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Storage Issues in Canadian Markets

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Agenda

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- Storage Issues, Challenges & Solutions
  1. Changing Regulatory Environment in Ontario (Storage Forbearance)
  2. Changing Market Dynamics
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  4. Opportunities & Challenges for New Storage Development
- Summary

Spectra Energy Gas Transmission System

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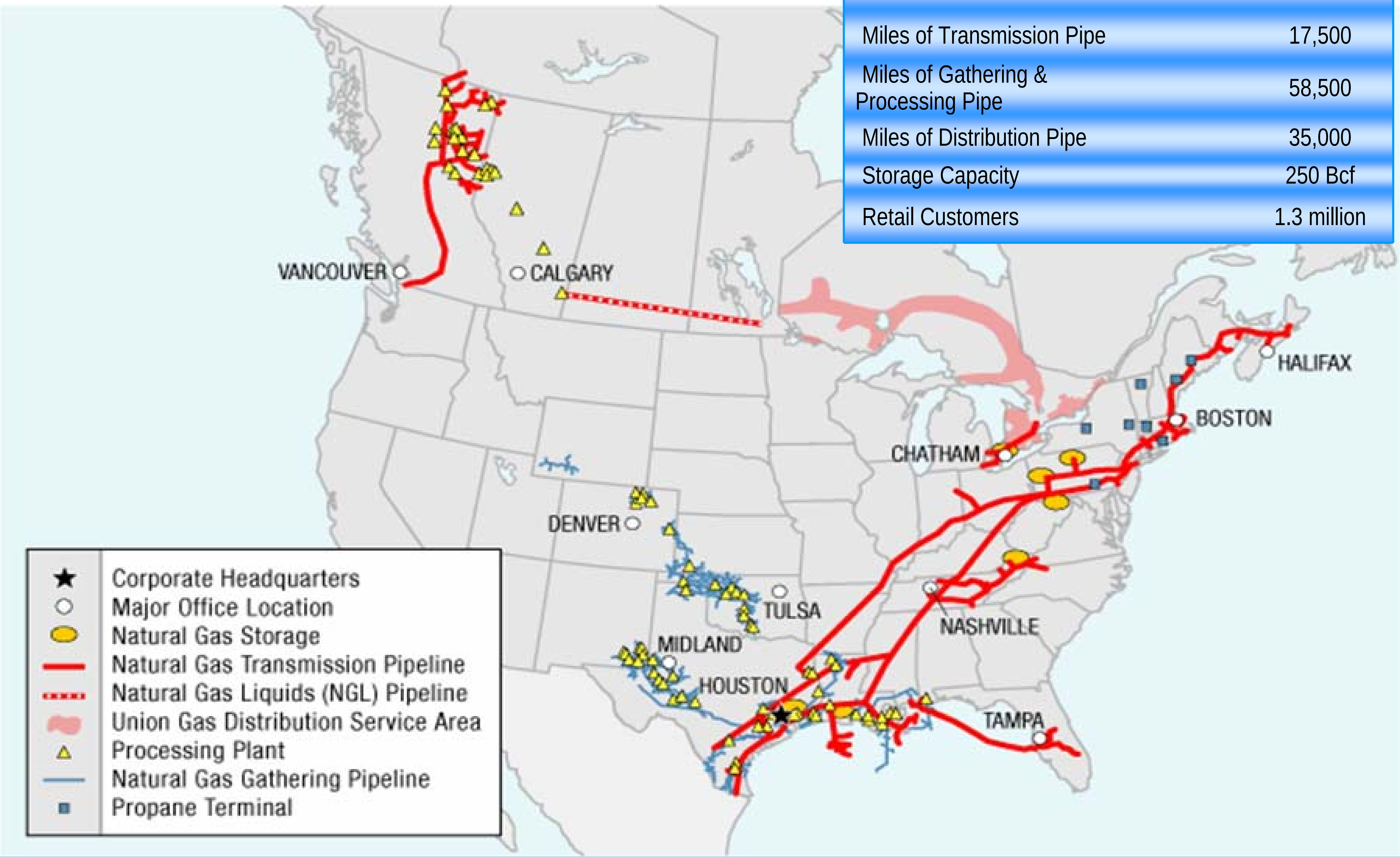
Natural Gas Throughput	2.9 Tcf
Miles of Transmission Pipe	17,500
Miles of Gathering & Processing Pipe	58,500
Miles of Distribution Pipe	35,000
Storage Capacity	250 Bcf
Retail Customers	1.3 million



