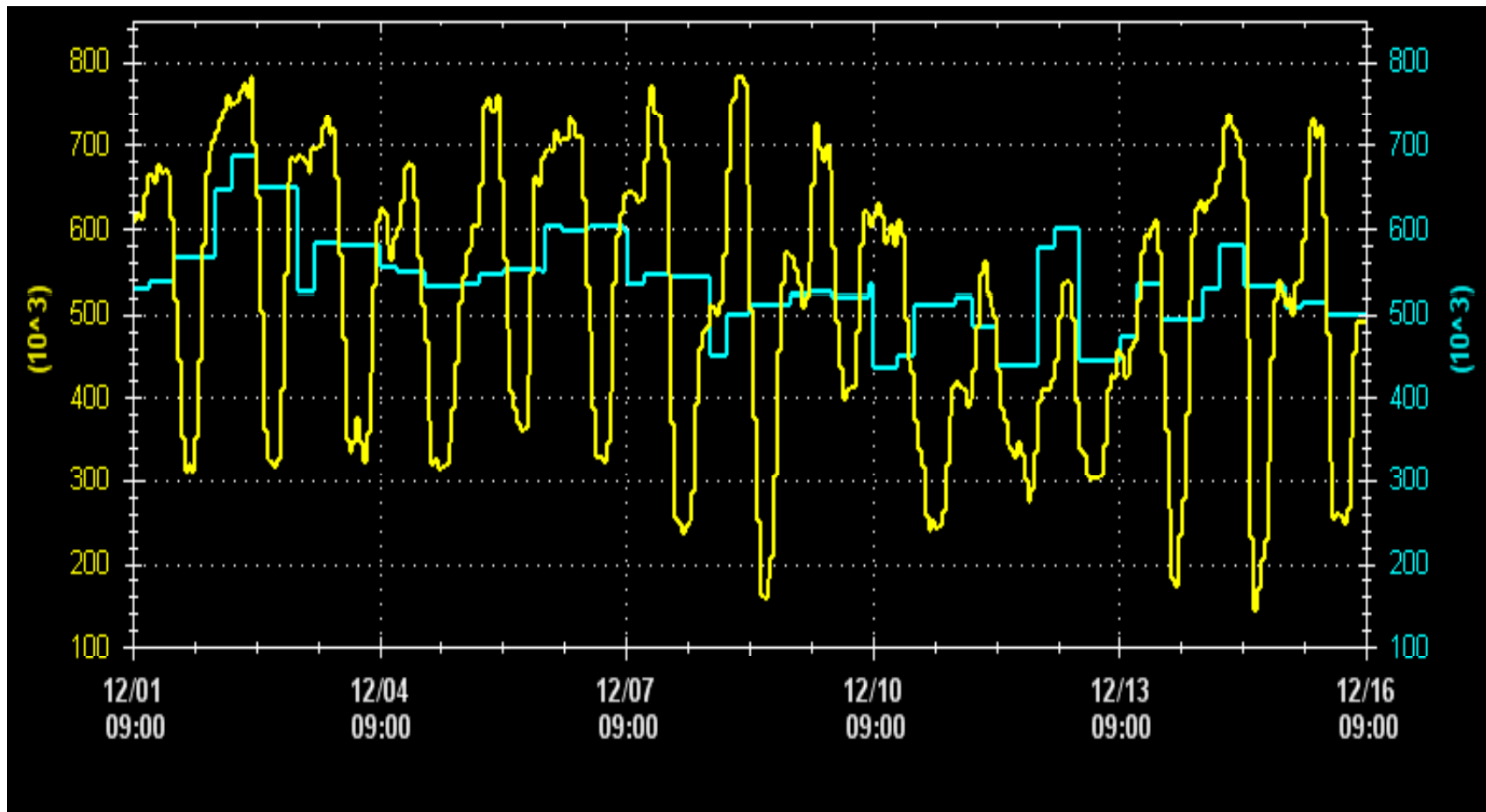


Interstate Pipeline and LDC operational challenges serving Power Generation market

