



## Corporate Risk Management

### Middle Office Compliance Report Related Merchant Transactions April - August 2008

---

#### Related merchant transactions - Management Control Plan<sup>1</sup>

*Resale of power purchased from third parties and which either flows over transmission owned or reserved by/for Manitoba Hydro or was purchased for Manitoba Hydro system requirements and has subsequently been deemed surplus.*

#### Transaction Limits

- > Maximum net power position of 1000 GWh
- > Fixed price to fixed price transactions may be entered into only if there is a positive profit margin
- > All other transactions may be entered into only if there is a positive expected value and with a term no more than three days in duration.
- > Maximum duration six months

#### Approval Authority

- > Merchant Energy Products up to and including 14 calendar days in duration: Manager, Power Trading or Division Manager, Power Sales & Operations
- > Merchant Energy Products Day Ahead: Day Ahead Power Trader or Financial Trading Supervisor
- > Merchant Energy Products Real Time: Day Ahead Power Trader or Financial Trading Supervisor or Real Time Power Trader or Physical Trading Supervisor

#### Comments

- **Transactions reviewed for the period were determined to be compliant.**

Risks associated with this trading activity include the risk that the energy may not be accepted by CDN market, pricing may change in the CDN market between the time energy is purchased in the day ahead market in US and delivery of the sale into CDN market at hourly or pre-dispatch price). In addition, a net position other than zero (purchases net of sale) may result in the risk of financial exposure and be considered a pure merchant transaction which has not been approved at this time.

The energy is purchased, not generated by the corporation. The volume of transactions are currently limited by the capacity of the related transmission positions.

---

<sup>1</sup> Approved by the Board of Directors November 22, 2007

**Middle Office Compliance Report  
Related Merchant Transactions  
April to August 2008**

	APRIL		MAY		JUNE		JULY		AUGUST	
<b>Number Deals</b>	394		404		388		407		370	
<b>Duration</b>	1 Day		1 Day		1 Day		1 Day		1 Day	
<b>% Total Deals with Losses</b>	6.9%		6.4%		3.9%		4.7%		5.4%	
	Total MWh	Total Settlement	Total MWh	Total Settlement	Total MWh	Total Settlement	Total MWh	Total Settlement	Total MWh	Total Settlement
<b>CDN Market</b>										
Purchases[1]	134,987	6,738,880	162,213	5,437,408	162,168	8,060,927	146,961	7,255,605	114,441	4,211,988
Sales	<u>134,987</u>	9,064,487	<u>162,213</u>	7,507,361	<u>162,168</u>	11,551,852	<u>146,961</u>	9,340,004	<u>114,441</u>	5,460,656
Net Position	0		0		0		0		0	
Total Trading Gains/(Losses)[2]		2,325,607		2,069,953		3,490,925		2,084,399		1,248,668
Profit Share to Third Party										
<b>Other[3]</b>										
Purchases	7,005	246,529	2,288	56,612	3,622	108,939	3,131	80,806	2,107	121,075
Sales	7,005	<u>186,870</u>	2,288	<u>50,214</u>	3,622	<u>123,834</u>	3,131	<u>77,836</u>	<u>2,107</u>	128,299
Total Trading Gains/(Losses)		(59,659)		(6,398)		14,895		(2,970)		7,224
Profit Share to Third Party										
Transmission & Market Costs[4]										
Net Profit		<u>883,966</u>		<u>373,783</u>		<u>1,644,950</u>		<u>598,513</u>		<u>421,269</u>

**Compliant**

[1] US dollar purchases converted to CDN at Webtrader monthly rate

[2] Before transmission and market costs

[3] Purchases not accepted by CDN market and sold back into US

[4] Source: Webtrader monthly summary



**CORPORATE RISK MANAGEMENT  
MIDDLE OFFICE COMPLIANCE REPORT  
OPPORTUNITY BOOK - SHORT TERM CONTRACTS - PHYSICAL AND FINANCIAL  
APRIL - AUGUST 2008**

---

Currently, Opportunity Book reports provided to the Committee consist of short term bilateral physical, financial, operating reserve contracts, Day Ahead, physical, financial, real time and virtual transactions.

