Request IR-21:

Reference Exhibit M-3, Confidential Appendix 6.04, p. 3. With regard to the "low", "base", and "high" forecasts of natural gas prices delivered to Tufts Cove:

(a) Please provide the "long term update July/Aug 2012" forecast of annual prices at the Henry Hub.

(b) Please provide the "long term update July/Aug 2012" forecast of annual prices at Dracut.

(c) Please provide all available documentation of the derivation of the annual basis differential between Dracut prices and prices delivered to Tuft's Cove.

(d) For each year of the forecast of prices delivered to Tuft's Cove.

(e) Please provide the amount included in the delivered price for M&NP-US transportation, expressed both in $CAD/MMBtu and as a percentage of the annual M&NP-US transportation tariff rate.

(f) Please provide the amount included in the delivered price for M&NP-Canada transportation, expressed both in $CAD/MMBtu and as a percentage of the annual M&NP-Canada transportation tariff rate.

Response IR-21:

(a-f) Please refer to Liberty IR-5. All pipeline tolls are at 100 percent of the annual transportation tariff rate.

Request IR-22:

Please provide a copy of the Renewable Energy Integration Study when it is available in draft or final form.

Response IR-22:

NS Power's Wind / Renewable Energy Integration Study commenced in Q3 of 2011 and is expected to be complete in Q2 of 2013. The FAM Small Working Group was provided with progress updates in November 2011, February 2012, May 2012 and November 2012.

The Final Report will be filed when it is completed.

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Request IR-23:

Please provide a copy of all materials that NSPI provided to GE for the Renewable Energy Integration Study.

Response IR-23:

Please refer to CA IR-22.

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Request IR-24:

Please provide all reports and presentations from GE related to the Renewable Energy Integration Study, since GE was hired for that project.

Response IR-24:

Please refer to CA IR-22.

Request IR-25:

Please identify any results from the Renewable Energy Integration Study used in the analysis presented in Appendix 6.02.

Response IR-25:

The Renewable Energy Integration Study was not used in the analysis presented in Appendix 6.02.

Request IR-26:

Reference Appendix 6.02

(a) Please provide all work papers supporting Figures 1.1 and 4.1, including a breakdown of the costs by project or category.

(b) Please provide all data and analyses supporting the assertion that "Within NSPI, the average capacity contribution from wind during peak load conditions is in the range of 20% of nameplate." (p. 14)

(c) Please provide hourly wind output by plant for January 2010 to date.

(d) Please identify which plants have ERIS service.

(e) Please provide any data regarding the extent to which "contribution of wind generation during peak load conditions could vary across years." (p. 14)

(f) Please provide a list of all the times that NSPI has curtailed a generator on non-firm transmission service, and for each such instance, the generator, the magnitude and duration of the curtailment, and the reason for the curtailment. (p. 14)

Response IR-26:

(a) Please refer to Synapse IR-18 Attachment 2, filed electronically.

(b) Please refer to Synapse IR-7

(c) Please refer to Synapse IR-5 (b).

(d) The following plants have ERIS service:

- Nuttby
- Dalhousie Mountain
- Glen Dhu
- Port Hawkesbury (Biomass)

(e) Please refer to Synapse IR-7 (a).

(f) Please refer to Synapse IR-8.

Request IR-27:

Reference Appendix 6.02, p. 14, regarding the claim that "A study by the ERCOT market operator showed that penetration of 5,000 MW of wind generation in their system would necessitate the introduction of a new category of operating reserve - a 10-minute non-spinning reserve."

(a) Given that ERCOT had "over 9,000 MW installed at the end of 2011" (p. 14), has ERCOT introduced 10-minute non-spinning reserve?

(b) What service does 10-minute non-spinning reserve provide that 10-minute spinning reserve does not provide?

(c) Please identify any NSPI generators that can provide 10-minute non-spinning reserve.

Response IR-27:

(a) NS Power is not aware of ERCOT's implementation plan for this proposal.