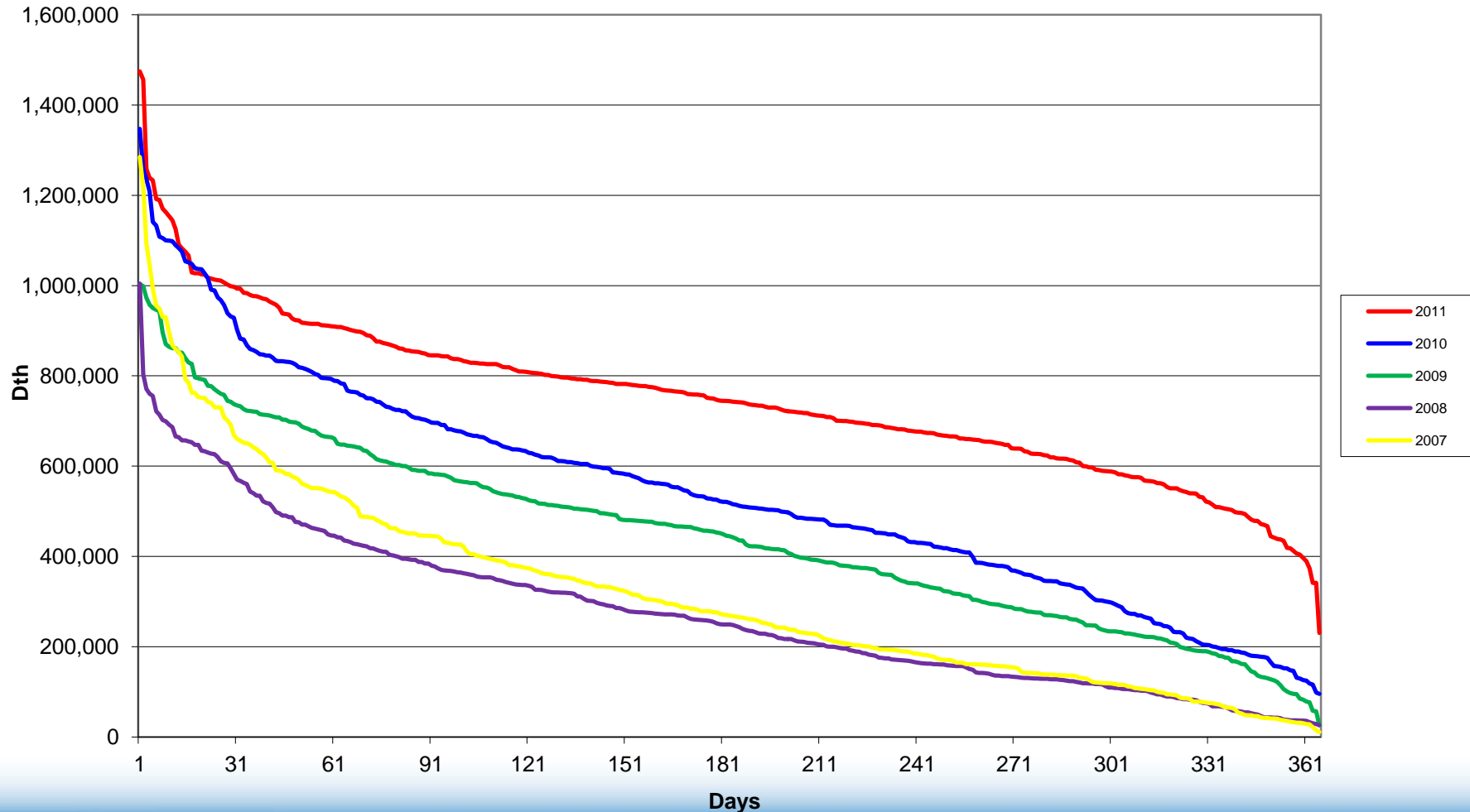
- Pipeline facilities design
- Increased Power Generation demand
- Uniform hourly flow rate
- Loss of pipeline line pack
- Firm and non firm pipeline service
- Gas supply, firm or interruptible
- Nomination and scheduling
- Priority of service, primary and secondary deliveries
- Power Generation contracting for appropriate service

North East Power Plants – Typical Heavy Period Volumes Scheduled (blue) Pvs Actual Hourly Flow (yellow)

