 21-23	Phase 2
11	Hedge Program Design	1.3.4.R1 Risk Limits	Develop and implement risk limits linked to financial objectives <ul style="list-style-type: none"> • At risk metrics such as Rate at Risk, Cash Flow at Risk, Credit & Collateral at Risk • Monthly reports to RMC • Link risk limits to pre-approved risk mitigation strategies 	pp. 12, 22-23, 28	Phase 2
12	Delegation of Authority	1.4.1.R1 Delegation of Authority	Ensure consistency of Delegation of Authority memo to Risk Policy	Not part of Risk Policy. Updating 7/7/17 memo to reflect current staffing and organization.	
13	Roles, Resources & Structure	2.3.1.R1 Adequacy of Resources	Cross training to provide redundancy across front, middle and back offices	Part of separate effort	Ongoing
14	Position, P/L, Risk Reporting	3.4.R1 At-Risk Measures	Middle Office should implement risk metrics and measurements	pp. 9, 12-15	Phase 2
15	Position, P/L, Risk Reporting	3.4.R2 At-Risk Measures	Daily risk reports sent to RMC members in addition to EMO personnel. Tie risk metrics to hedge strategy and program objectives.	pp. 5, 9, 11, 16	Phase 2
16	Data/Risk Inputs	4.1.1.R1 Visibility of All Risks / Commodities	Identify alternative ETRM systems and implement	Not part of Risk Policy. Will seek Council approval separately.	

MEDIUM PRIORITY

	Capability	Sub category	Recommendations	Addressed in Policy Update	Timing
1	Governance	1.1.1.R2 BOD Oversight	Develop quarterly risk management report for Council / PUB	p. 8	Phase 2
2	Governance	1.1.1.R3 BOD Oversight	Periodic training of Council / PUB on fundamentals of energy markets & commodity trading	p. 16	Phase 2
3	Governance	1.1.3.R2 Risk Management Committee	Establish RMC chairman. Define duties of chairman. Identify resources to support day-to-day oversight responsibilities of chairman	pp. 7-8	Phase 1
4	Governance	1.1.3.R3 Risk Management Committee	Create RMC meeting guidelines	p. 8	Phase 1
5	Governance	1.1.4.R1 Segregation of Duties	Update organizational chart, job descriptions	p. 31	Phase 1
6	Risk Policy	1.2.1.R4 Risk Policy & Admin	Formal and annual acknowledgement that all required personnel have reviewed and understand risk policy	p. 35	Phase 2
7	Risk Policy	1.2.2.R1 Risk Policy Updates	Review and maintain log of changes to Risk Policy & Risk Operating Procedure. Create procedures to ensure updates are distributed and communicated to organization.	pp. 9-10	Phase 2
8	Hedge Program Design	1.3.1.R2 Objectives & Hedge Strategy Design	Review hedge strategy at least annually and evaluate EMO performance.	p. 9	Phase 2
9	Hedge Program Design	1.3.3.R1 Risk Appetite	Quantify DME's risk appetite and tolerances and create framework for communicating with Council and PUB	pp. 12, 22	Phase 2
10	Hedge Program Design	1.3.5.R1 Book Structure	Document book structure in Operating Procedures Manual	Not part of Risk Policy. Book structure part of ETRM implementation. Will be documented	

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				in Operating Procedures (approved by RMC)	
11	Knowledge Sharing	2.1.1.R1 Resource Adequacy Knowledge Sharing	Knowledge sharing within EMO front, middle and back office groups to help offset rapidly changing organizational changes. Topics may include <ul style="list-style-type: none"> • Hedge accounting • Risk modeling and analysis • Risk assessment • Market risk • Credit risk 	Ongoing	
12	Knowledge Sharing	2.1.1.R2 Resource Adequacy Knowledge Sharing	Increase interaction between Front, Middle and Back office groups to get exposure outside of their day-to-day responsibilities	Planning to implement during Q3-2018	
13	Product Requirement Forecasting & Planning	3.1.1.R1 Communications	Review and approval or load forecasting methodology by RMC. Document methodology in EMO Procedures Manual	pp. 7, 11, 12	Phase 2 (EMO procedures manual needs updating. RMC members need training before they can approve methodology.)
14	Pre-trade Analytics	3.3.1.R1 Tactical Meetings	Add following standard agenda items for RMC meetings <ul style="list-style-type: none"> • Current objectives • Compliance with risk limits • Required hedging activity • Emerging risks • Other key topics 	p. 8	Upon adoption of Phase 1 Risk Policy update
15	Pre-trade Analytics	3.3.2.R1 Trade Analysis & Comparison Against Limits	Develop daily report showing compliance with all risk and hedge strategy compliance limits	p. 9-10	Various daily reports currently produced and distributed manually. Expansion to include risk limits and hedge strategy compliance will be added as part of Phase 2 and

