

Congestion Impact Calculation Update

NYISO ESPWG
November 16, 2004

11/12/04

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Agenda Items

- Use of Mitigated or Unmitigated Bids for Calculations
- Results Reporting Suggestions
- PROBE Enhancement Update



Mitigated or Unmitigated Bids

- Issue Reminder & Summary
 - Mitigation Protocol Changes May Make Trend Comparison Difficult
 - Mitigated Bids Actually Set Prices and Reflect the Actual Market
 - Under AMP, No Congestion Implies No Mitigation (reinforces the severity of the “no constraints” assumption)
- Question from the last Meeting: *“What Difference Does it Make?”*
- Test July, August, September 2004
 - **Primary Congestion Cost Measure**
(Constrained – Unconstrained Bid Production Cost Change)
 - Unmitigated \$22.0 Million
 - Mitigated \$20.6 Million
 - Difference (Mitigated – Unmitigated) -\$1.4 Million (-6.3%)
 - **Other Congestion Metrics Not Yet Computed**



Congestion Reporting Options

Agreed Reporting

- Metrics Routinely Produced for ESPWG should be Posted (Monthly Zonal Metrics)
- Explanation of the Metrics & Their Interpretation

Metrics Options

- Congestion Metrics or Constrained & Unconstrained Components
- NYCA or Zonal
- Monthly or Daily Totals (Hourly Not Recommended)

Any Combination of these Choices is Possible



Congestion Reporting Options

Examples

- Basic - Monthly Zonal Metrics ★
 - Same as the ESPWG Presentations
- More - Metrics Daily NYCA

	BPC	Cong Pay	TCC	Unhedged	Gen Pay	Load Pay	Load TCC	Sch1	Shortfall	Load Unhedged
Monday, July 19, 2004	\$196,432	\$2,252,209	\$1,204,975	\$1,047,235	-\$989,873	\$153,988	\$1,208,414	\$73,139	-\$8,586	-\$989,873

- Even More - Daily Metrics by Zone ★

Zone	BPC	Cong Pay	TCC	Unhedged	Gen Pay	Load Pay	Load TCC	Sch1	Shortfall	Load Unhedged
CAPITL	-\$291,622	\$45	-\$2,412	\$2,457	-\$371,046	-\$148,882	-\$2,412			
CENTRL	-\$537,859	\$41	\$7,795	-\$7,754	-\$839,090	-\$150,654	\$7,795			
DUNWOD	\$0	\$23,994	-\$14,765	\$38,759	-\$4,085	-\$79,740	-\$14,765			
GENESE	-\$32,009	\$43	\$1,614	-\$1,571	-\$87,617	-\$189,107	\$1,614			
HQ	-\$48,173	\$0	\$1,266	-\$1,266	-\$104,762	\$0	\$149			
HUDVL	-\$9,246	\$25	-\$13,424	\$13,449	-\$246,922	-\$102,907	-\$13,424			
LONGIL	\$520,682	\$965,562	\$325,512	\$640,049	\$730,522	\$633,645	\$325,512			
MHKVL	\$0	\$8	\$4,344	-\$4,336	-\$20,742	-\$71,468	\$4,344			
MILLWD	\$0	\$15,993	\$7,712	\$8,281	-\$139,288	-\$43,376	\$7,712			
N.Y.C.	\$803,156	\$1,246,867	\$876,822	\$370,044	\$818,010	\$566,211	\$876,822			
NORTH	\$0	-\$18	\$3,605	-\$3,622	-\$111,224	-\$42,726	\$3,605			
NPX	-\$46,983	-\$408	\$544	-\$952	-\$40,263	\$3,511	-\$40			
OH	-\$175	\$0	-\$1,382	\$1,382	-\$26,534	\$0	\$0			
PJM	-\$147,309	-\$910	-\$3,965	\$3,055	-\$217,194	-\$11,995	-\$206			
WEST	-\$14,030	\$968	\$11,708	-\$10,740	-\$329,639	-\$208,523	\$11,708			
NYCA	\$196,432	\$2,252,209	\$1,204,975	\$1,047,235	-\$989,873	\$153,988	\$1,208,414	\$73,139	-\$8,586	-\$989,873



