

TransCanada Hydro

Deerfield and Connecticut River Operations

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NHA Northeast Regional Meeting
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TransCanada
In business to deliver

Trans who???



Assets (\$43. Billion)

Natural Gas and Oil pipelines in Canada, US and Mexico

More than 60,000 kilometres (37,000 miles)

Gas Storage

Second largest natural gas storage provider in North America with approximately 380 Bcf of storage capacity

Diversified power portfolio includes Natural gas, nuclear, coal, hydro and wind generation

Primarily located in Alberta, Ontario, Quebec and the northeastern United States.

Total power generation* More than 10,800 megawatts (MW)

**Including Power Purchase Arrangements and plants under construction.*

Wholesale and retail electricity marketing and trading

In Alberta, Ontario and the northeast U.S.



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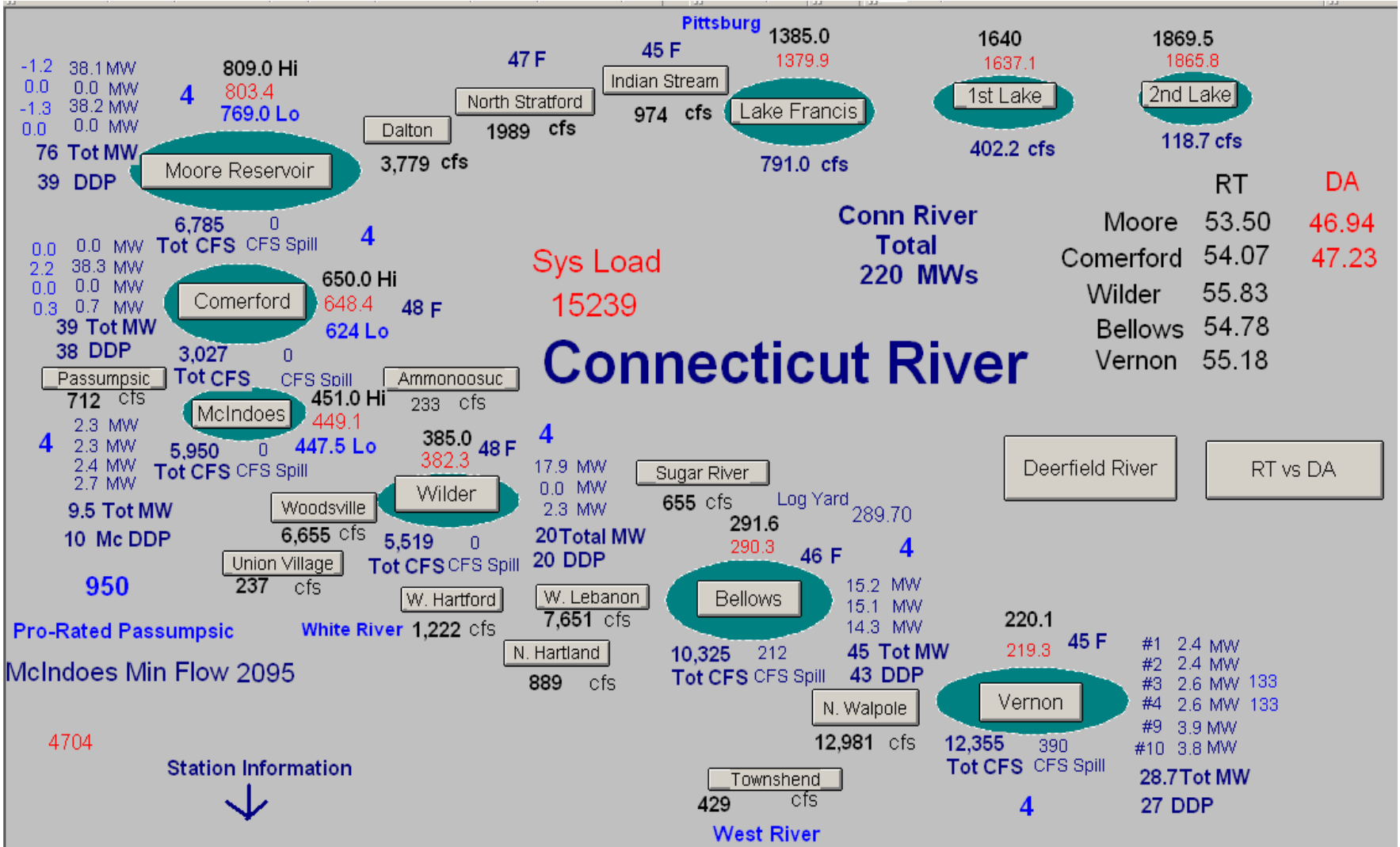
TransCanada Operational Considerations