Corporate Introduction
- Spectra Energy / Union Gas (2007)

	Spectra Energy	Union Gas
Assets	$23.0 billion	$4.6 billion
Revenue	$4.7 billion	$1.9 billion
EBIT	$2.1 billion	$322 million
Employees	8,340	2,200
Distribution Customers		1.3 million

Union Gas Operations

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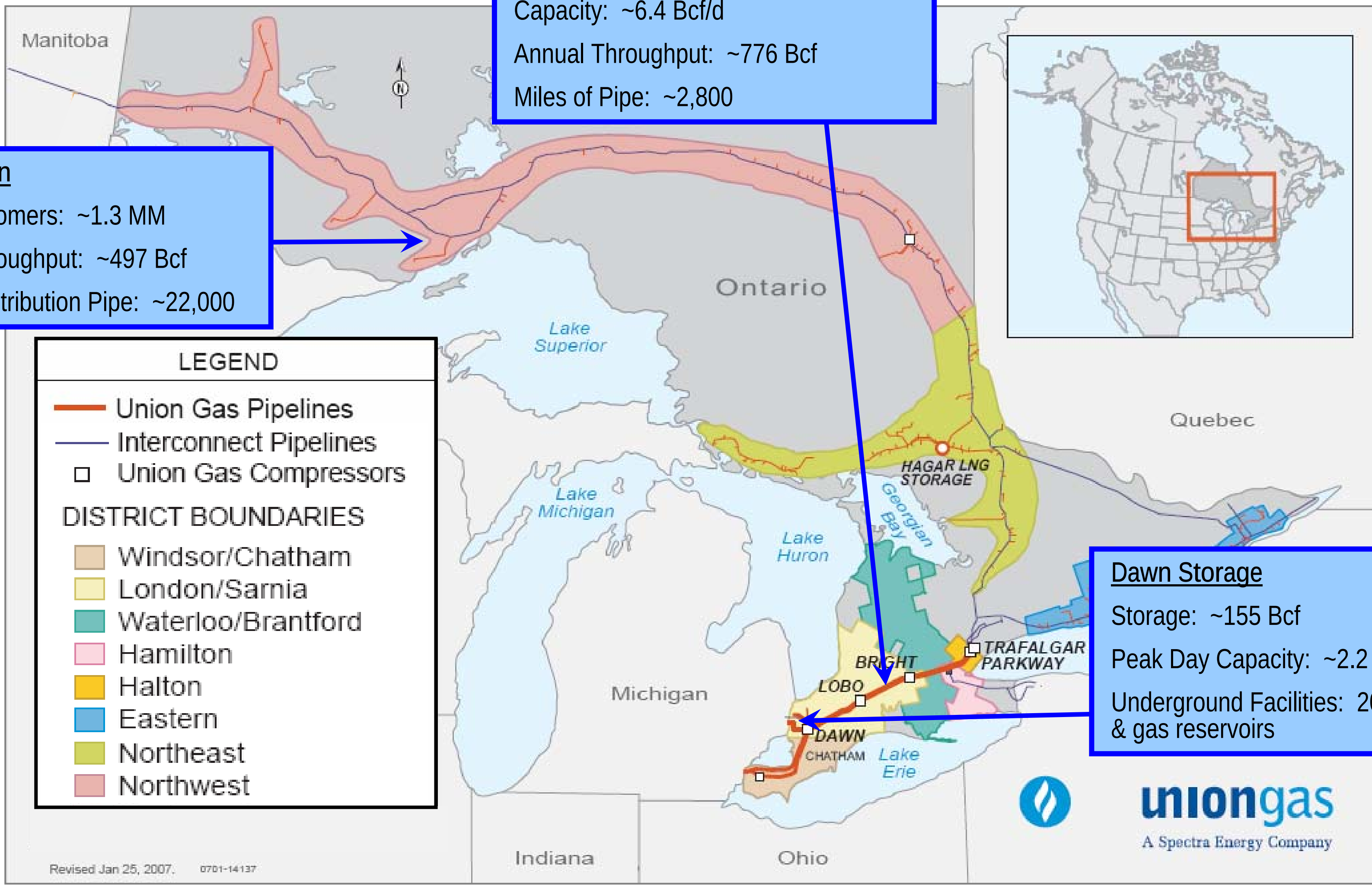
Transmission
Capacity: ~6.4 Bcf/d
Annual Throughput: ~776 Bcf
Miles of Pipe: ~2,800