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					automated as part of ETRM replacement project.
16	Position, P/L, Risk Reporting	3.4.1.R1 Position Reporting	Include automated Position Reporting as part of new ETRM System	Will be a requirement of new ETRM system	
17	Position, P/L, Risk Reporting	3.4.2.R1 Mark-to-Market Process	Include automated MtM and P&L process as part of new ETRM System	Will be a requirement of new ETRM system	
18	Position, P/L, Risk Reporting	3.4.3.R1 Market Data Sourcing	Expand description of market data sourcing and forward curve development / modification in Risk Policy Manual	Dependent on ETRM system. Will include in Operating Procedures.	Phase 2
19	Position, P/L, Risk Reporting	3.4.5.R1 Management Reporting	Develop standard reporting package for Council and PUB	p. 16	Phase 2
20	Controls	3.8.1.R1 Process Controls	Develop control framework for energy and risk management activities, including Control objectivity, activity and type	p. 9, 21-27	Phase 2
21	Data / Risk Inputs	4.1.3.R1 Review and Approval of Data Sourcing & Valuation Methodologies	Develop and clearly document process for validating price and volatility data in ETRM system	Part of new implementation of new ETRM system. Will be included in Operating Procedures (approved by RMC)	
22	Data / Risk Inputs	4.1.3.R1 Review and Approval of Data Sourcing & Valuation Methodologies	Ensure segregation of duties between Front and Middle Offices as part of data sourcing and MtM process.	pp. 8-10	Part of new implementation of new ETRM system
23	Controls	4.3.2.R1 End of Day Processing	Develop and document end of day activities	Part of new implementation of new ETRM system. Will be included in Operating Procedures (approved by RMC)	

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LOW PRIORITY

	Capability	Sub category	Recommendations	Addressed in Policy Update	Timing
1	Risk Policy	1.2.1.R5 Risk Policy & Admin	Develop compliance log of operational / procedural violations	p. 9	Phase 2
2	Pre-trading Activities	3.2.2.R1 New Products	Develop a new product review and approval process	p. 9	Phase 2
3	Position, P/L, Risk Reporting	3.4.6.R3 At-Risk Measures	Periodic independent review of daily portfolio-level risk report	pp. 8, 9	Phase 3
4	Stress Testing	3.5.1.R1 Scenario Analysis	Middle Office perform regular stress-tests to ensure ongoing validity of at-risk metrics	p. 13	Phase 2
5	Stress Testing	3.5.2.R1 Back testing Risk Measurements	Middle Office perform back testing of at-risk measurements annually	pp. 8, 9, 13	Phase 2
6	Stress Testing	3.5.2.R2 Back testing Risk Measurements	Document back testing of at-risk measurements in EMO Operating Procedures manual	p. 13	Phase 2
7	Stress Testing	3.5.2.R3 Back testing Risk Measurements	Independent resource should review back testing results and methodology	p. 13	Phase 2
8	Settlement	3.6.1.R1 Actualization	Include capability to retrieve actual prices and volumes in ETRM system to support settlement processes	Part of new implementation of new ETRM system. Will be included in Operating Procedures (approved by RMC)	
9	Settlement	3.6.2.R1 Settlement Discrepancies	Develop formal settlement discrepancy tracking and resolution log	Part of new implementation of new ETRM system. Will be included in Operating Procedures (approved by RMC)	
10	Accounting	3.7.1.R1 G/L Reconciliation – Realized P&L	Develop formal realized P&L discrepancy tracking and resolution log	Part of new implementation of new ETRM system. Will be included in Operating Procedures (approved by RMC)	
11	Accounting	3.7.2.R1 Reconciliation – Unrealized P&L	Develop formal unrealized P&L discrepancy tracking and resolution log	Part of new implementation of new ETRM system. Will be included in Operating Procedures (approved by RMC)	
12	Accounting	3.7.3.R1 Links between hedge and exposure	Within either the ETRM system or manually, document the link between each hedge transaction (hedge instrument) and the exposure it is intended to hedge (hedged item). Requirement to document the link should be included in EMO	Part of new implementation of new ETRM system. Will be included in Operating Procedures (approved by RMC)	

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			Procedures manual and desk procedures		
13	Controls Processes	3.8.1.R2 Controls Processes	Periodic independent review of the following controls <ul style="list-style-type: none"> • Deal capture • Trade execution • Data sourcing and valuation methodologies • Risk limit compliance • Risk management program compliance • Credit limit compliance • Annual credit assessments • User roles and permissions and regular updates • Risk Policy compliance • EMO Procedures compliance 	pp. 11-14 and in Operating Procedures (approved by RMC)	Ongoing. Implementation details on model validation and controls framework is currently under development and will be added to Policy as part of Phase 2.
14	Credit	3.9.1.R1 Credit Rating Methodology	Evaluate current methodology and verify it is adequately described in EMO Procedures manual. Consider whether it would be more appropriate to include in a desk procedure	Include in Operating Procedures (approved by RMC)	Phase 2
15	Credit	3.9.2.R1 Credit Rating Methodology	Evaluate whether EMO Procedures for credit evaluations should be updated	Underway	Phase 2
16	Credit	3.9.3.R1 Counterparty Creditworthiness Reviews	Evaluate whether EMO Procedures for counterparty creditworthiness reviews should be updated	Underway	Phase 2
17	Credit	3.9.3.R2 Counterparty Creditworthiness Reviews	Document a more detailed desk procedure based on Counterparty Evaluations EMO Procedure manual	Underway	Phase 2
18	Reporting	4.2.1.R1 Planned Reporting	Develop automated position, credit and risk reports	Part of new implementation of new ETRM system. Will be included in Operating Procedures (approved by RMC)	
19	Reporting	4.2.2.R1 Confirmations	Ensure all transactions are appropriately tagged with a status (actual, pending, confirmed) and develop a trade status report to allow	Part of new implementation of new ETRM system. Will be included in Operating Procedures (approved by RMC)	

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			Front, Middle and Back offices the required visibility into transacting activity		
20	Controls	4.3.1.R1 Transaction Completeness and Accuracy	Develop a set of deal capture controls to ensure transactions are entered timely, completely and accurately within new ETRM system	Part of new implementation of new ETRM system. Will be included in Operating Procedures (approved by RMC)	
21	Controls	4.3.1.R2	Review transaction capture controls on an annual basis	Will initiate upon implementation of new ETRM system.	