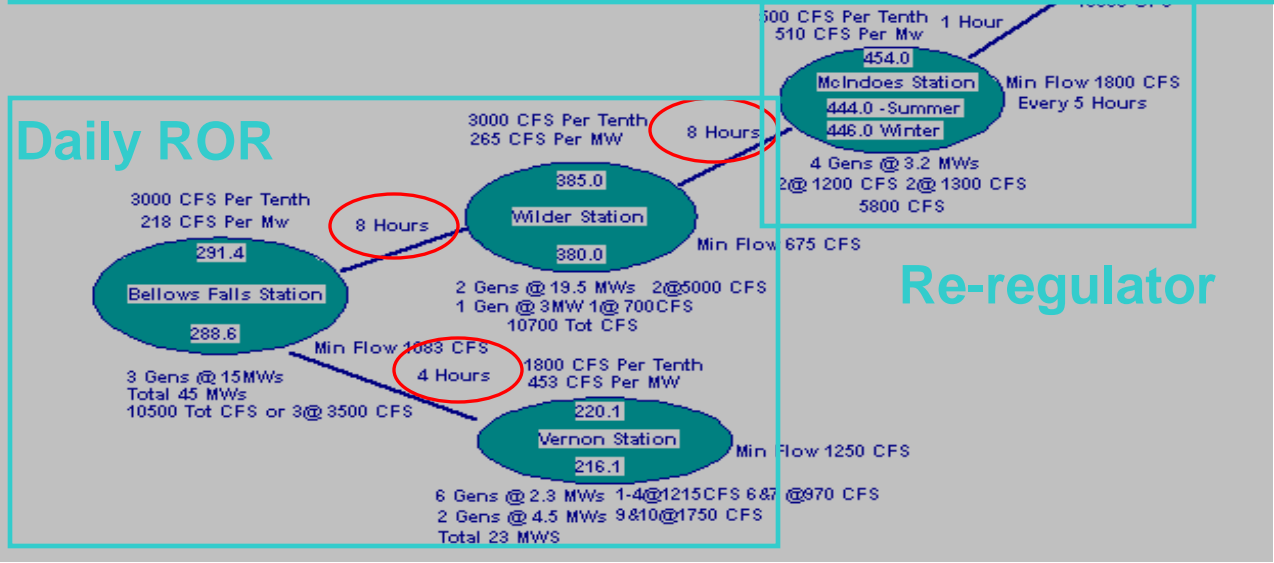
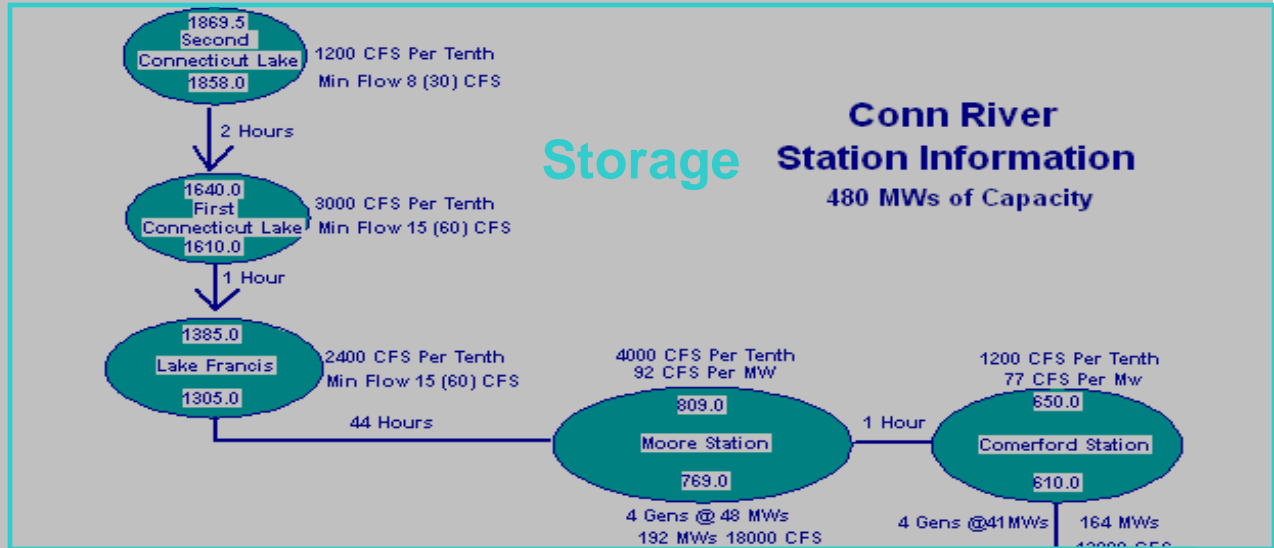
- Significant distances in terms of water travel time between storage/peaking and downstream dams
- River Profile issues – keeping water within project boundary at upstream end as inflow increase
- Guaranteed (from storage) minimum flow flows
- White Water recreation releases

