

# Annex II

# Summary of Practices in Other Jurisdictions



**Research Associates** 



#### Alberta





### Alberta - Energy Market

- Very favourable to natural gas fired generators, fuel sources are readily available
- Market fully unbundled and is operated by the independent Alberta Electric System Operator ("AESO").
- Government and regulatory authorities are largely not intrusive and are supportive of open markets.
- Market is also extremely competitive.

#### FERC



- Interstate transmission pipeline and storage companies provide services in many US jurisdictions under the regulation of the FERC.
- FERC requires contractual commitments from purchasers of gas transportation/storage capacity to approve new interstate pipeline/storage construction.
- The typical allocation of cost of investment on new gas infrastructure (transportation/storage) has been incremental.
- Instances when FERC has allowed costs to be rolled-in provided rates increased by no more than 5% and the new pipeline capacity increases reliability to all shippers.



- Interstate Storage operators must receive a certificate of public convenience and necessity from FERC to construct and operate storage facilities.
- Rates for independent storage can be at cost-of-service or market-based.





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## California - Gas Generation

- Natural Gas primarily a "swing fuel",
  - amount used depends on amount of hydro
    - in a wet year (1983) hydro produced 45%,
    - in a dry year (2001) 12%
- Increased focus on reliability of older generators
  - although 9 369 MW has been added since 2000;
  - 3 873 MW dates prior to 1960

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## California - Storage

- SoCalGas owns all storage in southern California
- PG&E owns all storage in northern California
- CPUC unbundled storage in 1993
- Storage built by the utilities is available to core and noncore customers at regulated rates
- Market based pricing used to encourage infrastructure investment
- Wild Goose (1999) and Lodi (2001) Gas Storage facilities are independent, use market-based rates



#### California - Services

- El Paso Natural Gas (EPNG) and its' subsidiary Mojave Pipeline Company offer various transportation, parking and lending services
- Some LDC's, have tariffs that are designed to accommodate the needs of electric generators.
- SoCalGas has preferred rates for gas generators using over 250,000 therms per year (the equivalent of a 220 kW generator running 24/7 all year-round).







## **Illinois - Gas Generation**

- Natural gas fired generating capacity in Illinois grew by over 310% between 1997 and 2002, an average rate of over 62% per year.
- In the 2002 to 2003 period the rate of growth slowed to 3.4%.
  - Due to the fact that many of the natural gas-fired generating facilities in the state are dispatchable.
- When gas-fired generation decreased, the predominate sources were nuclear and coal fired generation.
- Many of the pipelines have tariffs which are supportive of gas fired generation.





#### Michigan - Policy

- The MPSC is responsible for approval of applications to construct intrastate transmission facilities. Any contracts for service must be included in the filing; however, the Commission has not established any minimum purchase commitment.
- The cost of investment on new gas infrastructure could be rolled-in or incremental. Individual circumstances determine the approved allocation method.
- Tariffs for intrastate gas transmission/storage can be cost of service based or market based. Initial rates for a new intrastate pipeline are filed with the Commission. No change in rates can be made until such change is approved by the Commission.



## Michigan - Storage

- Michigan's storage is significant: approx. 623 Bcf, more than any other state
- Storage provides for more efficient use of transmission pipelines that bring supply to utilities, and helps stabilize prices despite highly seasonal use.
- Storage is provided by distribution utilities and gas storage companies under rates and services approved by the MPSC and FERC (if interstate company)



## Michigan - Gas-Generation

- Natural gas-fired generation in Michigan accounted for 13.4% of electricity produced in the State in 2002, a growth rate of 5.2% for the period 1993-2002.
- Gas-fired Generators could be firm or non-firm customers. Obtain transportation services from regulated utilities and purchase gas supplies from unregulated marketers. Special contracts for transportation and storage are typically negotiated.
- The price of electricity generated by gas-fired generators is market-based.



#### Michigan - Services

- Pipelines and storage companies offer a variety of services, not specifically designed for gasfired generators but which are attractive to generators, including peaking, no notice, balance, over run services, intra-day nominations and others.
- Some companies also indicate that they have services that are specifically designed for power generators.





## **New York - Gas Generation**

- In 2001, the NYISO recommended that between 5,000 and 7,000 megawatts (MW) of in-state generation was needed by 2008 to maintain reliability. More than 3,000 MW have been installed since then.
- Natural gas is mostly used as a winter peaking fuel for electric generation in the state.
- Recent significant gas price increase and volatility and concerns over the reliability implications of the increasing use of gas-fired electricity generation are on the rise.



## New York - Storage

- Total gas storage in New York is 207 Bcf
- Recent storage field addition
  Stagecoach project (13 Bcf)
- Planned storage projects include:
  - Wyckoff Storage, Seneca Lake II,
  - Tennessee's planned "Northeast ConneXion" in Pennsylvania, geared to serving the entire Northeast market.
- LNG an important part of Northeast storage portfolio.
  - Total LNG storage capacity is about 3.4 Bcf.



