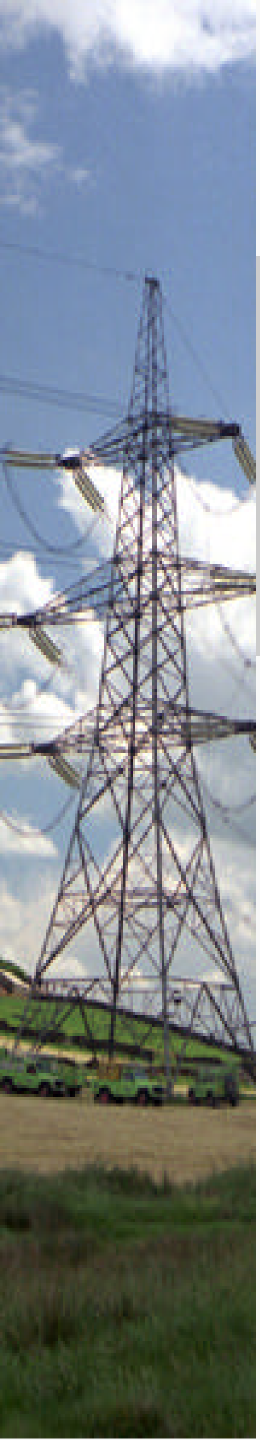


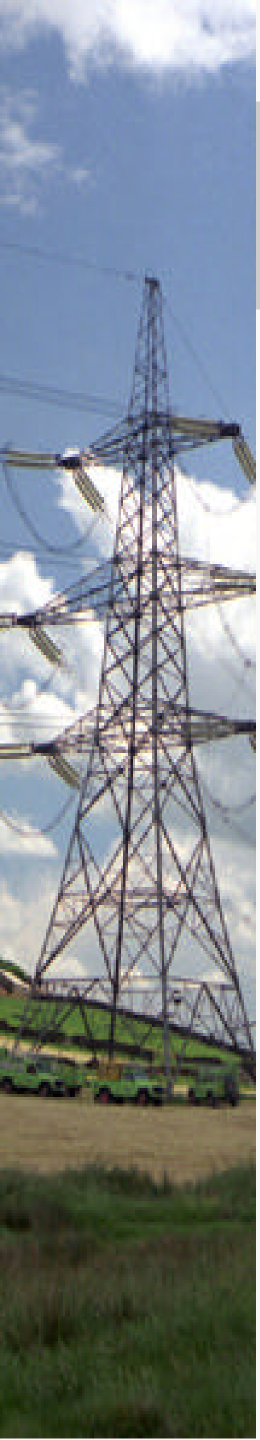
2002 State of the Market Report
Midwest ISO

Prepared by:

Independent Market Monitor
Midwest ISO

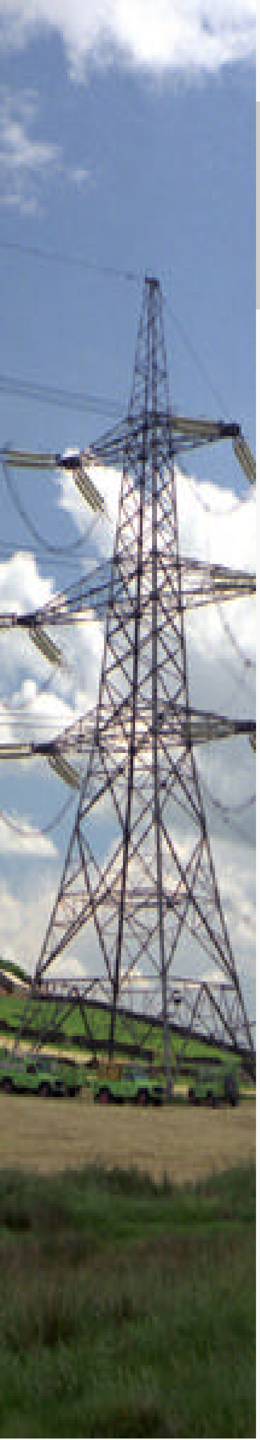
April 2003

POTOMAC ECONOMICS



Introduction

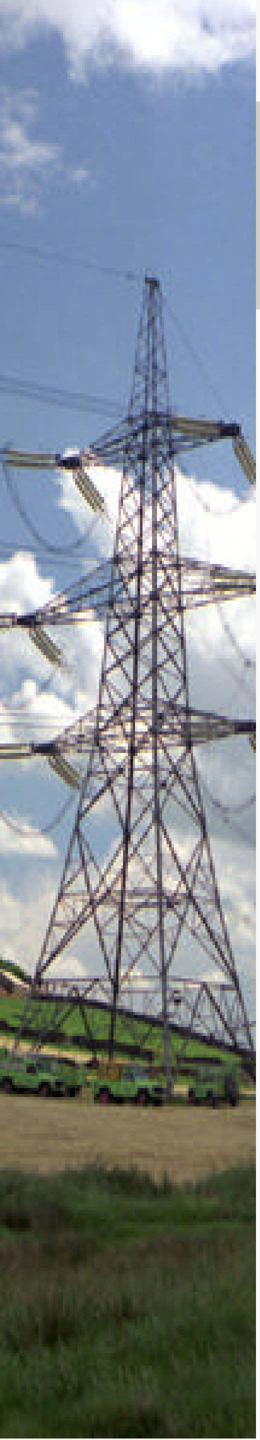
- This report evaluates the state of the market in the Midwest during 2002.
- The Midwest ISO currently provides transmission service, but does not facilitate centralized spot markets for energy or ancillary services.
- Hence, the focus of this report will be significantly different than the State of the Market reports from other RTOs or ISOs with operating markets.
- This report will assess market conditions and characteristics during 2002 in anticipation of the Midwest ISO markets to be implemented by March 2004, including:
  - ✓ Characteristics of the Midwest Markets;
  - ✓ Wholesale Market Prices in 2002;
  - ✓ Assessment of Transmission Utilization;
  - ✓ Pivotal Supplier Analysis;
  - ✓ Market Development Summary and Recommendations; and
  - ✓ RTO Configuration and Coordination.