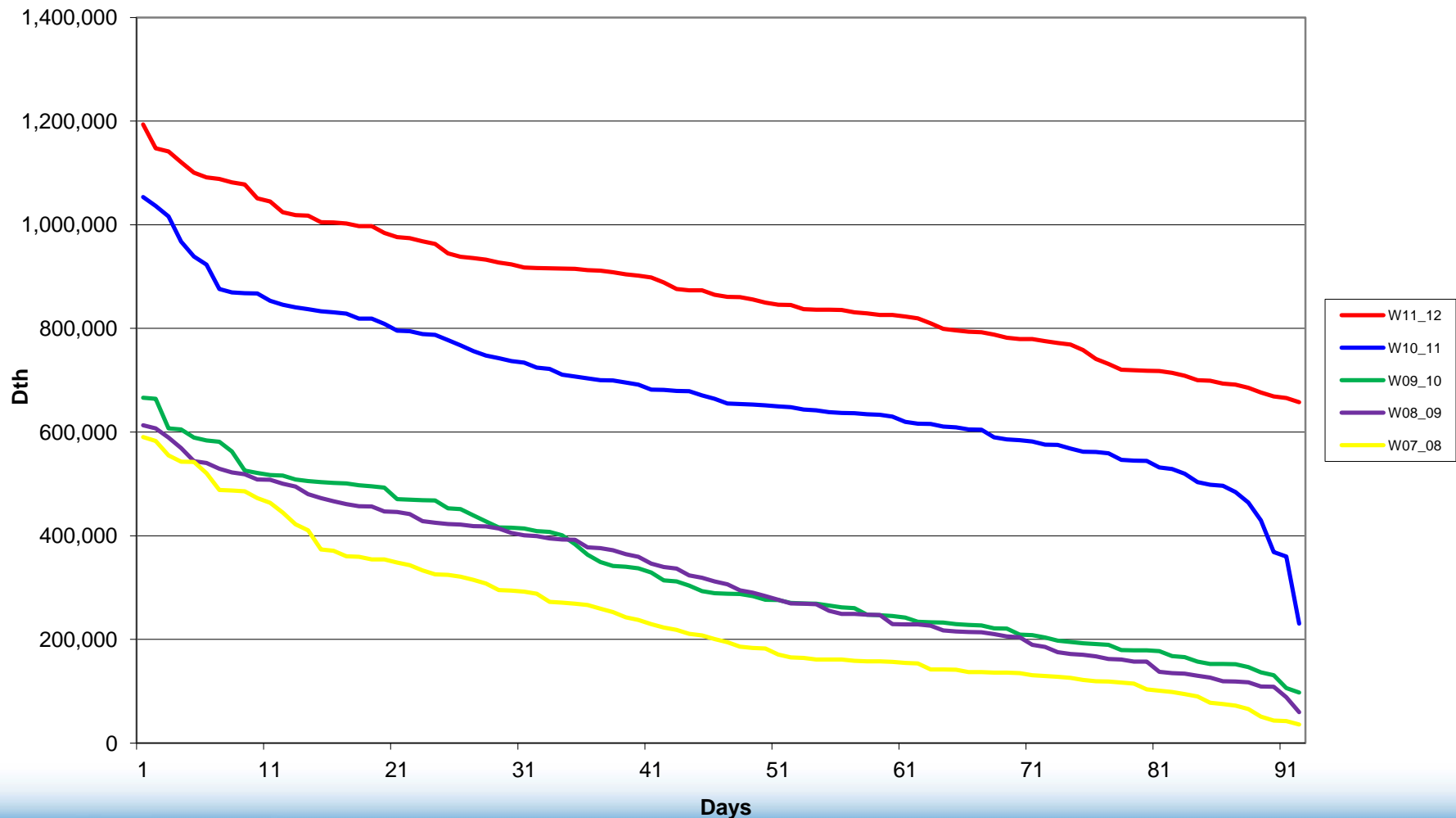


Hourly flexibility is provided on a best efforts basis. Never guaranteed, and never at the expense of Primary Firm shippers in operational compliance.