Distribution
Retail Customers: ~1.3 MM
Annual Throughput: ~497 Bcf
Miles of Distribution Pipe: ~22,000

Dawn Storage
Storage: ~155 Bcf
Peak Day Capacity: ~2.2 Bcf/d
Underground Facilities: 20 depleted oil & gas reservoirs



Changing Regulatory Environment in Ontario (NGEIR)

Changing Regulatory Environment
(Storage Forbearance)

Storage regulation in Ontario <u>**before**</u> the Nov 2006 Natural Gas Electricity Interface Review (NGEIR)

- Ontario Energy Board (OEB) was required to approve all storage contracts greater than 18 months or 2 Bcf
- OEB was required to approve all storage rates (sold within range rates)
- OEB was required to approve all new facilities
- Market based ex-franchise storage revenue above cost of service rates shared with in-franchise customers

Changing Regulatory Environment (NGEIR)

In 2005 and 2006, the Ontario Energy Board held a policy review regarding the interface between gas and electricity (NGEIR)

Policy review consisted of two main components:

1. Review of new short notice storage and balancing services for power generators
    - Negotiated settlement reached in June 2006
2. Review of storage regulation in Ontario
    - Board decision received in November 2006

Review of Storage Regulation in Ontario

Key Questions Addressed by Regulator	OEB Decision
Is the Ontario storage market competitive?	*Yes* •current storage providers do not have market power; storage prices are determined by reference to competitive commodity markets •Ontario competes with greater regional market including Michigan, Illinois, Pennsylvania, New York
Should storage for non-utility customers continue to be regulated?	*No* •storage services for ex-franchise non-utility customers will not be regulated •storage services for Union Gas in-franchise distribution customers will continue to be regulated
Should new storage services (i.e. high deliverability) be regulated? Should new storage operators/facilities be regulated?	*No* •new storage services *and* new storage operators will not be regulated •OEB still approves facilities

Review of Storage Regulation In Ontario

Storage regulation in Ontario <u>after</u> the Nov 2006 Natural Gas Electricity Interface Review (NGEIR)

- OEB to cease to regulate and allow for market pricing on:
  - Exfranchise storage services
  - New storage services offered to infranchise customers
  - All storage services offered by other operators
- Existing cross subsidy of infranchise rates from exfranchise storage sales to be eliminated over 4 years
- OEB no longer to approve storage contracts between customer and Union
- Storage for in-franchise customers to remain at cost of service rates
- OEB must still approve new facilities