(b) It would provide additional 10-minute reserve.

(c) NS Power units that provide 10-minute non-spinning reserve:

- Most hydro units within the limits of the system as defined by watershed hydrology and in some cases by system operating licenses
- Combustion turbines

Request IR-28:

Reference Appendix 6.02, p. 16

Please identify that pages of the Committee on Climate Change report that "estimate[s] that the cost of providing additional reserves because of wind generation is around $8-$16 per MWh of wind generation."

Response IR-28:

The upper bound of the wind integration cost estimate of $16 per MWh comes from the Committee on Climate Change report, page 17, and is expressed as 1 pence per kWh.

The lower bound integration cost estimate of $8 per MWh comes from a different source which was inadvertently omitted from the filed document. The report "The Costs and Impacts of Intermittency: An assessment of the evidence on the costs and impacts of intermittent generation on the British electricity network" estimates these costs on page 47 at up to £5 per MWh (system dependent). The reference to this paper is provided below:

Gross, Robert, Philip Heptonstall, Dennis Anderson, Tim Green, Matthew Leach, and Jim Skea. "The Costs and Impacts of Intermittency: An assessment of the evidence on the costs and impacts of intermittent generation on the British electricity network." *UK Energy Research Centre*. March 2006.
http://www.ukerc.ac.uk/Downloads/PDF/06/0604Intermittency/0604IntermittencyReport.pdf
(accessed March 4, 2013).

Request IR-29:

Reference Appendix 6.02, p. 19

(a) Please quantify the "high inertia" of NSPI's "conventional synchronous generators."

(b) Please describe the method for synthesizing inertia for wind generators with appropriate control mechanisms.

(c) Please provide NSPI's estimate of the cost of the "appropriate control mechanisms" per nit of inertia.

(d) Please provide "the reactive power output range of a typical synchronous generator."

(e) Please provide "the reactive power output range" of a typical wind generator.

(f) Please explain why the local SCADA system slows the reactive power output response of wind turbines.

(g) Please quantify the slowness of reactive power output response compared to the rate of response by NSPI's conventional synchronous generators.

(h) Please identify the specific existing, planned and proposed Nova Scotia wind farms that are "located in remote, weakly interconnected parts of the electric grid" and create "Large power flows over a weak transmission system that actually result in voltage flicker, low substation voltages and overall negatively impact power system stability."

(i) Please identify any combination of loads and dispatch of NSPI's conventional generation that can result in "low substation voltages" or "negatively impact power system stability."

(j) Does NSPI consider Lingan and Point Aconi to be "closer to load centers" than the South Canoe wind plant?

(k) Would the Maritime Link DC/AC converter station at Woodbine be "closer to load centers" than the South Canoe wind plant?

(l) Please specify how much system frequency control is required for the NSPI system.

(m) Please specify how much system frequency control can be provided by each NSPI thermal and hydro unit.

Response IR-29:

(a)

Unit (Over 10 MW)	Rated MVA	Inertia Constant (MW-s/MVA)
88S-LINGAN 1	177.00	3.2100
88S-LINGAN 2	177.00	3.2100
88S-LINGAN 3	177.00	3.2100
88S-LINGAN 4	177.00	3.2100
2S-VJ 1	28.47	2.1600
2S-VJ 2	28.47	2.1600
102S-ACONI 1	217.00	3.3700
1C-TUPPER 2	177.00	4.3900