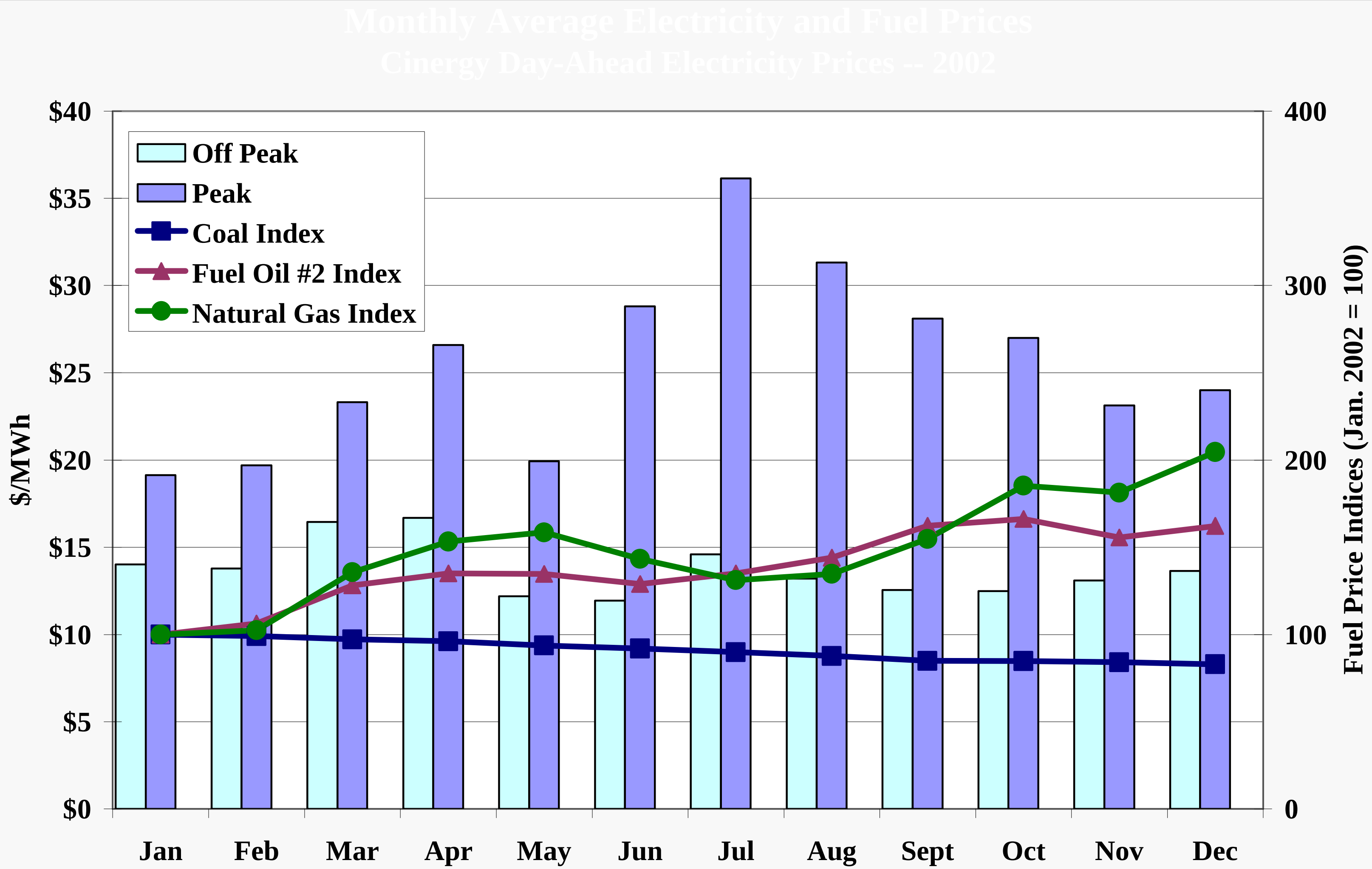
Summary of Conclusions

Market Characteristics

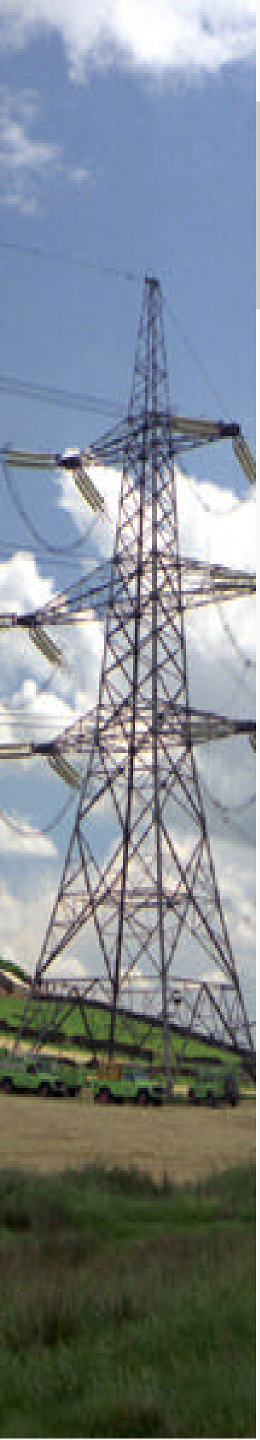
- The fuel mix in the Midwest is dominated by coal-fired resources, accounting for 60 percent of the capability.
- Most of the recent investment has been in natural gas resources, which currently account for 16 percent of the capability in the region.
- The report calculates the capacity margin in the Midwest ISO area at 19.8 percent, which is substantially higher than FERC's minimum requirements
  - ✓ In four sub-regions within the Midwest ISO (not including WUMS), the capacity margin ranges from 19 percent to 27 percent, which is substantial.
  - ✓ The capacity margin in WUMS is much lower, at 15 percent.
- The market concentration in most of the sub-regions is moderate to high with HHIs ranging from 1000 to 2700. The HHI in the WUMS sub-region is 2700.