Congestion Reporting Options

Examples

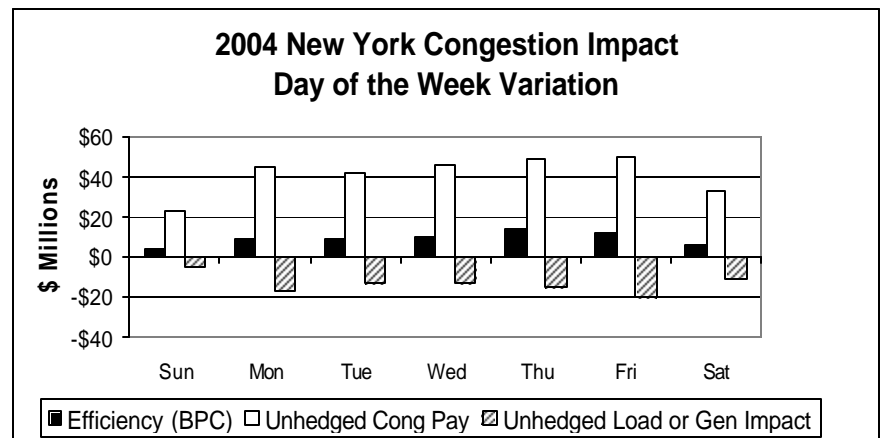
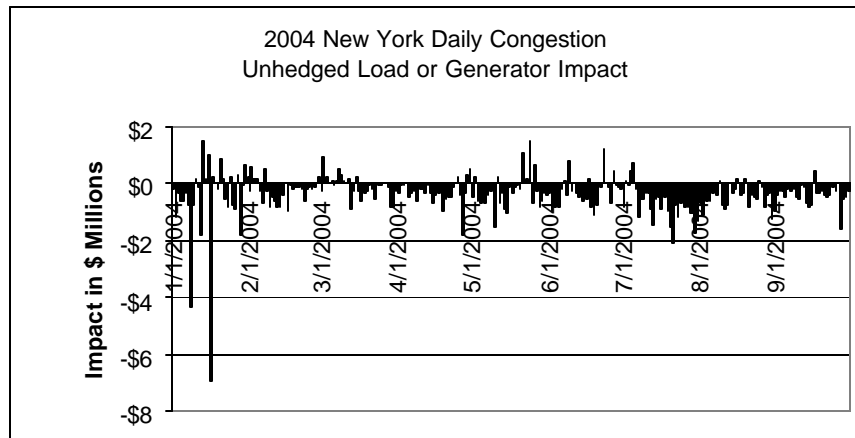
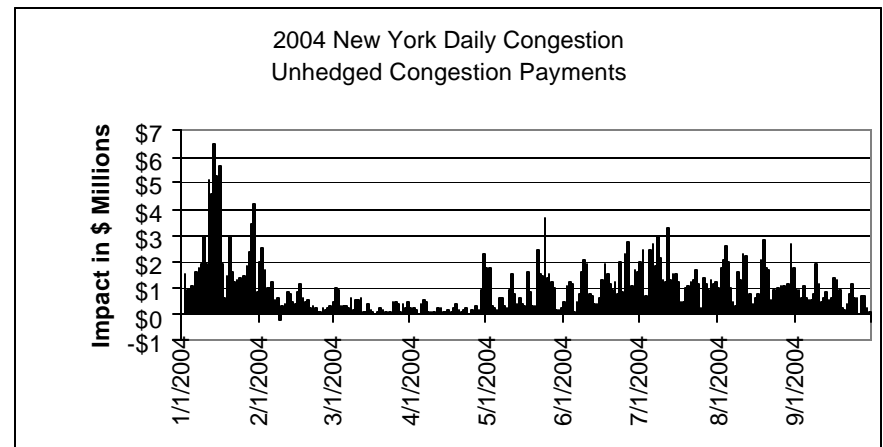
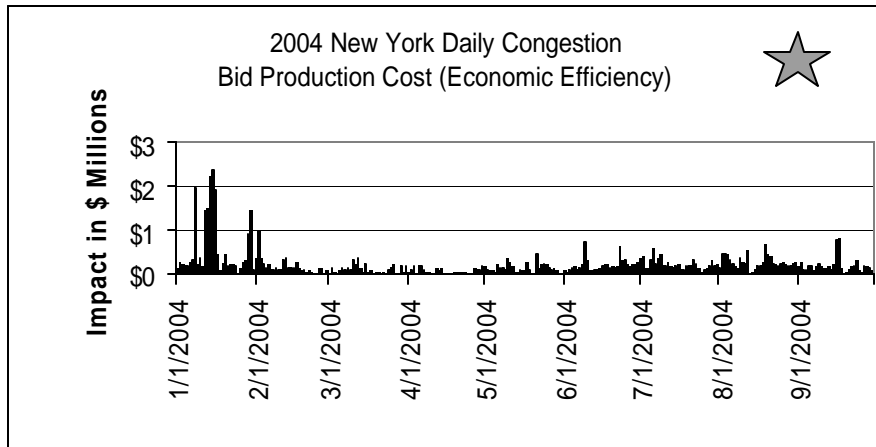
- Most - Daily Constrained and Unconstrained Components