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Unit (Over 10 MW)	Rated MVA	Inertia Constant (MW-s/MVA)
50N-TRENTON 5	177.00	3.5000
50N-TRENTON 6	188.00	4.1000
91H-TUFTS COVE 6	59.77	4.6200
91H-TUFTS COVE 1	117.60	3.4300
91H-TUFTS COVE 2	117.60	3.5000
91H-TUFTS COVE 3	177.00	4.3400
91H-TUFTS COVE 4	60.00	5.9000
91H-TUFTS COVE 5	60.00	5.9000
14H-BURNSIDE 1	28.47	2.1600
14H-BURNSIDE 2	28.47	2.1600
14H-BURNSIDE 3	28.47	2.1600
14H-BURNSIDE 4	28.47	2.1600
10W-TUSKET CT	28.47	2.1600
85S-WRECK_1	111.10	4.4800
85S-WRECK_2	111.10	4.4800
95H-MALAY_FL69.000	4.50	2.0200
96H-RUTH_FLS69.000	2.50	3.4000
96H-RUTH_FLS69.000	2.50	3.4000
93H-ST_MARG 13.200	13.00	3.3800
5W-DEEP_BRK 6.9000	10.00	3.1100
6W-COWIE_FL 6.6000	8.00	1.2300
4W-L_GR_BRK 6.9000	5.00	2.1400
3W-BIG_FALL 6.6000	10.00	2.3200
1W-UP_LAKE 6.6000	6.00	2.4400
2W-LOW_LAKE 6.6000	8.20	2.3000
2V-AVON2HYD 2.2000	3.75	2.0800
1V-AVON1HYD 2.2000	7.50	1.4400

Unit (Over 10 MW)	Rated MVA	Inertia Constant (MW-s/MVA)
8V-SALMON_HY23.000	2.50	1.7200
9V-CROIX_HY 23.000	3.75	2.4000
3V-HELS_GATE23.000	4.20	2.6500
3V-HELS_GATE23.000	4.20	2.6500
4V-WHITE_ROC23.000	4.00	1.2500
5V-LUMSDEN 69.000	3.50	1.9500
6V-HOLLOW_B 69.000	6.25	1.7100
7V-METHALS 6.9000	4.00	2.0000
12V-LEQUILLE6.9000	13.00	2.5900
81V-TIDAL 4.2000	19.10	2.2950
11V-PARADISE6.9000	5.50	2.8600
10V-NICTAUX 6.9000	8.50	1.7500
13V-GULCH 13.800	7.50	2.9000
14V-RIDGE_HY6.9000	5.00	1.4800
15V-SISSIBOO6.9000	7.50	2.6600
91V-FOURTH_L4.2000	3.34	0.6100
16V-WEYMOUTH69.000	11.25	2.5800
16V-WEYMOUTH69.000	11.25	2.4800

(b) Synthesized inertia effect is described in the Reference: Lalor, G., Mullane, A., and O'Malley, M.J., "Frequency Control and Wind Turbine Technologies," *IEEE Transactions on Power Systems*, Vol. 20, pp. 1903-1913, 2005. It is a required feature for interconnection of wind generation on the Hydro-Québec system. Please see Section 14.4 of the reference document "Transmission Provider Technical Requirements for the Connection of Power Plants to the Hydro-Quebec Transmission System".

(c) NS Power has requested cost information on this feature from the proposed generation suppliers for South Canoe and Sable Wind.