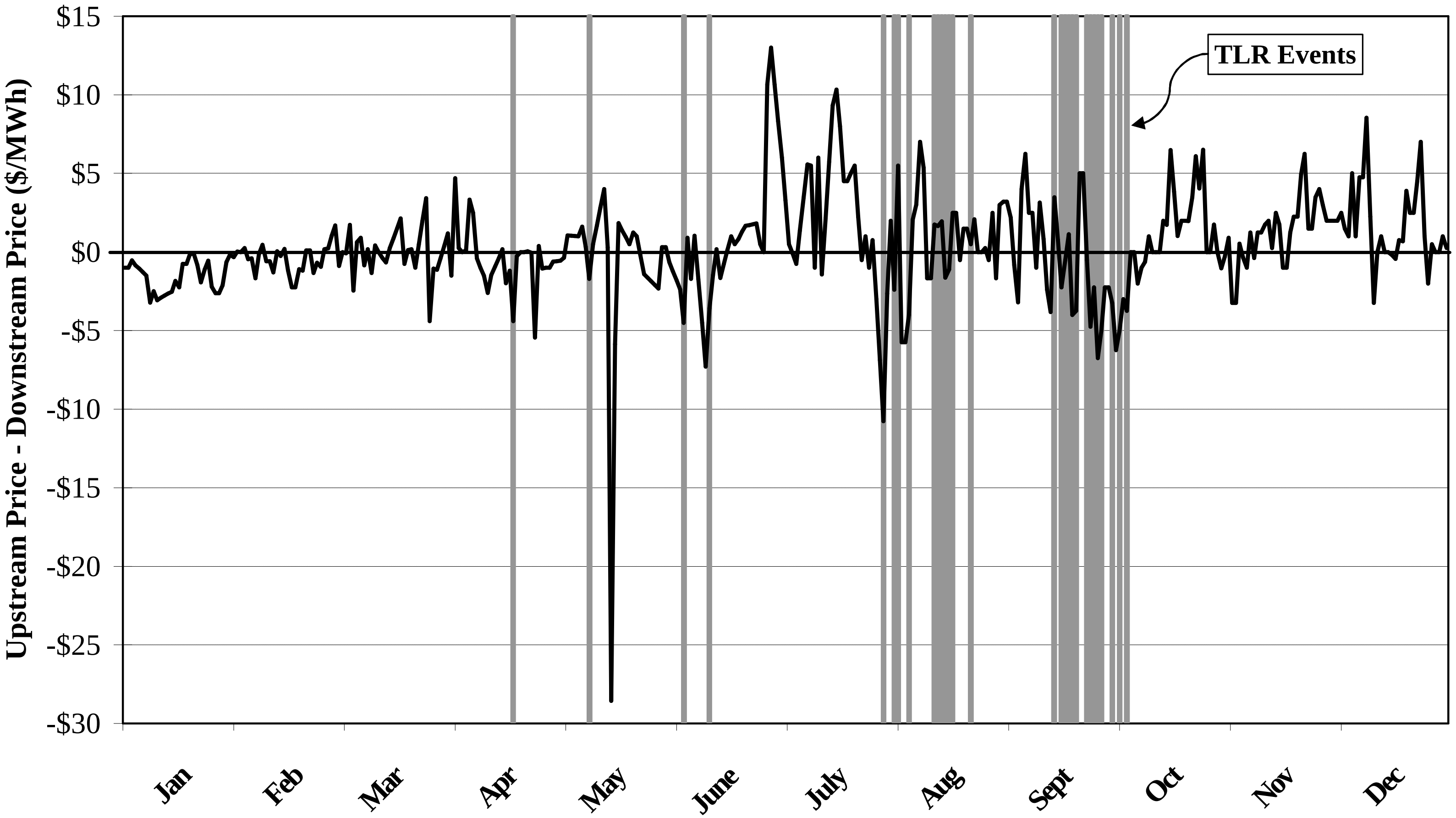


Monthly Average Electricity and Fuel Prices
Cinergy Day-Ahead Electricity Prices -- 2002