19-Jul-04

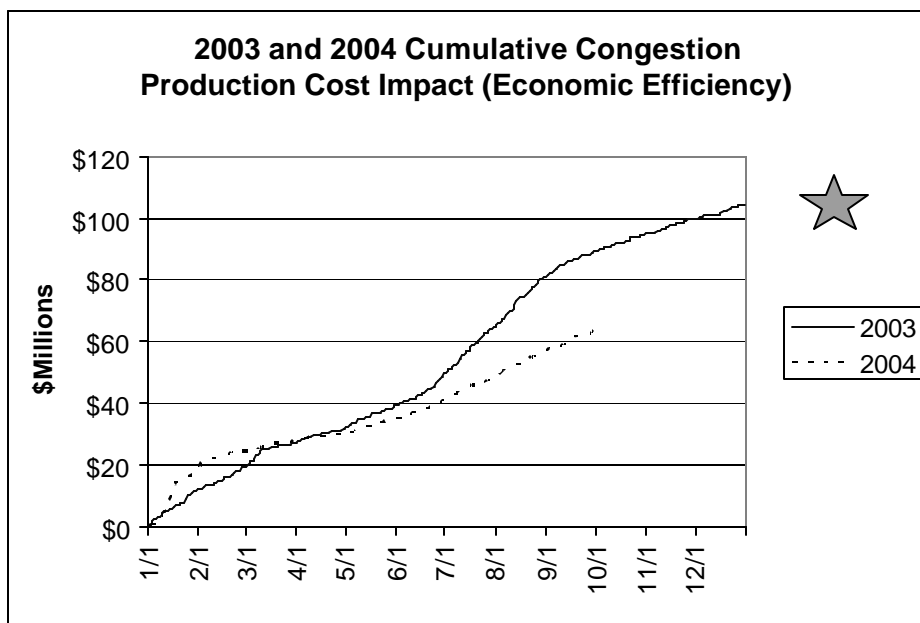
Constrained													
Zone	Load_MW	Supp_MW	BPC_Unmitg	BPC_Mitg	BPCG	Dem_Energy\$	Dem_Congest\$	Dem_Losses\$	Supp_Energy\$	Supp_Congest\$	Supp_Losses\$	AS_rev	TCC
CAPITL	41613	14128	\$116,188	\$116,188	\$98,270	\$1,950,173	\$45	\$120,757	\$757,821	\$8	\$39,191	\$2,328	-\$2,412
CENTRL	41135	92131	-\$1,310,393	-\$1,310,393	\$0	\$1,974,531	\$41	-\$35,182	\$4,329,727	\$47	-\$119,843	\$40	\$7,795
DUNWOD	27733	1525	-\$658,090	-\$658,090	\$0	\$1,344,286	\$23,994	\$127,273	\$68,983	\$941	\$6,327	\$0	-\$14,765
GENESE	47203	17793	-\$10,524,972	-\$10,524,972	\$0	\$2,219,584	\$43	-\$23,950	\$848,981	\$12	-\$37,170	\$5,145	\$1,614
HQ	0	14550	\$583,728	\$583,728	\$0	\$0	\$0	\$0	\$769,465	\$3,909	-\$22,125	\$0	\$149
HUDVL	28248	75182	\$2,042,515	\$2,042,515	\$18,795	\$1,383,633	\$25	\$93,688	\$3,629,443	\$70	\$242,480	\$10,141	-\$13,424
LONGIL	76958	53618	\$2,836,881	\$2,836,881	\$48,136	\$3,776,007	\$965,562	\$402,511	\$2,680,855	\$571,120	\$258,274	\$45,144	\$325,512
MHKVL	19761	5914	\$15,895	\$15,895	\$0	\$945,727	\$8	\$11,507	\$294,836	\$1	-\$913	\$0	\$4,344
MILLWD	13415	50906	\$382,959	\$382,959	\$0	\$666,334	\$15,993	\$52,571	\$2,380,573	\$34,115	\$182,303	\$0	\$7,712
N.Y.C.	184442	65150	\$4,210,193	\$4,103,381	\$505,204	\$8,897,696	\$1,246,867	\$966,399	\$3,267,209	\$442,143	\$347,430	\$6,607	\$876,822
NORTH	14427	37622	\$82,765	\$82,765	\$0	\$683,378	-\$18	-\$30,941	\$1,773,749	-\$43	-\$85,155	\$0	\$3,605
NPX	3834	425	\$140,286	\$140,286	\$0	\$90,772	-\$396	\$6,057	\$22,323	-\$1	\$1,475	\$0	-\$40
OH	1160	12954	\$193,611	\$193,611	\$0	\$0	\$0	\$0	\$464,857	-\$12,765	-\$42,309	\$0	\$0
PJM	3312	22654	\$910,167	\$910,167	\$0	\$164,475	-\$863	-\$1,924	\$942,842	-\$8,033	-\$41,659	\$0	-\$206