Review of Storage Regulation

Impact of NGEIR Change

1. New framework supports long term investments and expansions in infrastructure
   - Union is undergoing a significant expansion to increase storage deliverability by 500,000 mcfd for Nov 2008 in-service
   - Union has launched a Phase II open season for 200,000 mcfd of new deliverability for Nov 2010
   - Enbridge is undergoing expansion to add 2 Bcf of high deliverability storage, to be completed by late 2008
2. Allows for new creative services to meet changing customer requirements

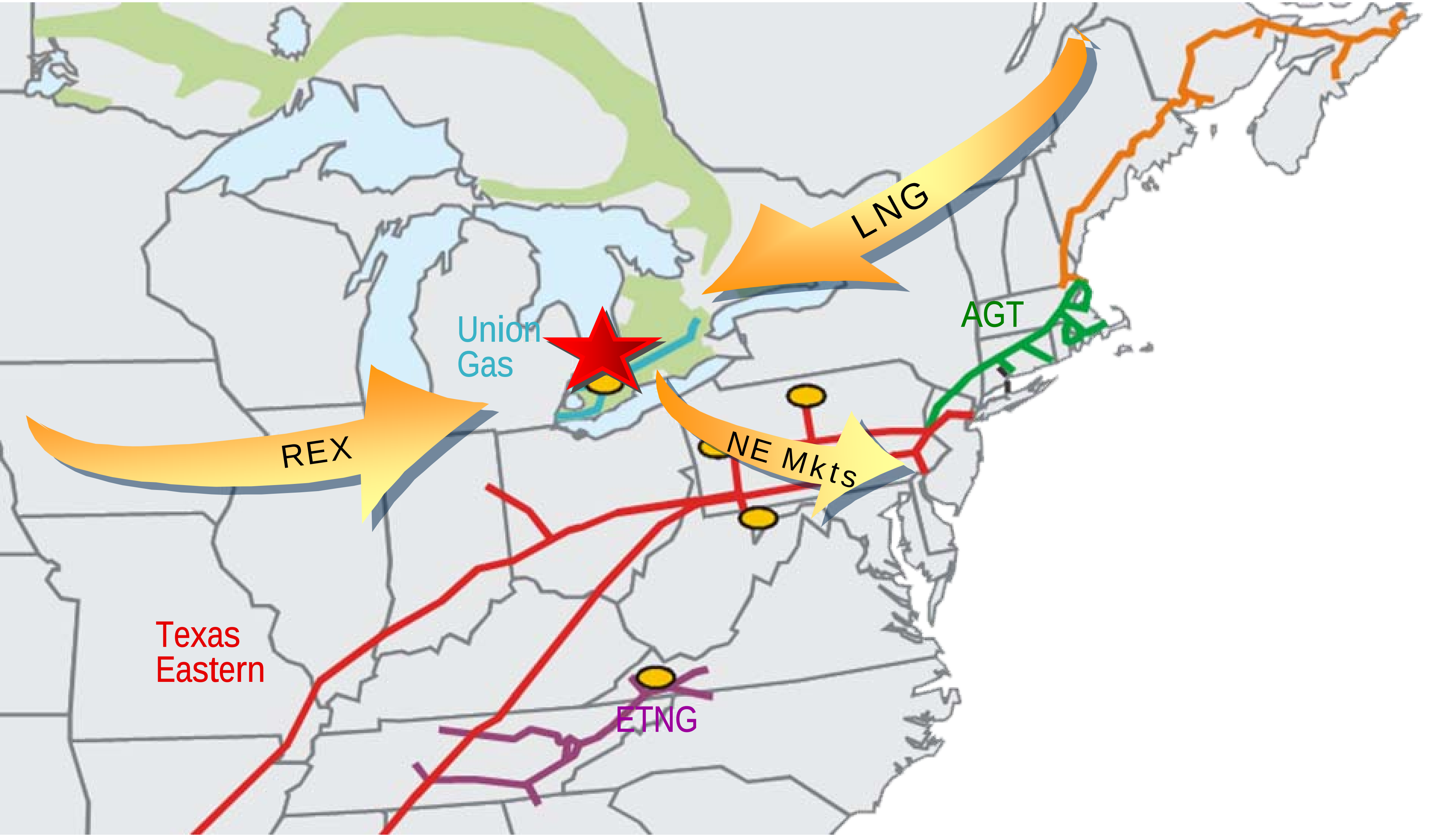
Changing Market Dynamics

Changing North American Market Dynamics

1. Supply Changes
    - Reduction in gas flows from traditional basins (WCSB) and increased gas supplies from new sources
        - Rockies (REX), Gulf Coast Shale
        - New proposed LNG terminals on east coast will deliver gas supplies to market areas
            - Load factor on LNG terminals (higher summer) will impact storage demands

2. Market Changes
    - Residential/commercial market average use is trending down, peak use increasing
    - Increased natural gas fired power generation, higher summer and winter demands
    - Changing market dynamics will drive incremental balancing requirements

Change in Gas Flows to/through Ontario



Changing Requirements for Storage

Changing Requirements in Storage Markets

i. Traditional Storage Services

- 90 day firm withdrawal storage services offered long term
- Allows for seasonal balancing, single cycle
- Traditional users were utilities, in-franchise industrial customers