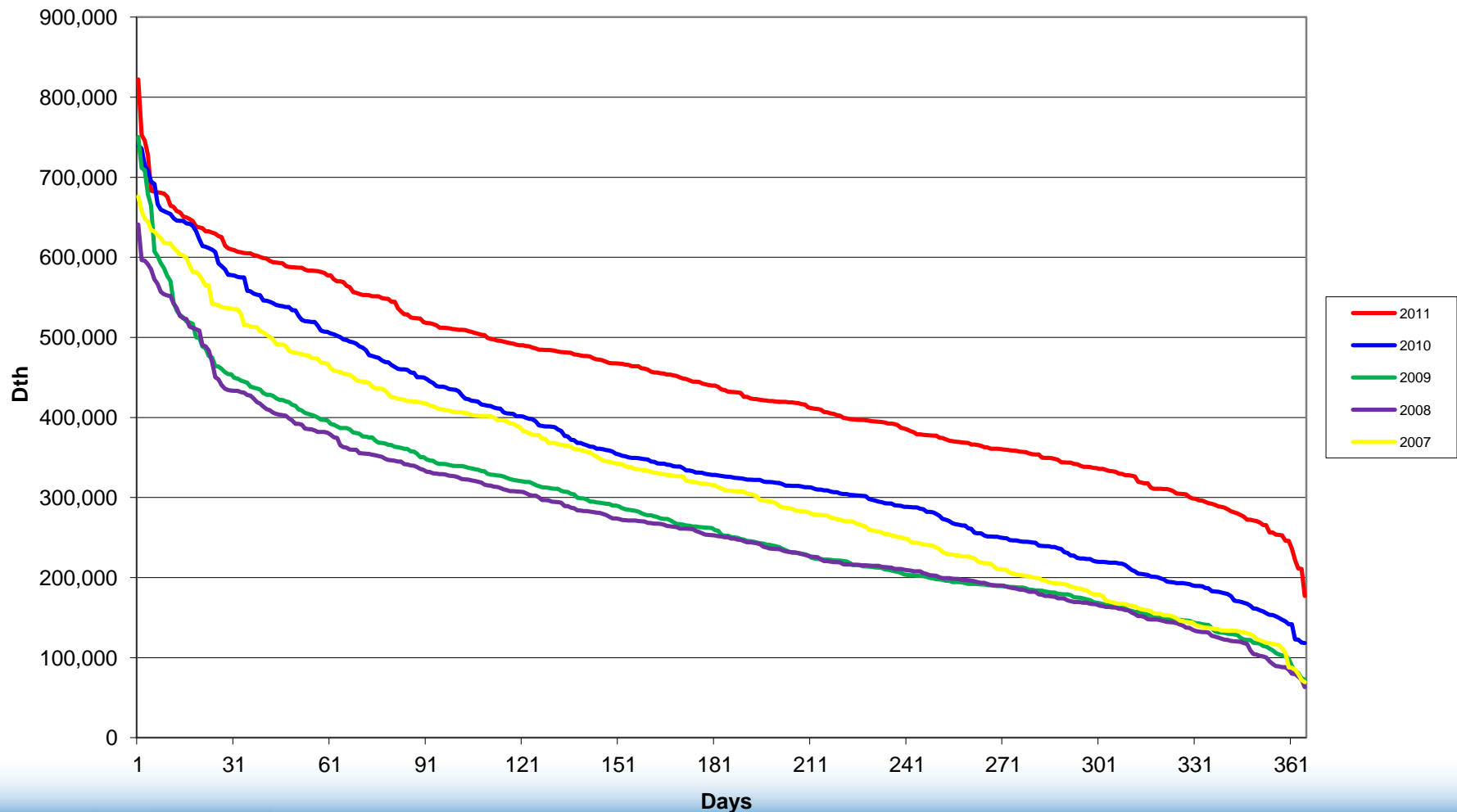
Growing Power Generation Demand Texas Eastern Market Area – Annual 2011/12