WEST	58574	94476	\$2,291,904	\$2,291,904	\$0	\$2,786,808	\$968	-\$168,021	\$4,658,459	\$308	-\$326,956	\$45,816	\$11,708
Unconstrained													
CAPITL	41613	19242	\$407,810	\$407,810	\$101,818	\$2,077,759	\$0	\$142,099	\$1,105,216	\$0	\$60,065	\$1,566	\$0
CENTRL	41135	101762.1	-\$772,533	-\$772,533	\$0	\$2,107,775	\$0	-\$17,731	\$5,181,086	\$0	-\$132,054	\$29	\$0
DUNWOD	27733	1525	-\$658,090	-\$658,090	\$0	\$1,433,773	\$0	\$141,520	\$73,319	\$0	\$7,018	\$0	\$0
GENESE	47203	18326.4	-\$10,492,963	-\$10,492,963	\$63	\$2,366,291	\$0	\$18,492	\$937,394	\$0	-\$38,217	\$5,344	\$0
HQ	0	15388.22	\$631,901	\$631,901	\$0	\$0	\$0	\$0	\$880,187	\$1,117	-\$25,294	\$0	\$0
HUDVL	28248	75422.1	\$2,051,762	\$2,051,762	\$0	\$1,476,633	\$0	\$103,619	\$3,876,477	\$0	\$263,977	\$7,397	\$0
LONGIL	76958	45918.15	\$2,316,199	\$2,316,199	\$120,206	\$4,032,918	\$0	\$477,518	\$2,472,153	\$0	\$235,375	\$45,271	\$0
MHKVL	19761	5914	\$15,895	\$15,895	\$0	\$1,009,315	\$0	\$19,396	\$314,877	\$0	-\$211	\$0	\$0
MILLWD	13415	50906	\$382,959	\$382,959	\$0	\$709,534	\$0	\$68,740	\$2,539,416	\$0	\$196,863	\$0	\$0
N.Y.C.	184442	53645.27	\$3,407,038	\$3,407,038	\$627,954	\$9,491,485	\$0	\$1,053,265	\$2,819,067	\$0	\$298,847	\$4,717	\$0
NORTH	14427	37622	\$82,765	\$82,765	\$0	\$729,247	\$0	-\$34,103	\$1,891,552	\$0	-\$91,777	\$0	\$0
NPX	3481	1037.03	\$187,269	\$187,269	\$0	\$87,057	\$12	\$5,854	\$59,518	\$597	\$3,946	\$0	\$0
OH	1160	12961	\$193,786	\$193,786	\$0	\$0	\$0	\$0	\$481,524	-\$1,382	-\$43,826	\$0	\$0
PJM	3312	26386.31	\$1,057,475	\$1,057,475	\$0	\$175,653	\$47	-\$2,017	\$1,167,468	-\$3,711	-\$53,414	\$0	\$0
WEST	58574	94745.4	\$2,305,934	\$2,305,934	\$0	\$2,976,435	\$0	-\$148,157	\$4,997,123	\$0	-\$341,839	\$51,981	\$0