ii. Marketer Storage Services

- Development of liquid market hubs and deregulation of markets attracted marketers to storage
- Typically requires either more firm services or more IT services
- Used to provide customized balancing services to their customers or to take advantage of market arbitrage opportunities, etc.
- Often multi cycles

iii. Recent Changes in Storage Market

- Ontario is currently building 4,000 MW of gas fired generation with a further 2,500 MW of natural gas fired generation expected by 2010/11
  - Increased need for high deliverability storage (less need for space, more need for deliverability)
  - Increased need for new intra-day balancing services (less need for seasonal)
  - Will have multiple cycles of storage space

New Storage Services

In response to the requirements of the changing storage market Union developed and is now offering a suite of new storage services (Power Producers / Marketers)

- High Deliverability Storage (10 or 20% deliverability)
  - Current open season underway for Phase II expansion – Nov 1, 2010
- F24-T - Firm all day transportation
  - 13 nomination windows available, firm all day (industry standard = 4, firm for 1st window only)
- F24-S – Firm all day storage injections/withdrawals / 13 windows
- Upstream Pipeline Balancing Service (UPBS)
  - Load shaping service – allows for uneven flows across day
- Downstream Pipeline Balancing Service (DPBS)
  - Short notice balancing with 15 minute notice, in market area (Parkway)
  - Aligns with TCPL's FT-SN service