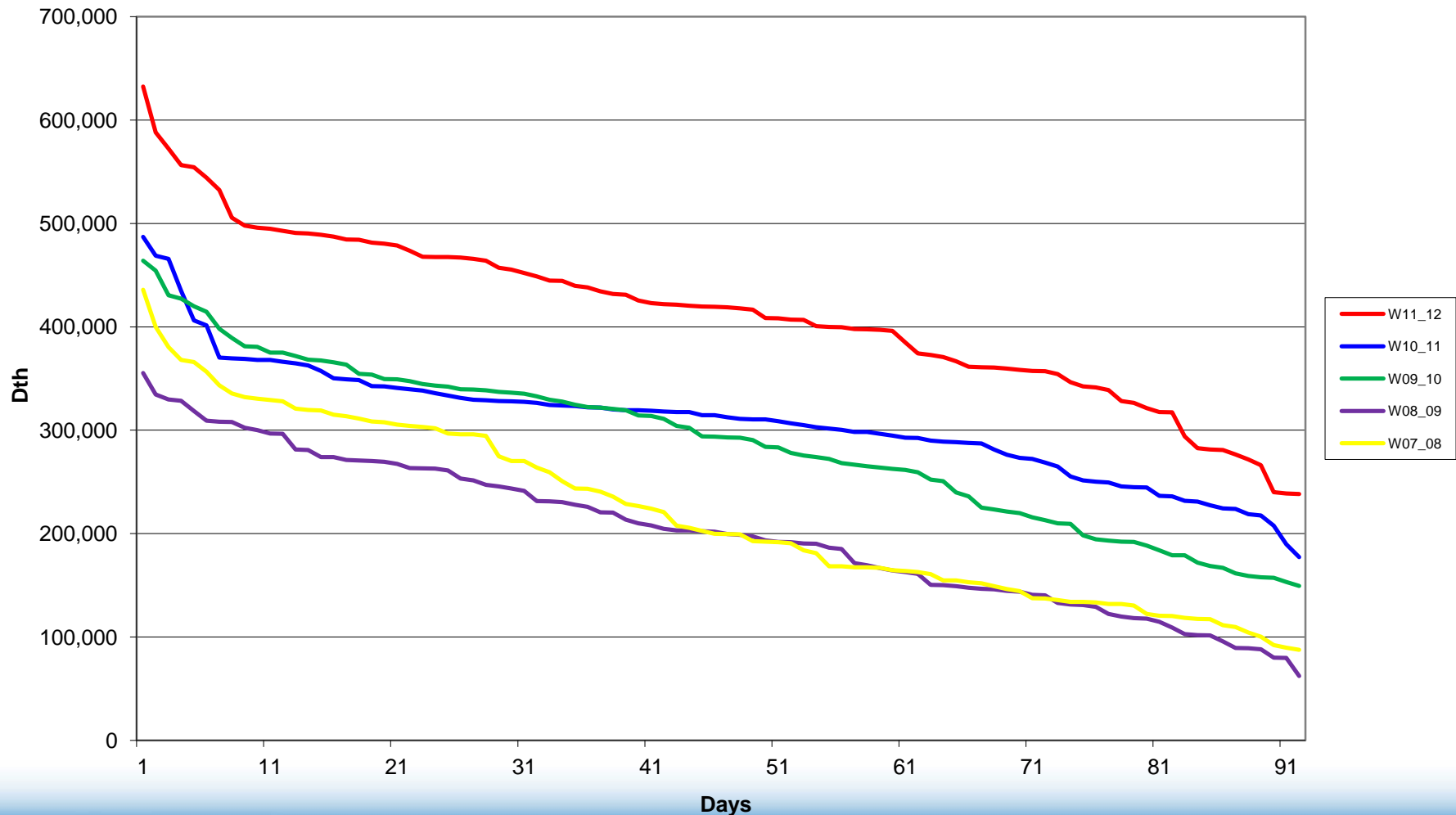
Growing Power Generation Demand Texas Eastern Market Area - Winter 2011/12



Growing Power Generation Demand Algonquin Gas Transmission - Annual 2011/12



Growing Power Generation Demand Algonquin Gas Transmission - Winter 2011/12



Key Issue

Firm Capacity Held by Power Generators



	<u>Texas Eastern</u>	<u>Algonquin</u>
Non-Coincidental Burn Potential	1,739 MDth / D	890 MDth / D
Coincidental Peak Day (Summer)	1,536 MDth / D	822 MDth / D
Coincidental Peak Day (Winter)	1,193 MDth / D	632 MDth / D
Contracted Mainline Capacity	276 MDth / D	125 MDth / D
<i>Ratio of Generators' Firm Capacity vs. Winter 2011/12 Peak Day</i>	<i>23.1%</i>	<i>19.8%</i>
<i>Ratio of Non-Generators' Firm Capacity vs. Winter 2011/12 Peak Day</i>	<i>123%</i>	<i>120%</i>

Pipeline Capacity is Designed to Meet Firm Contractual Obligations

- Facilities designed to support **primary firm obligations** even though actual operation may differ from these obligations
- Assumes all primary firm contracts are flowing **coincidentally** at 100% contract quantity representing a peak day scenario
- **No extra capacity** exists above the coincidental peak day firm capacity
- Design Considerations – quantity, delivery pattern (uniform or transient), pressure, temperature, distance, elevation, pipe wall friction (efficiency), compression HP style/size etc.

Serving Electric Generators

- There are no operational impediments to serving electric generators – provided that the generator has contracted for the appropriate pipeline transportation service.
- Pipelines can meet generator pressure requirements and load variations – when properly contracted
- In the northeast, generators typically access pipeline capacity through the secondary market via capacity release or IT on days when it is not needed by firm customers.
- When a pipeline cannot schedule interruptible transportation, it is not a gas reliability issue. It is a customer contracting issue.
- Pipelines will readily build infrastructure for additional capacity based on a customer's firm contract commitment.