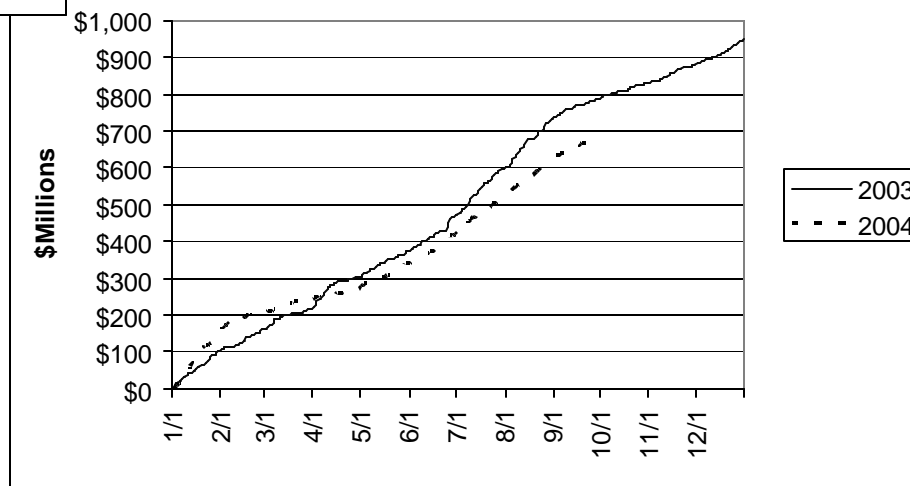
2004 Q1 – Q3 New York Congestion PRELIMINARY