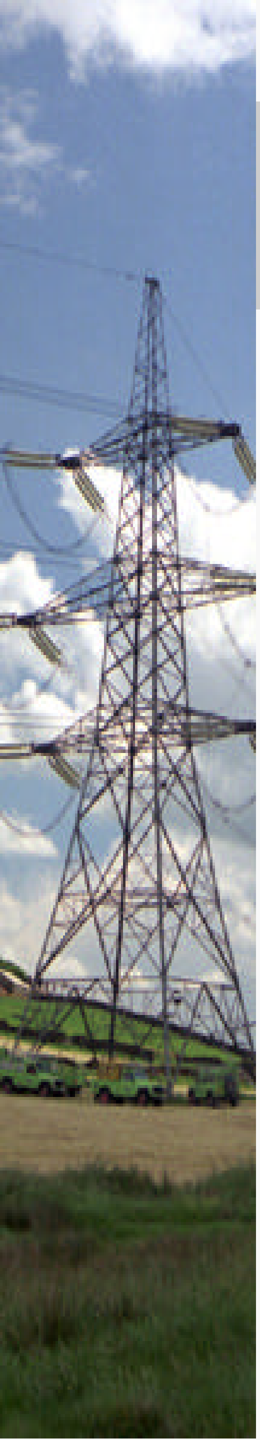


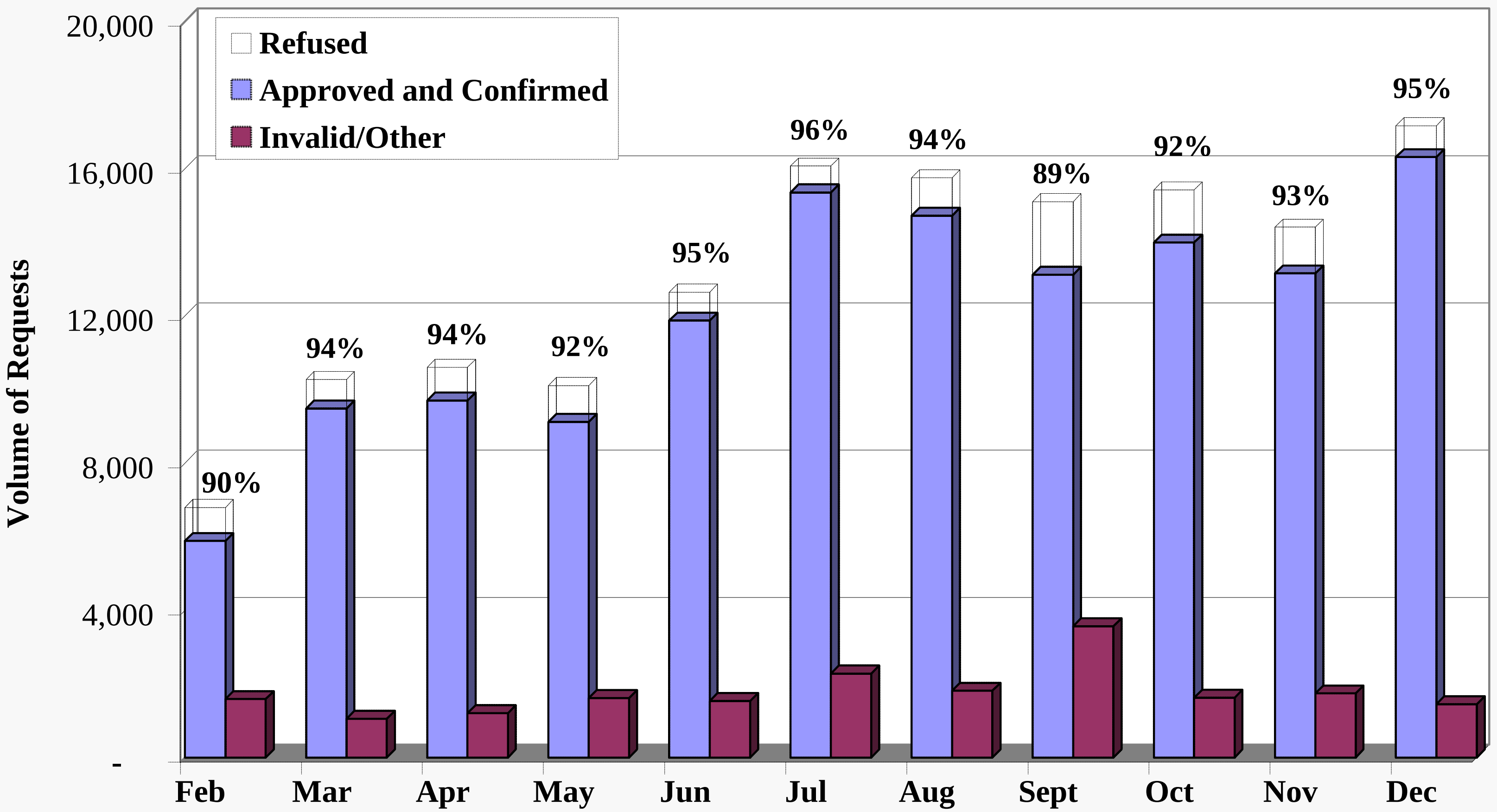
Relationship of Upstream-Downstream Prices During TLR Events -- Eau Claire-Arpin Flowgate in 2002