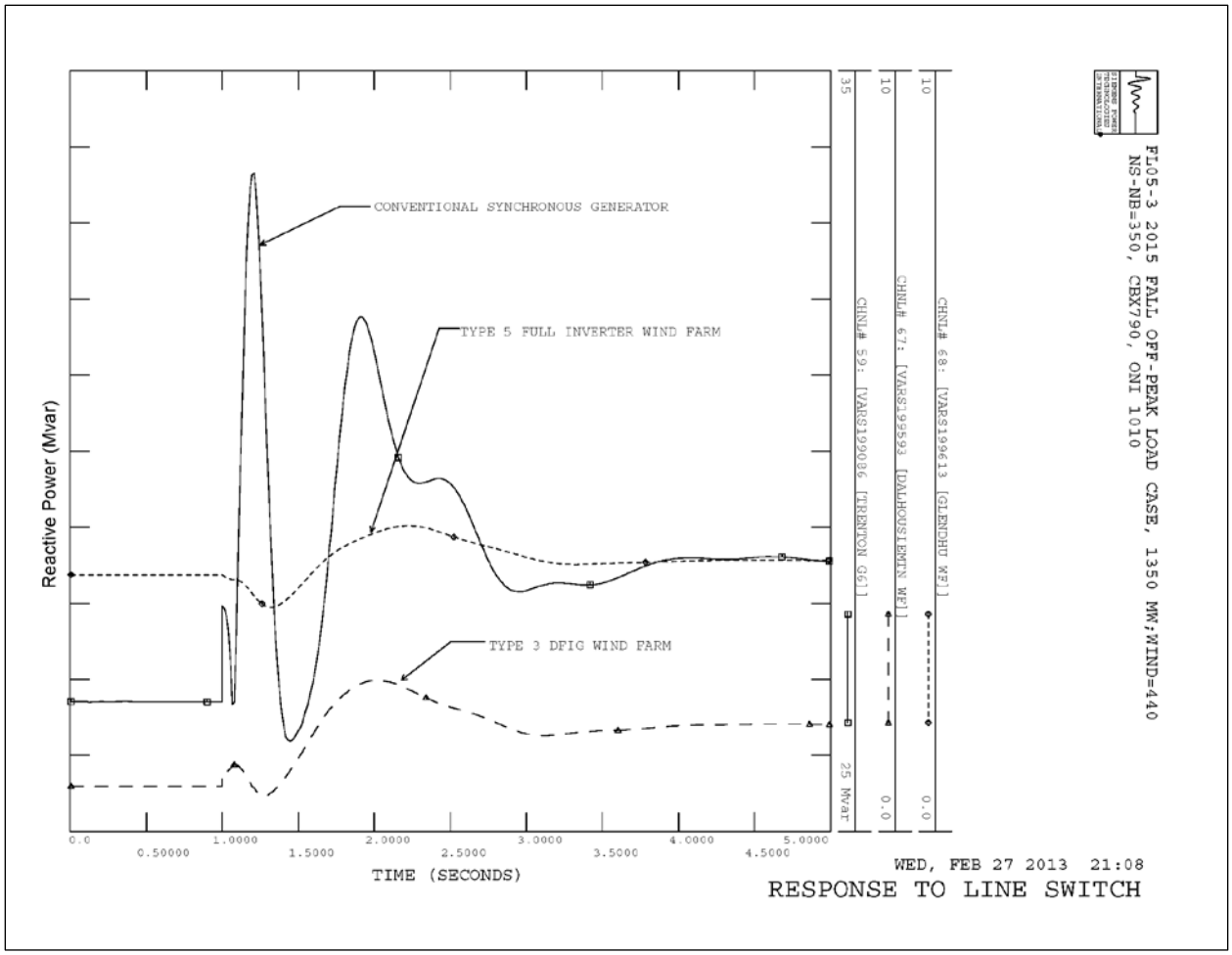
(d) Reactive power capability of generators is specified as "power factor". Thermal generation on the Nova Scotia system is typically rated at 0.85 power factor. That means that, for every 10 MW produced, the unit is capable of producing 6.2 Mvar of reactive power. Most hydro units on the Nova Scotia system are rated at 0.80 power factor, meaning that for every 10 MW produced, the unit is capable of producing 7.5 Mvar.

(e) Type 1 wind generators such as Little Brook and Type 2 wind generators such as Pubnico Point consume reactive power from the grid and provide no reactive power or voltage control. Type 3 and Type 4 wind generators represent the bulk of technology available today, range in rating from a power factor of 0.90 (4.8 Mvar per 10 MW of output) to 0.95 per unit (3.3 Mvar per 10 MW). More importantly, while most conventional generators on the Nova Scotia system are connected to the transmission system via a single step-up transformer, large-scale wind generation plants are connected via a low voltage transformer (typically 400V to 34,500V) plus a series of 34,500V collector circuits, and then an interconnection transformer. Since the NS Power Generator Interconnection Procedures require a net power factor of 0.95 to be available at the Point of Interconnections, this often requires wind generation plants to supplement their reactive power capability with switched shunt capacitors.