#### **New York - Policy**

- FERC's general rule on rolled-in ratemaking applies
- For example, in 2002 Wyckoff was granted approval to roll-in costs for a natural gas storage facility, because it "will serve the public interest by providing firm and interruptible high-deliverability, single and multi-cycle natural gas storage service"



#### **New York - Services**

- Iroquois Gas Transmission System, L.P., through its subsidiary Iroquois Pipeline offers Firm (RTS) and Interruptible (ITS) transportation, as well as Park and Loan Service (PALS). Rates for this service are market-based and are structured to be competitive.
- Empire State Pipeline-Intrastate offers flexible nomination cycles
- The New York State Electric & Gas Corporation has a basic electric generation transportation service.







## Great Britain - Energy Market

- Once largely dependent upon coal,
  - become far more diverse with an increasing emphasis on natural gas and renewable sources, particularly wind.
- Impediment to gas-fired generation
  - government initiatives favouring wind power
- Sources are also augmented with inter-ties with both the Europe and Ireland.
- Some mothballed plants can be reactivated.
- Natural gas prices have risen over the last few years and there are indications that the production from the fields in the North and Irish Sea, which facilitated earlier increases in natural gas-fired generation has peaked and may even be in decline.



#### Great Britain - Gas Market

- Parties wishing to ship gas on the NTS must first obtain a licence from the energy regulator the Office of Gas and Electricity Markets ("Ofgem").
- Operators of storage facilities must make them available to third party users on a nondiscriminatory basis unless granted an exemption by a competent authority (Ofgem) The exemption must also be accepted by the European Authority.

# **Services Summary**



| UTILITY                       | SCHEDULES/SERVICES  |
|-------------------------------|---|
| Alberta                       |   |
| Nova Gas Transmission Ltd     | Facilities Connection Service:-   |
| EnCana Gas Storage            | A multi-time nomination schedule with intra-day nominations and the possibility of multiple storage cycles  |
| ATCO Midstream Carbon Storage | Multi-cycling and intra-day nominations   |
| California                    |   |
| El Paso Natural Gas           | -Firm transportation service (FT-1 and FT-2)<br>-Interruptible transportation service (IT-1)<br>-Interruptible parking and lending service (PAL)            |
| Mojave Pipeline Company       | -Interruptible authorized loan service (ALS-1)<br>-Parking service (APS-1)  |
| SoCalGas                      | -Electric generation rate GT-F5<br>-GN-10 gas rate is a 3-tier gas rate that includes both transportation<br>and the cost of natural gas                    |
| PG & E                        | -Schedule G-EG for electric generators<br>- A "Timely Nomination"<br>-An "Evening Nomination"<br>-An "Intraday 1 Nomination"<br>-An "Intraday 2 Nomination" |
| SoCalGas Storage              | -BSS, or "Basic Storage"<br>-LTS, or "Long Term Storage"<br>-TBS, or "Transaction Based Storage"  |

# **Service Summary**



| UTILITY                       | SCHEDULES/SERVICES  |
|-------------------------------|---|
| Illinois                      |   |
| ANR                           | Firm transportation service, FTS-3  |
| Panhandle Eastern             | -Hourly Firm Transportation Service<br>-Enhanced Firm Transportation Service<br>-Quick Notice Transportation Service                |
| Midwestern Gas                | -Firm Transportation Service  |
| Peoples Energy                | -Contract Service for Electric Generation<br>- Standby Service  |
| Northern Illinois Gas Company | -Rate 11 includes the provision of gas supply<br>-Rate 81 is a transportation rate<br>-Large Volume Transportation Service, Rate 77 |
| Panhandle Eastern             | -Flexible Storage service<br>-Parking and loan service  |

# **Services Summary**



| UTILITY                                       | SCHEDULES/SERVICES  |
|---|---|
| Michigan                                      |   |
| ANR Pipeline Company (ANR)                    | FTS-3 (firm transport)<br>ITS-3 (Interruptible transport)<br>Premium no-notice service ("NNS")  |
| Panhandle Eastern Pipe Line Company, LP       | -Standard FT and IT services<br>-Hourly Firm Transportation<br>-Quick Notice Transportation<br>-Enhanced Firm Transportation<br>-Gas Parking Service<br>-Flexible Storage Service<br>-No Notice Service<br>-Flexible Field Zone Firm Transport<br>-Intraday Gas Parking Service<br>-Delivery Variance Service |
| New York                                      |   |
| Iroquois Gas Transmission System, L.P         | -Firm (RTS) and Interruptible (ITS) transportation<br>-Park and Loan Service (PALS)   |
| Empire State Pipeline-Intrastate              | -Timely Nomination Cycle<br>-Evening Nomination Cycle<br>-Intra-day 1 Nomination Cycle<br>-Intra-day 2 Nomination Cycle   |
| The New York State Electric & Gas Corporation | Basic electric generation transportation service  |