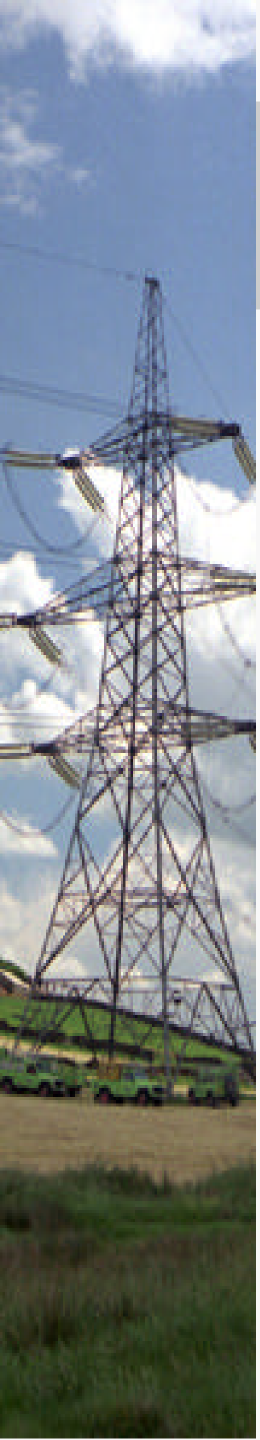




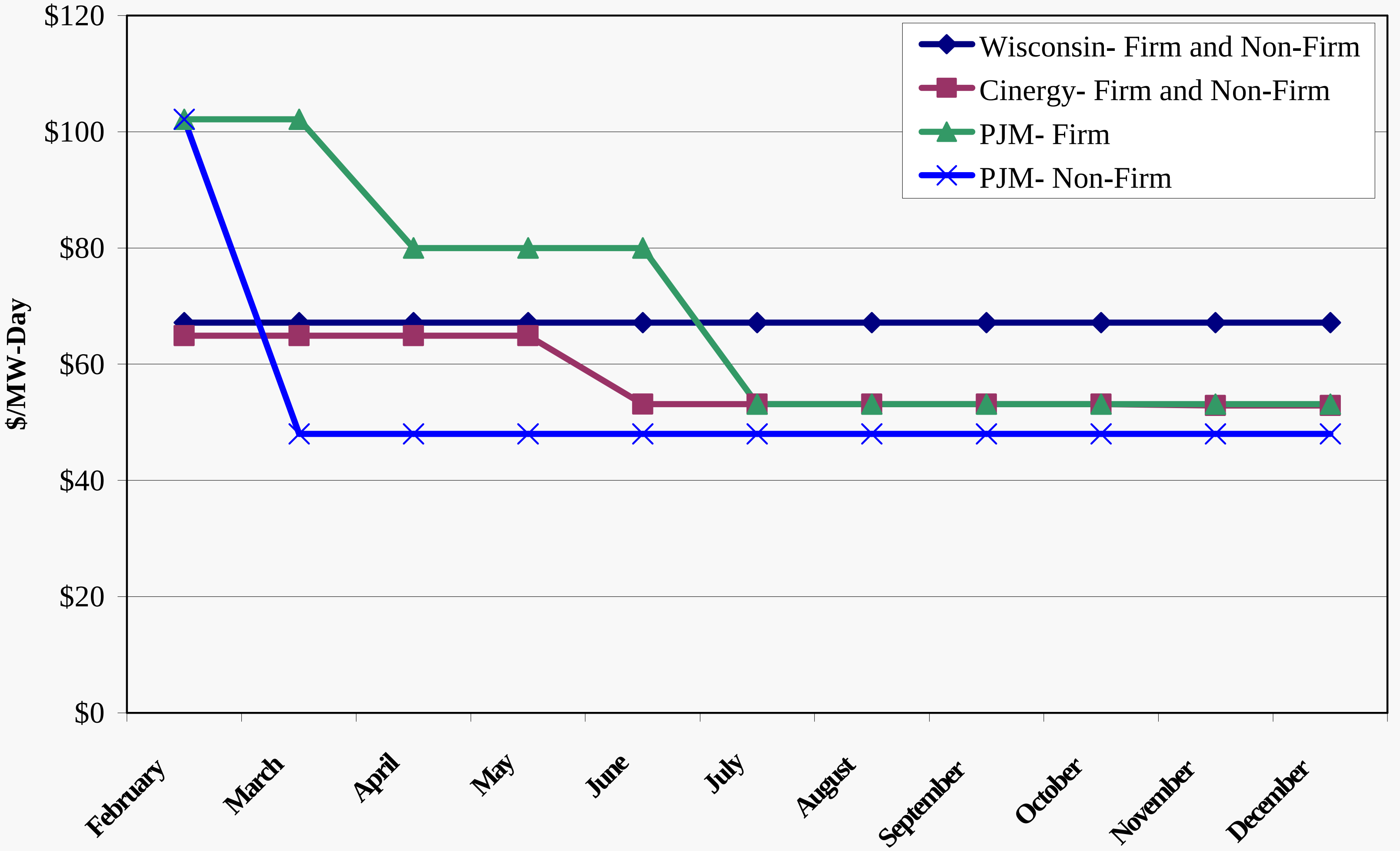
Disposition of Reservation Requests in 2002