(f) The voltage sensing and controller for a wind farm is usually located at the Interconnection Substation rather than at each individual machine in the farm, sometimes referred to as a Farm Control Unit (FCU). Each individual generator communicates with the FCU via a localized Supervisory Control and Data Acquisition system which may be sequential rather than synchronous. Our early experience with wind farms in NS indicated that the communication link is based on a polling scheme in which each machine in the wind farm was contacted in sequence. When the FCU senses system conditions (such as a voltage dip on the transmission system) it sends signals to each unit

to adjust reactive power output, and the aggregate voltage response would be slowed by the communication sequencing.

(g) The following chart shows the relative speed of response of reactive power to the same simulated event on the Nova Scotia transmission system of a traditional synchronous generator and two nearby wind farms (Type 3 and Type 4 wind technologies respectively). Note the magnitude and speed of response of a conventional synchronous generator compared to the Type 3 and 5 wind generator, the larger and faster response is favorable for system controls during upset conditions, without this response additional capital investments are required.



(h) The quoted statement was meant to reflect the fact that wind farms are not often located in urban load centres. For instance, no large wind farms have been proposed for the urban districts of Halifax Regional Municipality. The existing wind farms at Pubnico Point, Gullivers Cove, and Nuttby Mountain are located on remote, weakly interconnected parts of the Nova Scotia transmission system. Siting these facilities required careful consideration of their size and operating characteristics to limit voltage flicker and substation voltage impacts. The System Impact Studies for wind farms in development have indicated to the Interconnection Customers the limitations and requirements for their facilities based on their Point of Interconnection. However, there have been a number of projects proposed in the past which would not meet criteria, or for which the required system upgrades were deemed too extensive for the projects to continue, based on the results of the feasibility studies or the system impact studies.

(i) The hydro generation in the western part of the province shares the weakly interconnected 69kV system with the Pubnico Point and Gullivers Cove wind farms, however some of the hydro plants are dispatchable (they are under the remote control of the System Operator and their output can be raised, lowered and scheduled) to mitigate the operating issues.

(j) From the perspective of system losses, South Canoe Lake is closer to the load centre. From the perspective of system strength (measured as Short Circuit Level not geographic distance), both Lingan and Pt. Aconi are closer to the electrical load centre (3899 and 1661 MVA respectively compared with 887 MVA for South Canoe Lake).

(k) From the perspective of system losses, South Canoe Lake is closer to the load centre. From the perspective of system strength (measured as Short Circuit Level not geographic distance) Woodbine converter station is closer to the electrical load centre (3682 MVA compared with 887 MVA for South Canoe Lake).

(l) NERC requires NS Power to carry 22 MW per 0.1 Hz while interconnected with the Eastern Interconnection.

(m) All thermal and hydro units in Nova Scotia are equipped with frequency control (governors) and are used to contribute to the system frequency control as needed. The range of their ability to deliver frequency control to maintain the 22MW per 0.1 Hz standard is a function of their individual operating point and mode of operation at any given time, assuming they are on-line.

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Request IR-30:

Please provide NSPI's "preliminary stability simulations with high levels of wind generation in the Maritimes" and all reports and memoranda describing the results of those simulations.

Response IR-30:

Please see Attachment 1 - Summary of Stability Findings, Attachment 2 and Attachment 3 - Simulation Plots.

System Stability with High Penetration of Wind Generation

Power system reliability standards are established and enforced by the North American Electric Reliability Corporation (NERC) and the Northeast Power Coordinating Council (NPCC). These standards require interconnected power systems to be designed and operated such that, among other requirements, they remain stable and well damped following an established set of disturbances (contingencies). Two forms of power system stability, voltage stability and angle stability.