- Series of Storage reservoirs and Peaking Operations Upstream
- Storage and Peaking projects provide valuable ancillary services
- Independent Power Producer – Wholesale NE energy market

TransCanada Hydro – Connecticut River



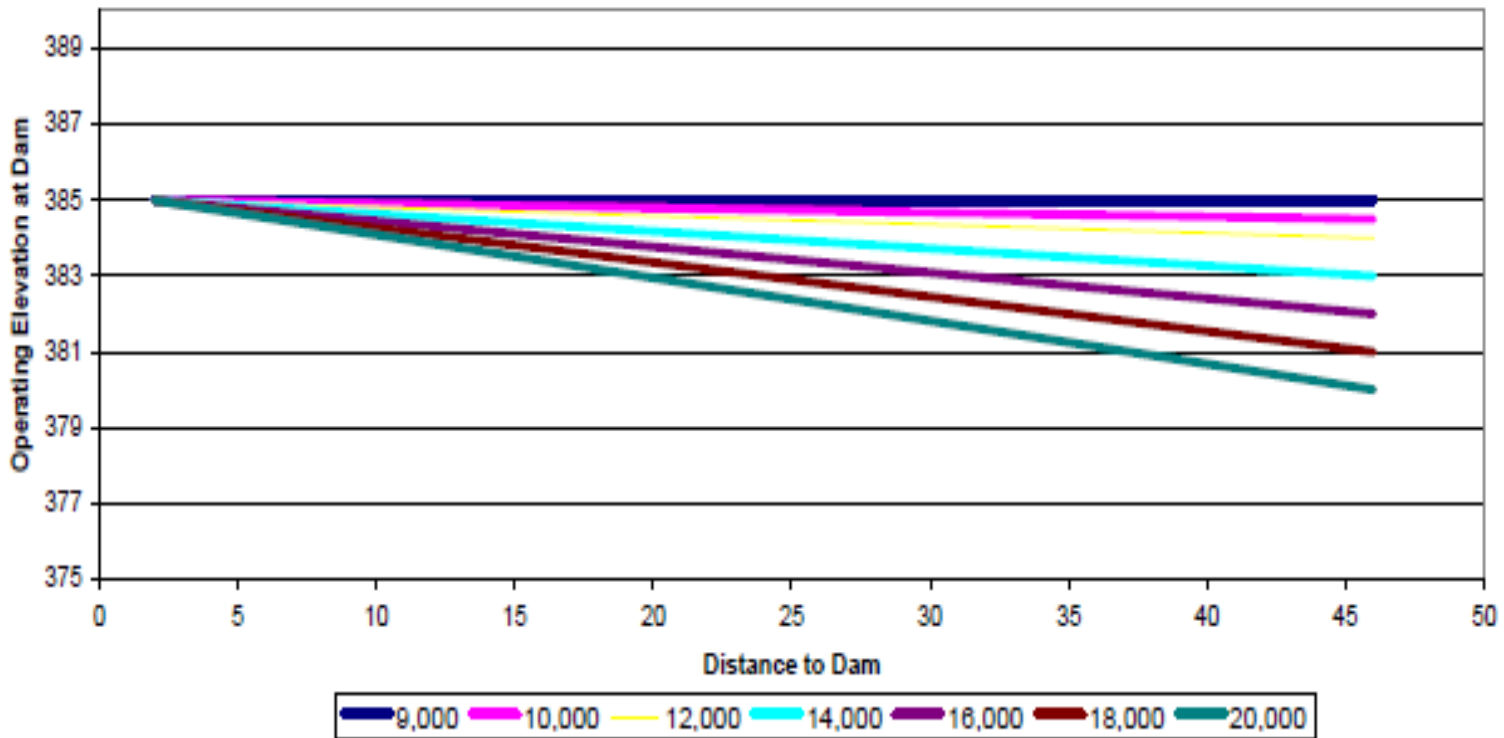
TransCanada Hydro – Connecticut River



River Profile Impacts

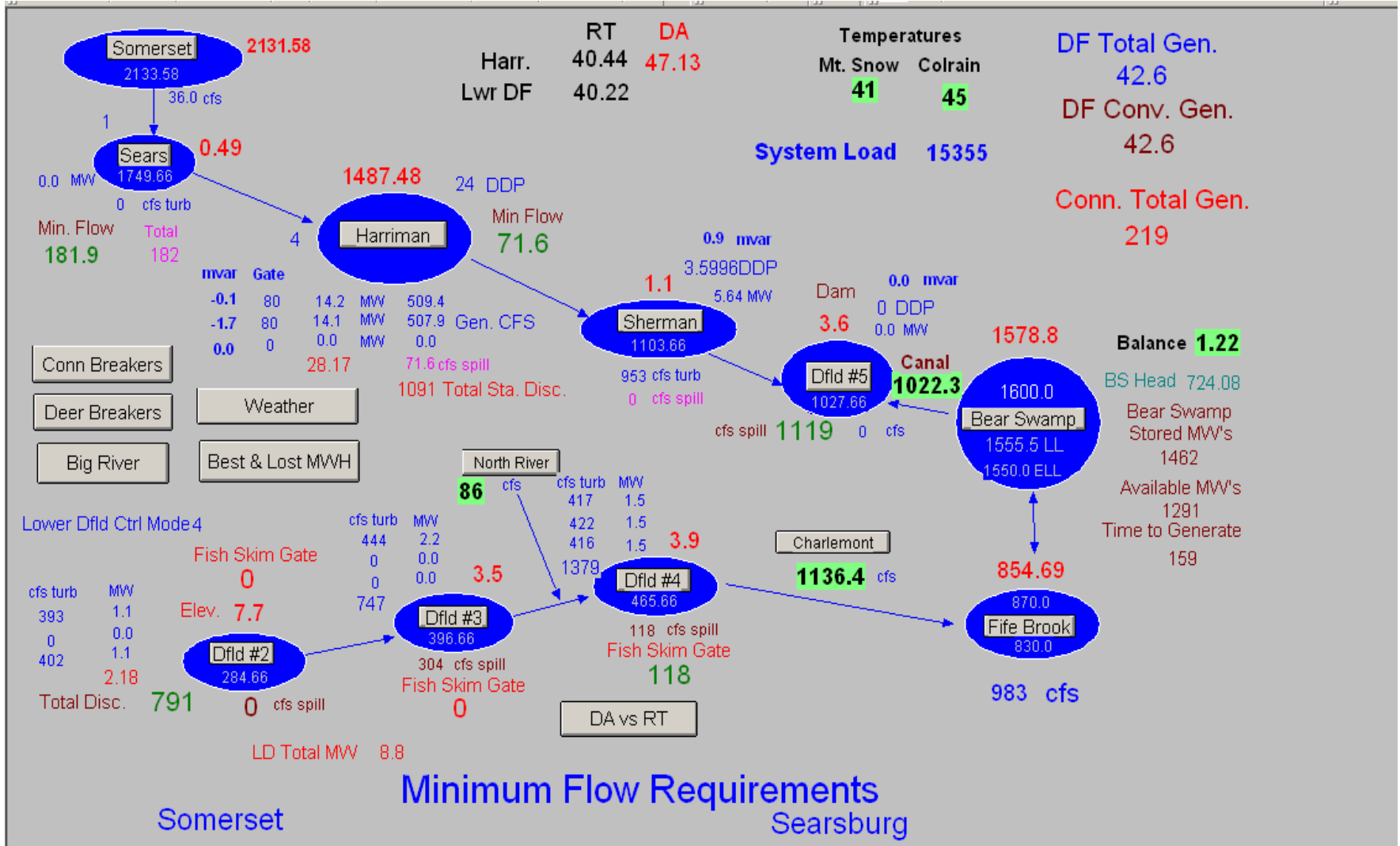


Wilder Dam Reservoir Elevation based upon Inflow (cfs)