Operational Challenges- Power Generation

- Assumption is that shippers will flow gas using a uniform hourly rate
- Flexibility allowed under Iroquois' tariff consists of the following:
 - Shippers may flow 120% of uniform hourly quantity for up to 3 consecutive hours twice in any 24 hour period
 - There must be a minimum of 8 hours between such use
 - Additional flexibility is offered on a “best efforts only” basis
- Power generators can vary flow as desired only when it is operationally feasible on Iroquois, such use will not impact other shipper's scheduled flows, and a nomination is in place
- Iroquois has no storage directly attached to its system, therefore no-notice service is not currently available on either a firm or interruptible basis

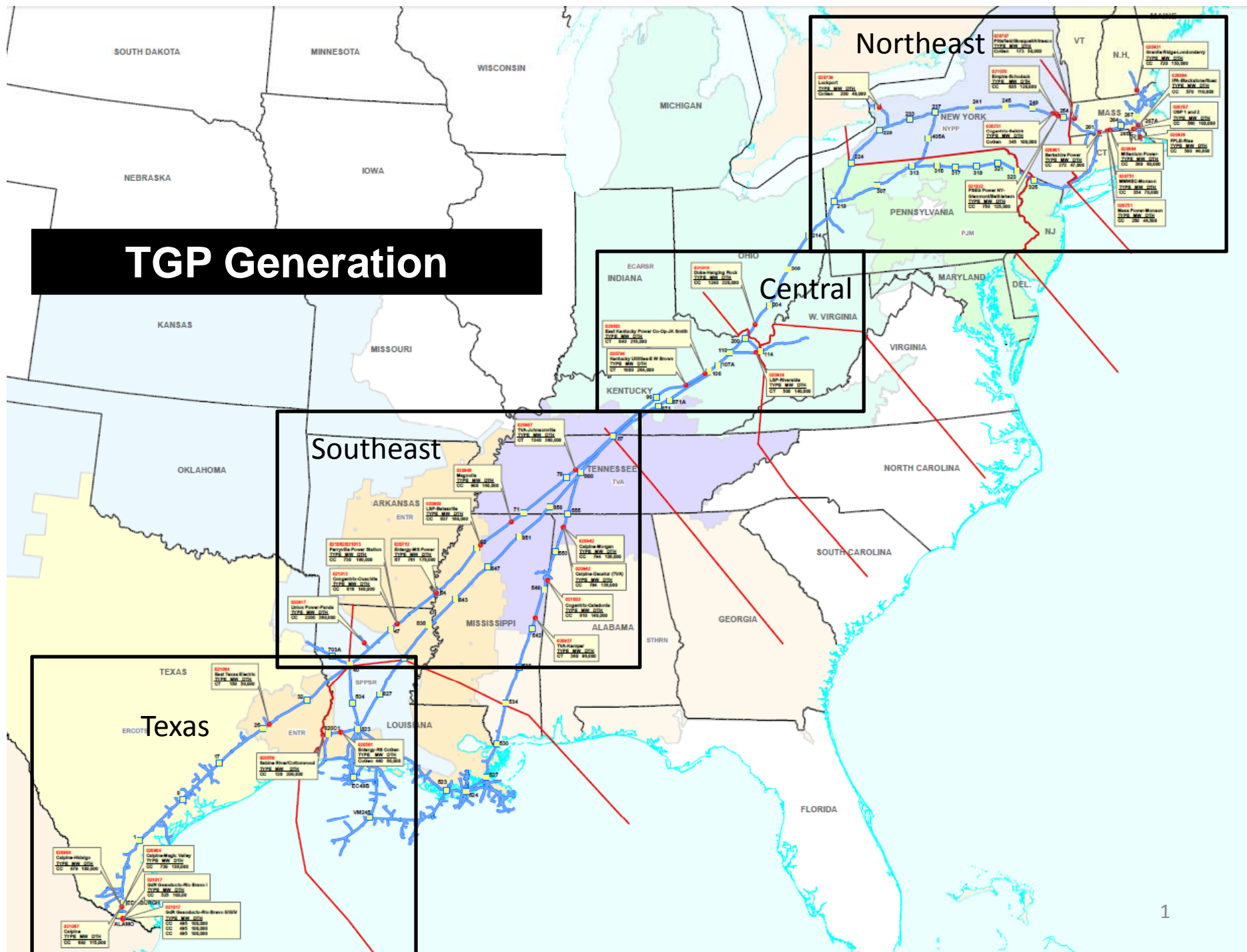
TGP Generation

Northeast

Central

Southeast

Texas



Northeast Power Plants

Holding Primary Firm pipeline capacity is rare