Voltage stability is generally a slow-acting phenomenon with either local or regional consequences. The primary cause is lack of sufficient reactive power to respond to the non-linear behavior of the AC power system when stressed. It is recognized that reactive power must be dispatched strategically, since it cannot be effectively transmitted over long distances. Reactive power capacity must be held in reserve to respond to contingencies. Sources of reactive power and reactive power reserves include conventional (synchronous) generators, switched shunt devices (capacitor banks and inductors), very large industrial motors, as well as power electronic devices such as Static Var Compensators (SVC), Distribution Var generators (D-Var), voltage-source HVdc terminals, and certain types of wind turbines.

Angle stability can occasionally occur in steady state, but is more commonly recognized as “transient stability” characterized by cascading transmission element tripping, uncontrolled separation of parts of the power system, undamped oscillations of voltage and frequency, unexpected tripping of generation and/or load, following contingencies. Transient stability phenomena generally occurs in the 1-20 second time frame, where operator action is not possible and upon which only automated protection and control schemes can be relied.

NERC and NPCC define the type of contingencies for which power systems must maintain stability. Collectively these are referred to as “single contingencies”, but they can include the loss of more than one transmission element if a common mode of failure is involved. Contingencies for which stability must be maintained include:

- Loss of any element without a fault
- Permanent three phase fault on any transmission line, generator, transformer or bus section cleared in normal time.
- Single-phase to ground fault on any transmission line, generator, transformer with delayed clearing (assumes a circuit breaker failure, resulting in shared elements tripping)
- Single-phase to ground fault on any circuit breaker (trips more than one element)
- Single-phase to ground fault on separate phases of separate circuits on a multi-circuit transmission structure
- Simultaneous permanent loss of both poles of a direct current bipolar facility without an ac fault
- Failure of a circuit breaker to operate when initiated by an SPS.
- Following certain contingencies, the system must be re-dispatched as quickly as possible, generally within 30 minutes, such that a second contingency can be survived.

The primary factors influencing power stability include:

- Inertia of rotating equipment (primarily generators). Wind generators typically have little to no natural inertia, but it can be synthesized with special controls.
- High speed voltage and reactive power control. Wind generators do not have the range of reactive power output of a typical synchronous generator, and the speed of control response is significantly slower, since individual wind turbines are controlled via a local SCADA system.
- System strength. Wind generation is often located in weak parts of the transmission system characterized by high system impedance and low short circuit level. Not only does this phenomenon tend to raise phase angle across the transmission system, but low short circuit level impacts the performance of voltage control, harmonics, and voltage flicker from wind generation, all of which is not an issue with conventional synchronous generation.
- High transmission loading. High power flow across transmission is characterize by increased phase angle of the voltage vector, with the theoretical maximum phase angle of 90°.
- System frequency is the result of a balance between generation and load. Conventional generators are equipped with speed/load governors which maintain frequency within acceptable limits by adjusting the mechanical power input from a turbine to the connected generator. Wind turbines are not normally equipped with governors, since the wind power input cannot be increased on demand. It is theoretically possible to add some level of frequency control to wind turbines, but the generally only work well in one direction (for over-frequency). If underfrequency capability is expected from a wind generator, this would mean that the units are normally operated inefficiently (spilling wind energy), so they can pick up a portion of power in the short term.

NSPI has conducted preliminary stability simulations with high levels of wind generation in the Maritimes. New Brunswick currently has 300 MW of wind generation, Prince Edward Island has 165 MW, and Nova Scotia has committed 550 MW, some of which is embedded it in the distribution system. The stability question must be addressed at the regional level (all Maritime Provinces) as well as Nova Scotia alone. Light load in the Maritimes can be less than 2000 MW, yielding the potential for over 50% of total generation coming from wind. Similarly, light load in Nova Scotia can be as low as 700 MW. When the combination of high wind generation plus the minimum load on thermal generation exceeds the in-province load, there is the potential for the excess generation to be exported out of the province.

Because there is a need to keep load following (conventional) generation on-line during light load in order to meet the higher load expected during morning load pick-up, there is a maximum amount of wind generation that can be on-line at any time. As long as this mix of conventional and wind generation is maintained, the stability issue is generally mitigated, with some exceptions.