2003 and 2004 Cumulative Totals Preliminary

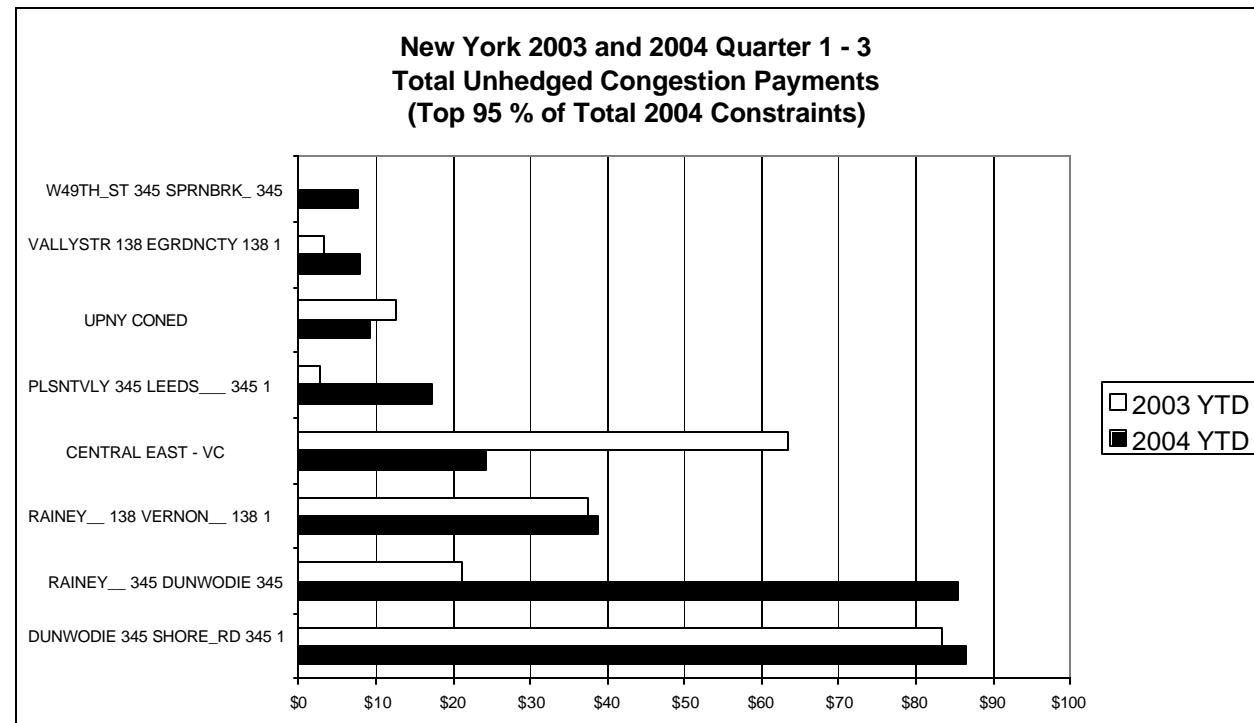


**2003 and 2004 Cumulative Congestion Payments
LMP Congestion Component Accounting Cost**



2004 Q1 – Q3 New York Unhedged Congestion Load & Congestion Payments by Constraint (95% or more of Total)

Monitored Facility	Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	2004 YTD	% of YTD	2004 Cum % of YTD	2003 YTD	2003 Cum % of YTD
DUNWODIE 345 SHORE RD 345 1	\$11	\$6	\$3	\$1	\$6	\$10	\$18	\$20	\$11	\$86	30%	30%	\$83	34%
RAINEY 345 DUNWODIE 345	\$56	\$13	\$1	\$0	\$0	\$4	\$5	\$6	\$1	\$85	30%	60%	\$21	9%
RAINEY 138 VERNON 138 1	\$0	\$0	\$2	\$2	\$9	\$10	\$5	\$7	\$4	\$39	14%	74%	\$37	15%
CENTRAL EAST - VC	\$0	\$0	\$1	\$3	\$3	\$2	\$8	\$5	\$0	\$24	9%	82%	\$64	26%
PLSNTVLY 345 LEEDS 345 1	\$0	\$0	\$0	\$0	\$4	\$4	\$2	\$4	\$2	\$17	6%	88%	\$3	1%
UPNY CONED	\$0	\$0	\$0	\$0	\$0	\$1	\$6	\$1	\$2	\$9	3%	92%	\$13	5%
VALLYSTR 138 EGRDNCTY 138 1	\$1	\$1	\$0	\$0	\$1	\$1	\$2	\$1	\$1	\$8	3%	94%	\$3	1%
W49TH_ST 345 SPRNBRK 345	\$0	\$0	\$0	\$0	\$0	\$3	\$2	\$2	\$1	\$8	3%	97%	\$0	0%