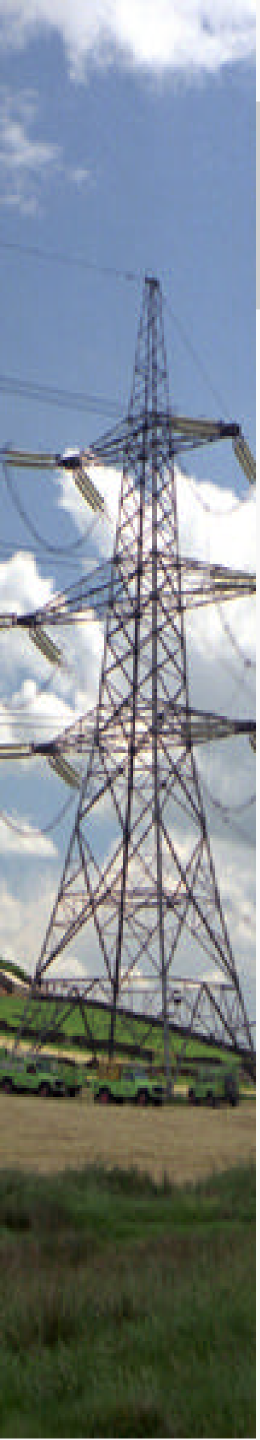




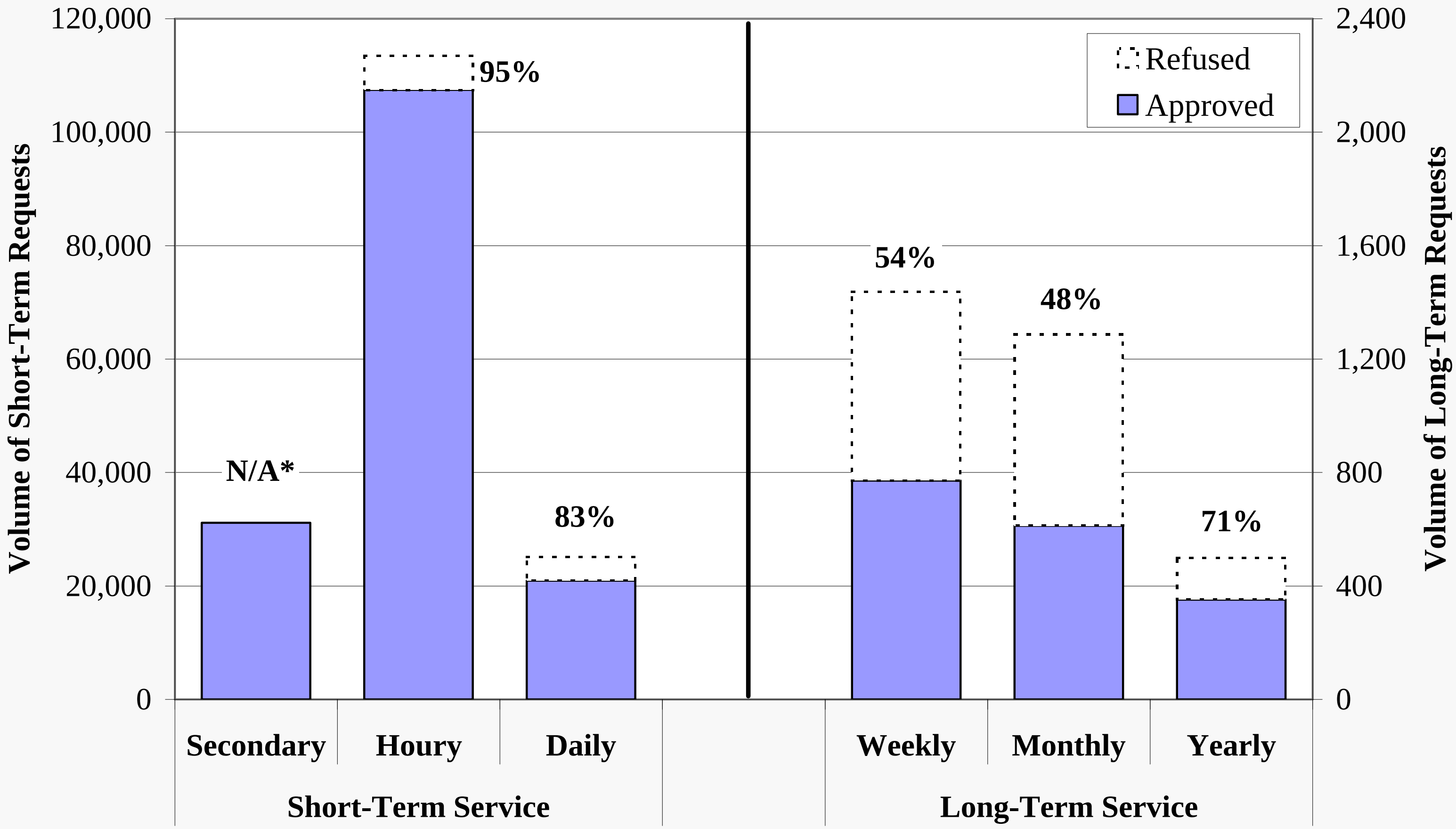


Summary of Transmission Rates During 2002
Daily Firm and Non-Firm Peak Service



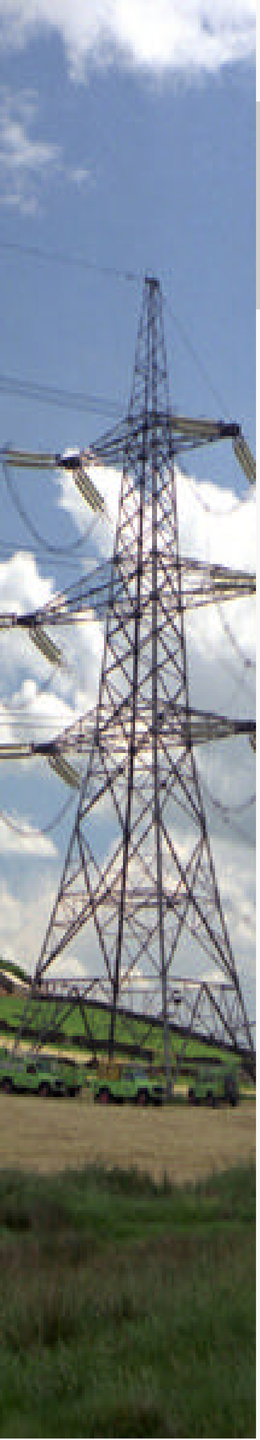


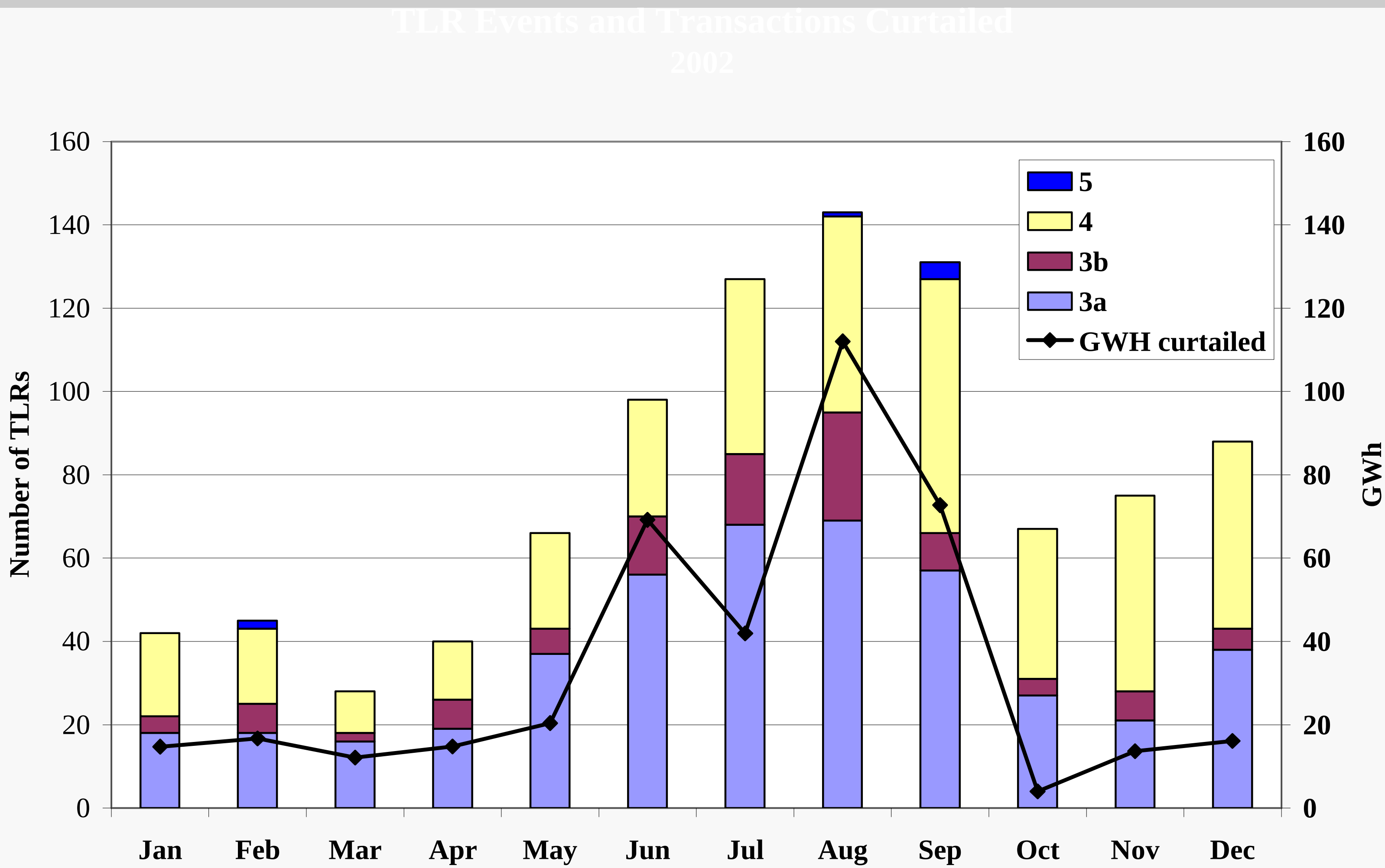
Short and Long-Term Reservation Requests

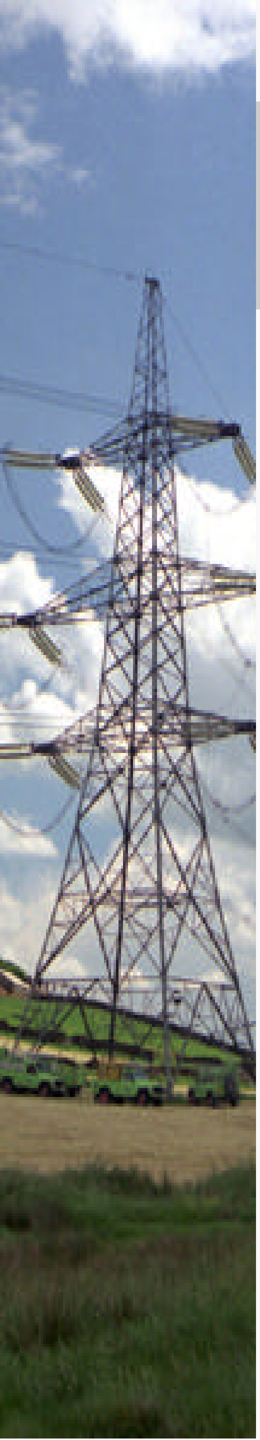


* Secondary non-firm service are schedules between secondary receipt or delivery points that are made under a firm reservation. These schedules are non-firm in priority and refusals of these schedules are not contained in the OASIS data (since they are not a request for new service). Therefore, no approval share is computed.