The greatest risk to stability with high levels of wind generation has been found to be system separation the interconnected system with high levels of wind generation. If NS is importing at the

time of this contingency, firm load will be lost because of the inability of wind generation to pick up load (lack of governor capability) and the lack of rotating inertia of wind generation. This phenomenon will also occur, but to a lesser degree, with conventional generation. The critical difference with high penetration levels of wind generation is the management of contingencies while separated from the grid. System studies have shown that the system would be unstable in that mode of operation, thereby not meeting reliability criteria. For this reason, it is recommended that a new 345kV circuit between Salisbury NB and Onslow NS for very high wind generation penetration levels. Further study is required to determine the point at which this recommendation is required.

If NS is exporting at the time of the separation, generation will be shed to ensure remaining transmission is not overloaded. Presently, exports over 100 MW require one unit at Lingan to be operated at 150 MW and cross-tripped with the 345kV line to NB. Exports over 225 MW require two units at Lingan to be armed for cross-tripping. Under the scenario of low load and high wind generation, Lingan units are not likely to be operating at a level which will permit export above 100 MW. However, the above recommendation for an additional 345kV circuit between NS and NB would remove the need for this limitation.

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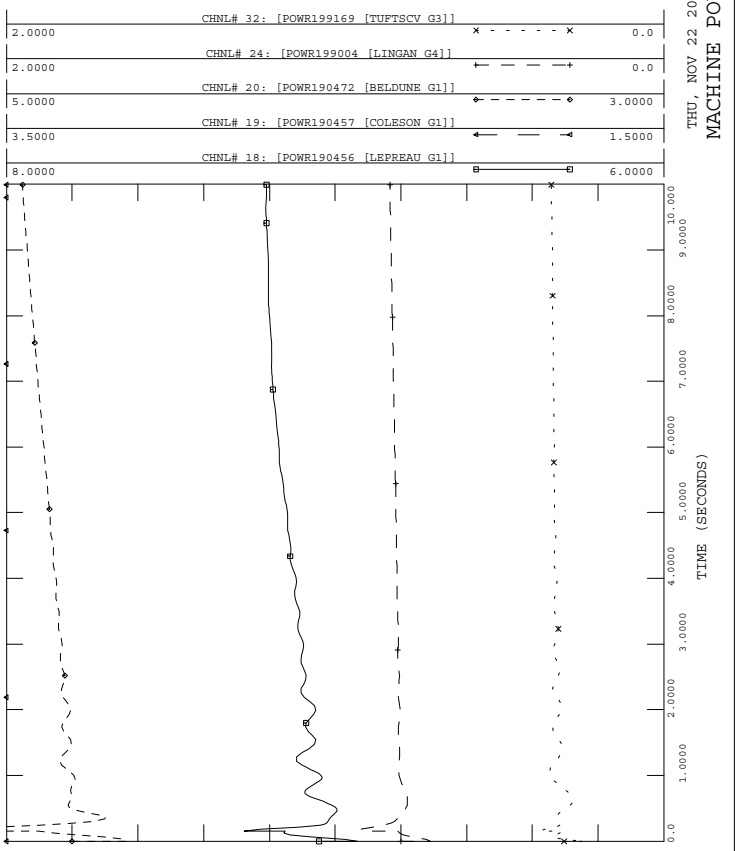