This compliance report reviews short term bilateral physical and financial contracts that are included in the above noted report. Day ahead and real time transactions will be reviewed in future by Middle office.

**System Energy & Related Products - Management Control Plan<sup>1</sup>**

*"System energy products include physical bilateral contracts, day ahead market and real time market power transactions and related products. The underlying intent for these transactions is the physical delivery of power to or from Manitoba Hydro's system."*

*Forward sales and purchase contracts, two weeks and longer in duration are formalized in writing in accordance with the applicable Master Agreement. The power trader or marketer negotiates these forwards sales using industry pricing indicators as a guide."*

**Pricing**

- ✓ As a minimum, Hydro will require recovery of 110% of its incremental costs in making any short term forward sale commitment. The power trader or marketer uses this information along with industry pricing indicators to negotiate forward contracts.

**Transaction Limits**

- ✓ No specific limits established in the Management Control Plan for short term physical forward sales.

---

<sup>1</sup> Approved by the Board of Directors November 22, 2007

## **System Financial Products<sup>1</sup>**

*Put and call options, swaps and bilateral contracts for differences for power or natural gas for the purpose of managing the uncertainty in available generation or load forecast or fuel supplies for Hydro's power supply assets. In addition, these products may be used to enter into favorable forward sales or to minimize exposure to price volatility on power and gas purchases.*

### **Permitted Financial Products**

- ✓ Put and call options, swaps, and bilateral contracts for differences. Financial Transmission Rights, auction revenue rights, virtual bids and offers and bilateral contracts registered as financial schedules.

### **Volume Limits**

- ✓ Cannot exceed the projected underlying physical position.

## **Approval Authority**

Transactions from existing generation or purchase from 15 calendar days up to the later of 5 months or the next March 31<sup>st</sup>:

Power Sales & Operations Market Committee or Division Manager Power Sales & Operations for volumes for purchase or sale *and*,

Manager, Power Trading or Financial Trading Supervisor for transactions.

## **Confirmation Method**

Either orally or through electronic communication or approved electronic platform followed up by written confirmation. The Management Control plan states that written contracts are reviewed, approved and signed in accordance with the approval authority requirements noted above.

## Compliance Issues

Middle Office is not able to verify complete compliance on these transactions due to:

- a) Insufficient supporting documentation, and
- b) Management Control Plan is very broad for these transactions

We note that a large part of the supporting documentation required to determine compliance is not formally required by the Management Control Plan or the Contract Documentation and Review Procedures.

Middle Office will work together with Power Trading and Export Power Marketing to develop processes and procedures based on good practice for supporting documentation in order to be able to assess compliance.

1. Procedures for entering into short term physical or financial contracts (up to the later of 5 months or the next March 31<sup>st</sup>) and longer term energy transactions that may include the opportunity portfolio *prior* to approval for quantities for sale do not specify the form of approval required (i.e. verbal or written). It would not be possible to verify verbal approval.
2. We are unable to determine projected supply available for sale and the position related exposure at the time decisions are made on how much is exposed to spot prices and how much is committed to term transactions at fixed prices. Emails for quantities to be approved do not reference projected supply available from the relevant EMMA run at the time these decisions are made.
3. We are unable to verify compliance with the 110% pricing policy as the readily available deal analyzer Emma runs (hard copy) for the short term contracts (both physical and financial) were dated after the contract had been entered into rather than at the time the contracts were negotiated and submitted for approval. The appropriate Deal Analyzer runs would need to be obtained from the PSO server back up tapes.

Industry pricing that may have been used as a guide is not readily available as part of the supporting documentation for each contract. Due to copyright restrictions, Middle Office would require its own subscription to various market price publications in order to retrieve and review the data. Power Trading did provide copies of some historical data and PIRA forecasts for our guidance on pricing.

4. The May 23, 2007 minute of the EPRMC approved that:

“Power Sales and Operations be authorized to enter into financial transaction with counterparties under the ISDA Agreement on the condition that in all cases transactions will be backed by physical product and that the corporation will not enter into transactions as a purely financial play.”