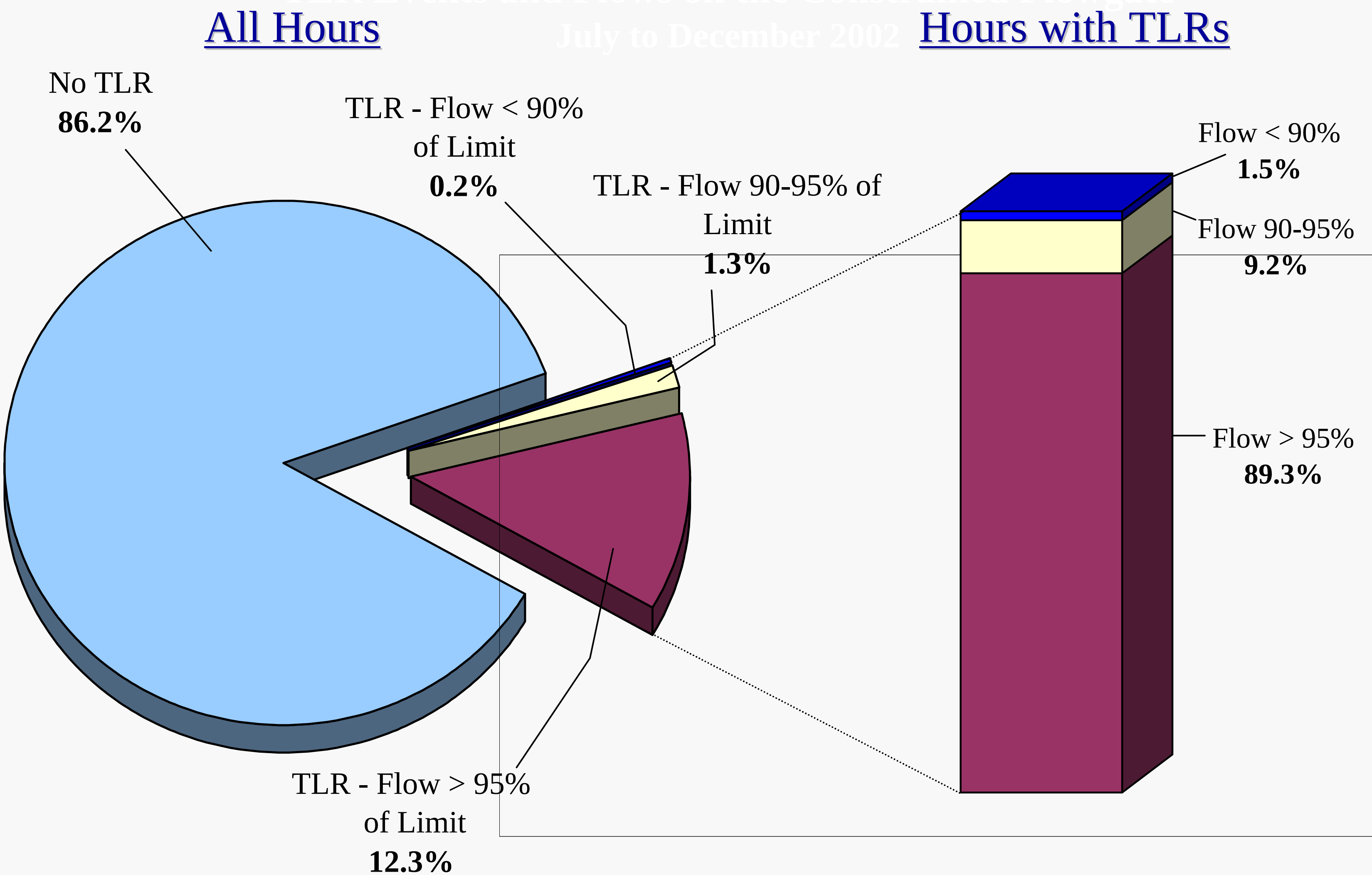
TLR Events and Transactions Curtailed in 2002

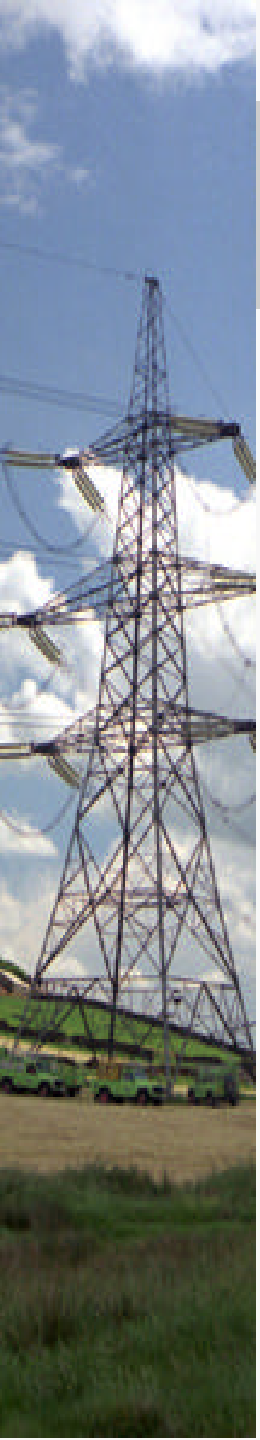






TLR Events and Flows on the Constrained Flowgate July to December 2002





Redispatch Ratio by Flowgate for TLR Events
July to December 2002

Flow Gate	TLR Events	Relief Provided (MW)	Curtailed Amount (MW)	Minimum Redispatch: Redispatch Amount (MW)	Minimum Redispatch: Redispatch Ratio	Economic Redispatch: Redispatch Amount (MW)	Economic Redispatch: Redispatch Ratio
Northside-Clifty Creek 138 (Flo) Trimble	6	10	161	128	80%	146	92%
Eau Claire-Arpin 345 Kv	25	51	368	107	27%	120	31%
Paddock Xfmr 1 + Paddock-Rockdale	16	27	189	59	31%	63	33%
Russel-Rockdale 138/Paddock-Rockdale 345	5	23	221	56	27%	58	28%
Albers-Paris138 For Wemp-Padock 345	10	16	184	158	74%	163	76%
Poweshiek-Reasnor 161 For Montezuma-Bond	8	9	133	41	32%	71	56%
Lor5-Trk Riv5 161kv/Wempl-Paddock 345kv	21	21	217	48	22%	92	39%
Salem 345/138 Quad Cities-Sub 39	7	20	344	77	22%	87	24%
MWSI	17	102	477	157	30%	195	39%
N.Platte-Stvl /Gentl-Redwil	3	38	387	354	90%	354	90%
Quad City West 345kv	2	26	316	114	35%	155	48%
Sub 92-Hills Flo Sub93-Subt	1	53	630	156	25%	164	27%
Arnold - Tiffin 345kv line	2	52	447	183	38%	225	47%
Weighted Average Redispatch Ratio					**30%**		**38%**

Percentage of Generation not Dispatched by the Primary RTO