

Comparison of Ontario Energy Forward Market Options

Column #	External to IESO (NGX/ICE, other exchange, broker, OTC)				IESO					
	Financial Swap		Physical Contract		Financial Swap		Physical Contract			
	A	B	C	D	E	F	G	H	I	
Current or Potential	Current		Potential		Potential		Potential			Current
Price settlement method	Bid/Ask		Bid/Ask		Bid/Ask		Market Clearing Price through IESO Auction			Bid/Ask
Cleared, Administered or Bilateral	Cleared by NGX	Bilateral	Cleared by exchange (eg NGX). IESO must authorize exchange if data transfer used.	Bilateral contracts - IESO must authorize external parties if data transfer used.	Administered by IESO. (Note: IESO may authorize external party system to complete the transactions)	Administered by IESO- Preliminary Assessment EFM (PA EFM). Note that external party could run auction but this was not part of the PA EFM.	Administered by IESO. (Note: IESO may authorize external party system to complete the transactions)	Administered by IESO. (Note: IESO may authorize external party system to complete the transactions)	Bilateral (physical bilateral mechanism in market rules- MPs provide quantity and delivery point)	
Interaction with IESO	n/a	n/a	Exchange may or may not transmit quantity and price data electronically for IESO settlement.	External party may or may not transmit quantity and price data electronically for IESO settlement.	If external party system is utilized, then quantity and price data is transferred electronically to the IESO.	If external party system is utilized, then quantity and price data is transferred electronically to the IESO.	If external party system is utilized, then quantity and price data is transferred electronically to the IESO.	If external party system is utilized, then quantity and price data is transferred electronically to the IESO.	MPs may or may not submit contract quantity to IESO for netting. No price data transferred.	
Prudentials	NGX is the clearinghouse. NGX establishes prudential requirements for all exchange participants. NGX assumes 100% risk of settlement.	Prudentials are managed between the parties of each transaction. Each party to the transaction assumes 100% risk of settlement.	Prudentials same as A if no data transfer to IESO. Otherwise: Exchange establishes prudential requirements for exchange transactions / participants. NGX assumes 100% financial risk for EFM settlement, whereas IESO only allocates RT defaults to Market Participants (MP). Even if a load conducts all transactions through EFM, the IESO will require a minimum of prudentials since IESO cannot immediately shutoff physical delivery of power. Generators may need to post prudentials with IESO should they become "a net buyer in RT", but this is likely mitigated by the fact that generators usually have net amounts owing to them by IESO MPs. NGX may require generators to post prudentials but there is potential to lower these prudentials if the IESO / generators allow NGX to draw upon any amounts owing to generators by IESO MPs. Balancing activity will be handled in the RT market, therefore if IESO prudentials are revised to allow for a reduction due to EFM volumes, new market rules need to be established for imbalance prudentials.	Prudentials same as B if no data transfer to IESO. Otherwise: Two scenarios. 1) In those cases where the broker takes credit risk, default risk and assumes 100% financial risk: Prudential requirements for all parties are set by the broker. Therefore prudentials will be the same as column C . 2) In those cases where each transacting party takes on credit risk, default risk (ie: broker does not): There are no official prudential requirements, as these are negotiated / managed between buyer & seller for each transaction. Therefore prudentials will be the same as column I .	Any financial forward contracts will be administered independent of the RT market. Total prudentials held by the IESO will increase, since the requirements will be calculated for each market independently. Default levies will be applied independently (not combined) to each market. No opportunities seem apparent to reduce prudentials but there may be opportunities to consolidate margin call amounts for both markets.	Any financial forward contracts will be administered independent of the RT market. Total prudentials held by the IESO will increase, since the requirements will be calculated for each market independently. Default levies will be applied independently (not combined) to each market. No opportunities seem apparent to reduce prudentials but there may be opportunities to consolidate margin call amounts for both markets.	IESO will calculate a combined physical RT and day-ahead prudential requirement. MPs will share in combined RT and day-ahead default levies. Prudential posting requirements will likely be similar to current postings.	IESO will calculate a combined physical RT and day-ahead prudential requirement. MPs will share in combined RT and day-ahead default levies. Prudential posting requirements will likely be similar to current postings.	Load prudentials are not changed except for those Market participants with a credit rating of BBB- or higher, for whom the IESO may adjust the prudential requirement by including the physical bilateral quantities.	
Implications for Market Rules	n/a	n/a	Revisions required if data transferred.	Revisions required if data transferred.	Revisions required.	Rules written for IESO auction, but revisions required in any case.	Revisions required.	Revisions required.	Rules are written.	
IESO System requirements	n/a	n/a	If data transferred, need system and revisions to settlement and prudential tools to include EFM quantity.	If data transferred, need system and revisions to settlement and prudential tools to include EFM quantity.	If external party system utilized, need system for data transfer. If no external party system, then IESO needs to build bid/ask system and transfer that data to settlement. Prudential tools will need to be developed.	If external party system utilized, need system for data transfer. IESO auction system is built but not enabled and needs review/updates. Prudential tools will need to be developed.	If external party system utilized, need system for data transfer. If no external party system, then IESO needs to build bid/ask system and transfer that data to settlement. Need revision to prudential tools to include EFM quantities.	If external party system utilized, need system for data transfer. If no external party system, then IESO needs to build bid/ask system and transfer that data to settlement. Need revision to prudential tools to include EFM quantities.	System is built	
Who can transact?	Any registered exchange participant	Anyone	It is possible for non-MPs and MPs to participate, depending on design details. Only MPs can transfer data.	It is possible for non-MPs and MPs to participate, depending on design details. Only MPs can transfer data.	Only MPs	Only MPs	Only MPs	Only MPs	Only MPs	