Congestion Reporting Options

By Constraint Choices

- Congestion Component & TCC
- Monthly or Daily Totals (Hourly Not Recommended)
- Monitored Element Only or Monitored Element/Contingency Pair

	Monitored Facility	Contingency	Demand\$	Supply\$	TCC\$
Monday, July 19, 2004	ADIRNDCK 230 MOSES 230 1	SIN:GRJ MSU1: HQ GEN & DC	-\$19	-\$53	\$28
Monday, July 19, 2004	BARRETT 138 VALLYSTR 138	BUS: VALLYST 292 262	-\$5,293	-\$4,658	-\$1,514
Monday, July 19, 2004	DUNWODIE 345 SHORE RD 345 1	SPRNB49345 EGRDNCTY345CY49	\$939,783	\$648,023	\$316,877
Monday, July 19, 2004	E179TH W 138 HELLTP W 138 1	Base Case	-\$14,413	-\$8,620	-\$10,648
Monday, July 19, 2004	E179THST 138 HELLGT E 138 1	Base Case	\$2,119	\$270	\$1,995
Monday, July 19, 2004	ELWOOD W 138 GREENLWN 138 1	NRTHPORT138WELWOOD E138 681	-\$50,193	-\$95,329	-\$13,720
Monday, July 19, 2004	FRESHKLS 138 WILLWBRK 138 1	Base Case	-\$11,034	-\$9,337	-\$23,713
Monday, July 19, 2004	HUDS AVE 138 JAMAICA 138	Base Case	\$38,005	\$13,606	\$20,767
Monday, July 19, 2004	NEWBRDGE 138 FREEPORT 138 1	Base Case	\$0	\$0	\$0
Monday, July 19, 2004	NRTHPORT 138 PILGRIM 138 1	NRTHPORT138EPILGRIM 138A677	-\$8,290	-\$7,619	-\$2,311
Monday, July 19, 2004	NRTHPORT 138 PILGRIM 138 2	NRTHPORT138EPILGRIM 138A679	-\$108,531	-\$96,681	-\$29,623
Monday, July 19, 2004	QUENBRDG 138 VERNON 138 1	Base Case	\$28,463	\$6,405	\$22,361
Monday, July 19, 2004	RAINEY 138 VERNON 138 1	TWR: 22 21 A2253	\$605,346	\$208,769	\$457,065
Monday, July 19, 2004	RAINEY 345 DUNWODIE 345	DUNWOD72345 RAINEY 345 72	\$108,157	\$27,994	\$90,925
Monday, July 19, 2004	SHORE RD 345 SHORE RD 138 1	SPRNB49345 EGRDNCTY345CY49	\$41,210	\$26,519	\$19,644
Monday, July 19, 2004	UPNY CONED	Base Case	\$276,100	\$161,371	\$89,846
Monday, July 19, 2004	VALLYSTR 138 EGRDNCTY 138 1	BUS: E F BARRET 292 459 BA	\$75,190	\$39,068	\$23,696
Monday, July 19, 2004	VERNON 138 KENTAVE 138 1	Base Case	\$8	\$1	\$7
Monday, July 19, 2004	VERNON 138 KENTAVE 138 1	Base Case	\$7	\$1	\$7
Monday, July 19, 2004	W49TH ST 345 SPRNBRK 345	SCB: SPBK (RS-4): M52 99941	\$335,601	\$138,436	\$212,170



PROBE Enhancements

- Concentrating on SMD2
- Improved TCC Data Handling (2003 & 2004 Data Just Received)
- Unit Commitment and Modeling Refinements from PROBE Work at NYISO and Other ISO's



Future Efforts

First Priorities

- Align SCUC and PROBE Modeling **Underway**
 - SMD2 and AMP
 - Refine Representation of Multiple SCUC Passes
- Monthly Analysis, Quarterly Summaries and Publication
- Recompute 2003 Metrics

Next Priorities

- Unusual Day Analysis
- Develop Automated SCUC – PROBE Results Comparison
- Automate Calculation Process
- Assist in Approach to Economic Transmission Planning