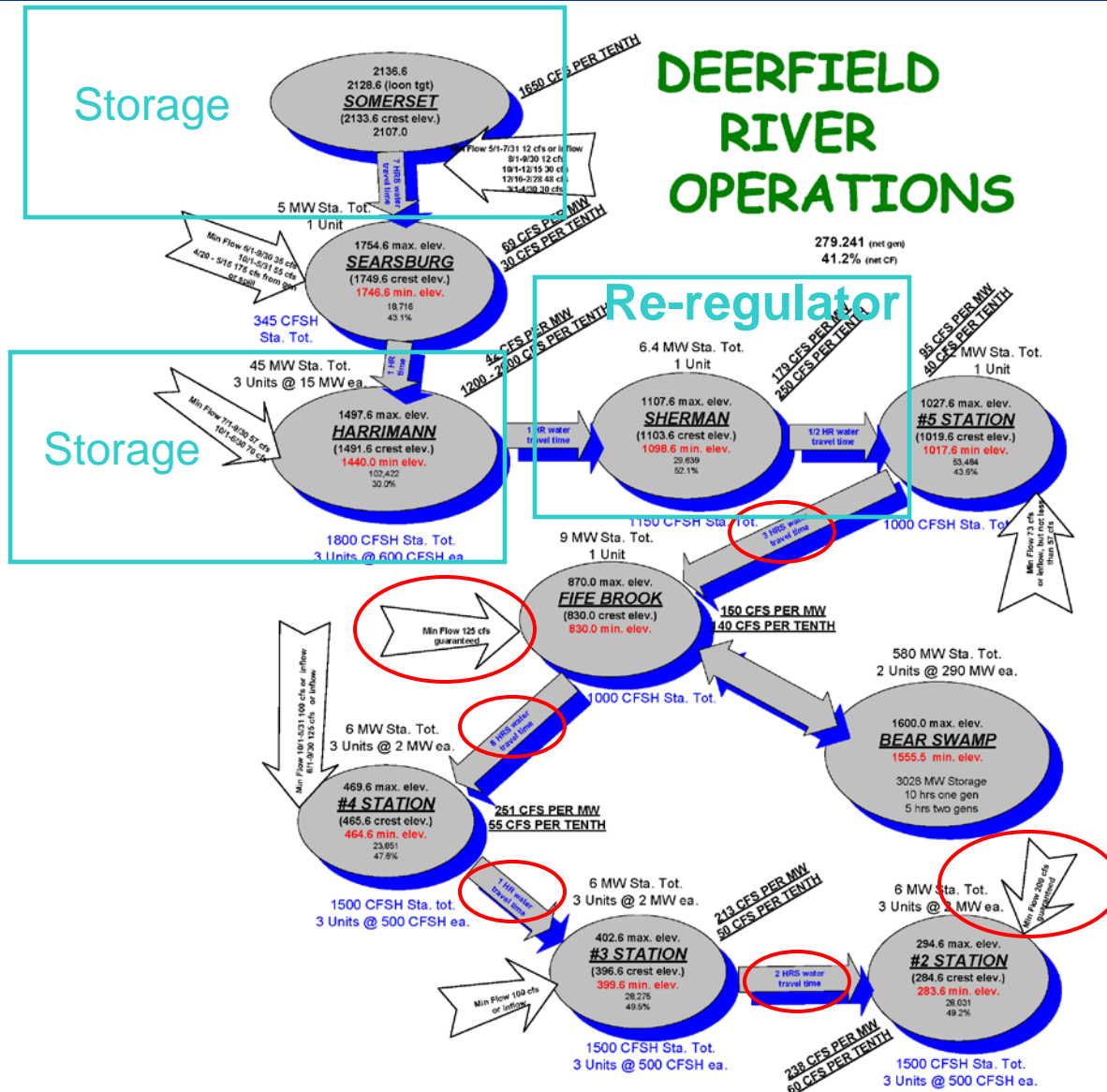


As inflow increases, operating elevation at the dam must be adjusted to keep water with the banks.