We are unable to verify specifically that the financial swaps were used for either or all of: managing the uncertainty in available generation or load forecast, minimize exposure to price volatility (hedges), or as a favorable forward sale since the control plan is very broad with no specific hedging parameters or targets established.

In addition, there are no documented procedures in place for determining and executing hedge strategies or when financial swaps would be used simply as a favourable forward sale rather than the physical delivery. Staff advised that swaps are mainly entered into as a forward sale with counterparties that do not hold transmission positions from Manitoba. The ability to lock in financially with counterparties allows Manitoba Hydro to purchase or sell energy to the market without being restricted to a small amount of counterparties that hold transmission positions from Manitoba.

Part of the PSOMC terms of reference includes the *review, and approval of*

- a) Energy product sales and purchases implementation plan for transactions longer than two weeks for capacity, energy, including ancillary services and transmission products.
- b) Hedging product sales and purchases for transactions longer than two weeks in duration.
- c) General bid and offer strategies for hedging product sales and purchases for transactions two weeks or less in duration.
- d) In addition, The Market Committee *reviews, and provides recommendations for approval* to the Vice-President, Power Supply on general hedging strategies, including objectives, types of instruments, and the establishment of risk tolerances.

No items noted above appeared in the minutes from January 2008 to present that would assist in determining compliance on this matter. The PSOMC terms of reference is inconsistent with the Approval Authority Table and current practice resulting in a need to clarify the role of PSOMC. These issues were raised at the PSOMC meeting on September 17, 2008. The terms of reference for above noted a) to c) will be revised to reflect current practice. Approvals in relation to d) will be revised from Vice President, Power Supply to the EPRMC.

5. Coordination of procedures between EPM and PTD opportunities and related good practice supporting documentation will assist in ensuring that financial contracts cannot exceed the projected underlying physical position.

We were able to determine that the volume of short term financial swaps entered into by Power Trading was within the volume limits of quantities approved for short term sale and the contracts with the counterparties had ISDA agreements in place. This does not include any financial contracts entered into by Export Marketing associated with longer term energy agreements that involved the opportunity book up to the later of 5 months or the next March 31<sup>st</sup>.

### **Other Comments**

A number of written contracts had not yet been signed by the counterparty and remained outstanding for a lengthy period after the transaction had been entered into. Middle Office notes that this was an issue identified by Internal Audit Phase II Power Trading and Settlement Processes October 2007. Procedures and processes were put in place in response to the Audit. It should be noted that these time lags are to be expected from time to time if legal and/or other administrative resources from both parties are required to review the written contracts. The written contract is confirmation of the already verbally committed transactions.

The attached summary table outlines a portfolio position report for the period that includes total volumes and average price for the contracts entered into by Power Trading (Export Power Marketing financial contracts are excluded).

**Middle Office Compliance Report**  
**April to August 2008**

**Short Term Opportunity (up to later of 5 months or next March 31st)**

<b>VOLUME ON PEAK (MW)<sup>1</sup></b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>VOLUME OFF PEAK (MW)<sup>3</sup></b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug</b>
<b>Forecast surplus volume</b>	<b>not available</b>					<b>Forecast surplus volume</b>	<b>not available</b>				
Volume Approved for Sale	600	650	600	550	550	Volume Approved for Sale	200	400	0	50	50
Physical Bilateral Avg Price <sup>2</sup>	200 \$82.86	300 \$81.24	250 \$87.49	250 \$96.69	250 \$96.69	Physical Bilateral Avg Price <sup>2</sup>				50 \$49.50	50 \$49.50
Financial Bilateral Swaps Avg Price <sup>2</sup>	50 \$78.00	275 \$74.08	200 \$83.52	200 \$104.00	200 \$104.00						
Avg Index Price <sup>2</sup>	\$75.00	\$57.38	\$64.24	\$91.44	\$70.09						
Remaining Surplus	350	75	150	100	100	Remaining Surplus	200	400		0	0

<sup>1</sup> 5 X 16

<sup>2</sup> US dollars

<sup>3</sup> weekend and off peak

Note: Excludes financial contracts entered into by Export Marketing that include the Opportunity Portfolio up to the later of 5 months or the next March 31st.