Opportunities & Challenges for Storage Development

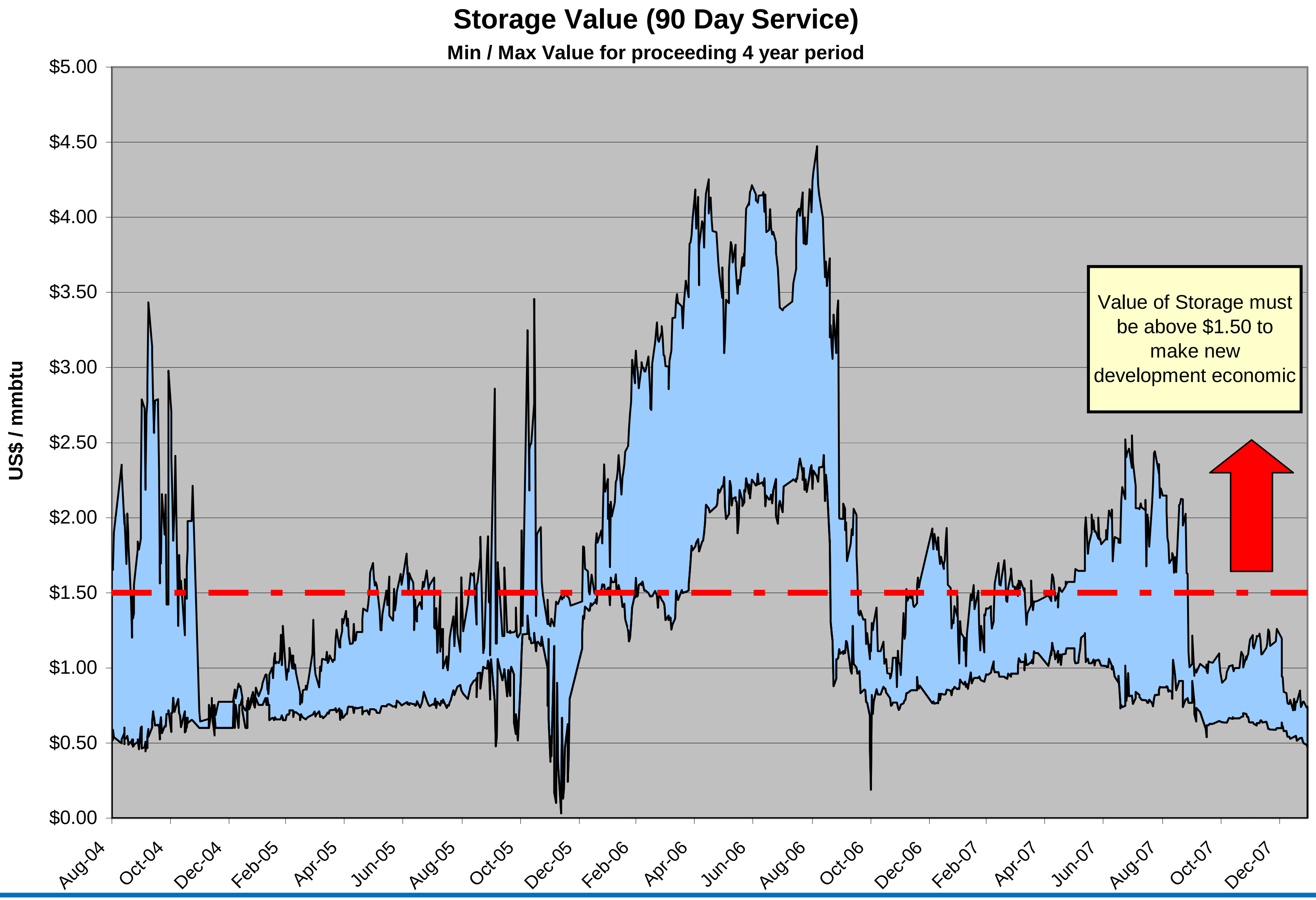
Support for Future of Storage Development

- ✓ Increased market demand
  - Storage is in high demand for all market segments (Ontario, U.S. Northeast)
- ✓ De-regulation of storage in Ontario
  - Competitive market which supports new physical storage expansion
  - Market will signal need for new capacity
- ✓ Growing need for new and innovative storage services to reflect changing need of storage customers
- ✓ Increased liquidity at the Dawn HUB

Challenges for Market Driven Storage Development

- New storage development more expensive
  - Construction costs increasing
  - More competition
  - New storage developments may be further away from market centers
- Long term commitment to support capital vs shorter term market needs
- Economic Viability
  - Long term storage valuations need to support project expansion
- Timing of Expansions
  - 2-year lead time required to complete facility expansions
- Alignment with customer demands
  - Projects come on-line in large “lumpy” increments

Challenges for Market Driven Storage Development



Summary

- Storage forbearance decision has changed the Regulatory framework under which storage is operated and developed in Ontario
- New storage services are being developed to meet demands of a changing market
- Union has and will continue to lead the way in the development of services for the power generation market and other interested parties
- Union’s Dawn storage operations and Dawn to Parkway Transportation system are a key linkage to all new supplies to access storage and key growing eastern Canadian and U.S. northeast markets

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