TransCanada Hydro – Deerfield River



TransCanada Hydro – Deerfield River

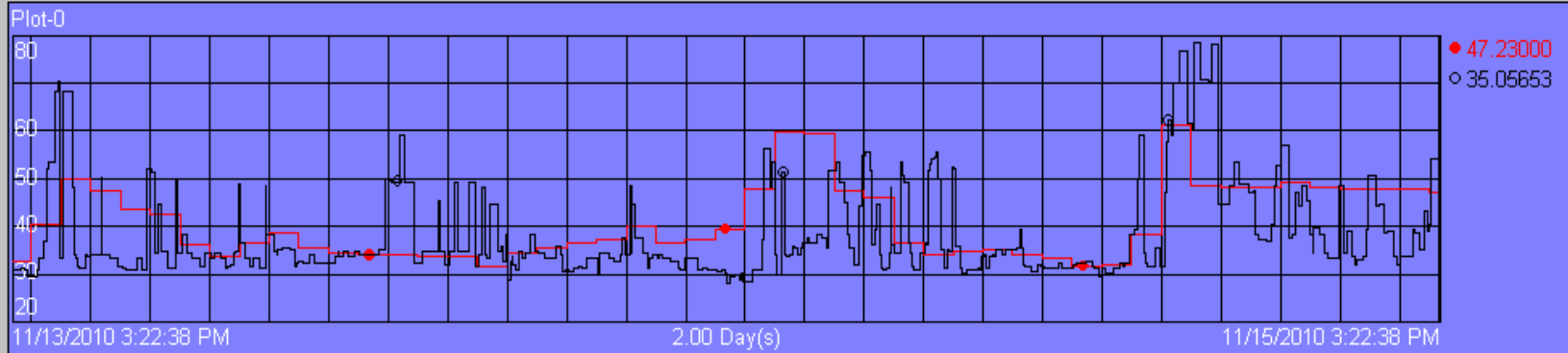


Economics of Peaking in New England



Red Font = Day Ahead Price

Comerford Station

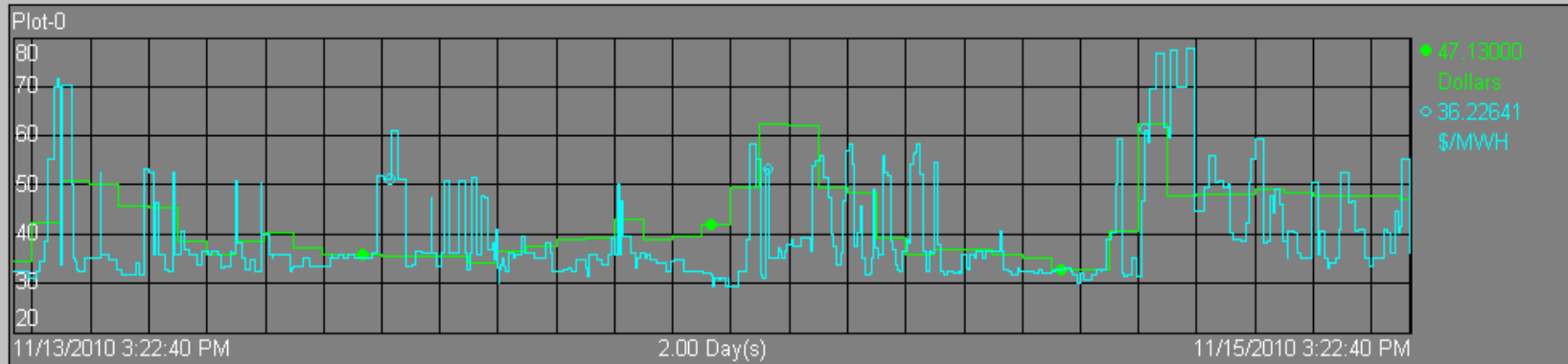


Deerfield

Connecticut

Light Green Font = Day Ahead Price

Harriman Station



TransCanada Hydro – Comerford Dam



...some dams simply not designed for ROR