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MACHINE POWER MW

IR372 SYSTEM IMPACT STUDY
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ONLY LG4 AND TC3 ON-LINE
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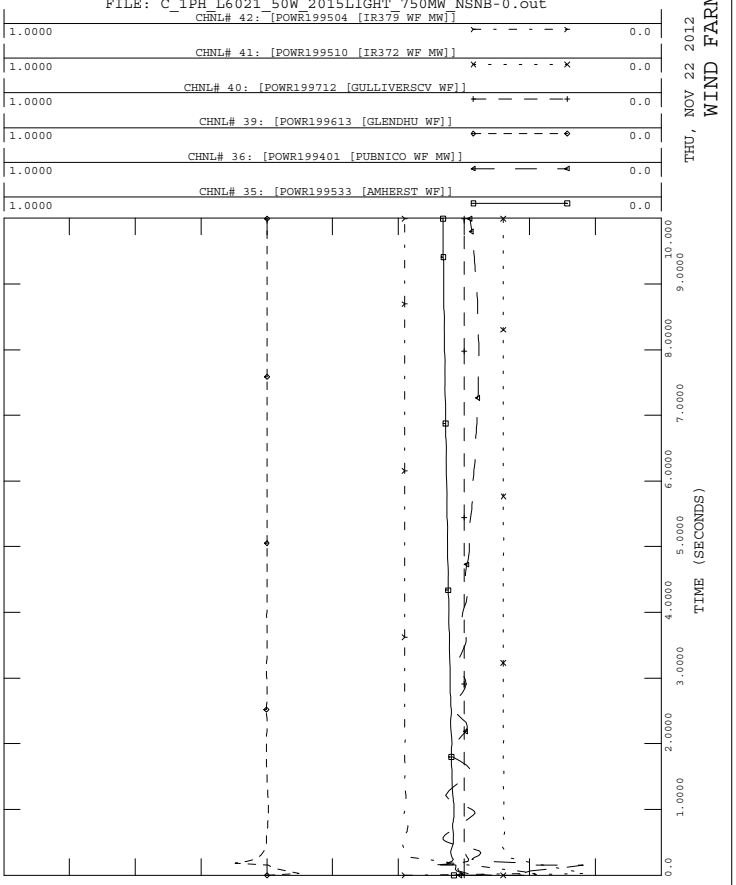

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WIND FARM MW

IR372 SYSTEM IMPACT STUDY
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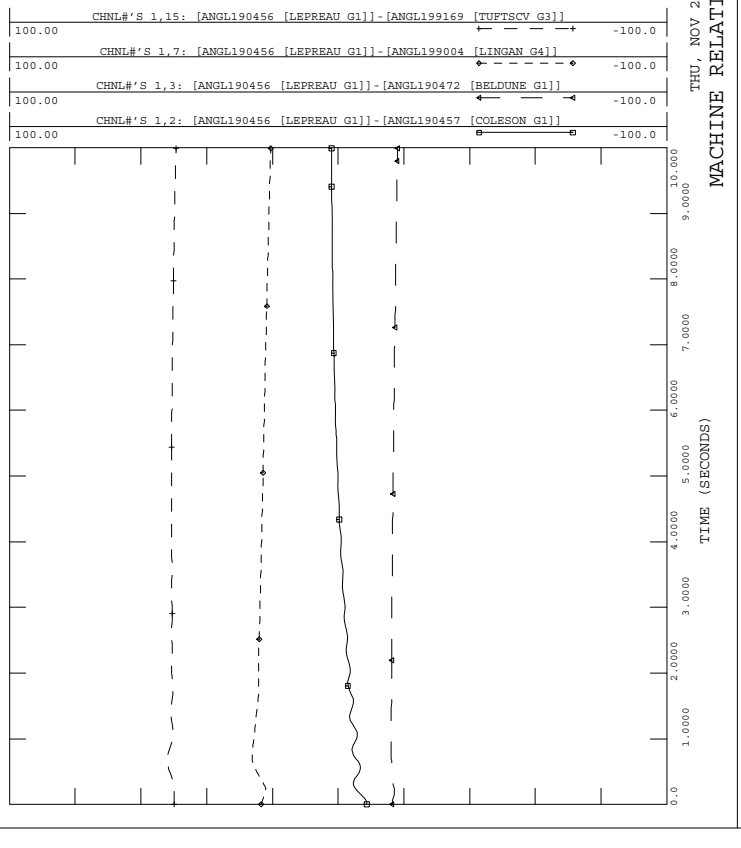

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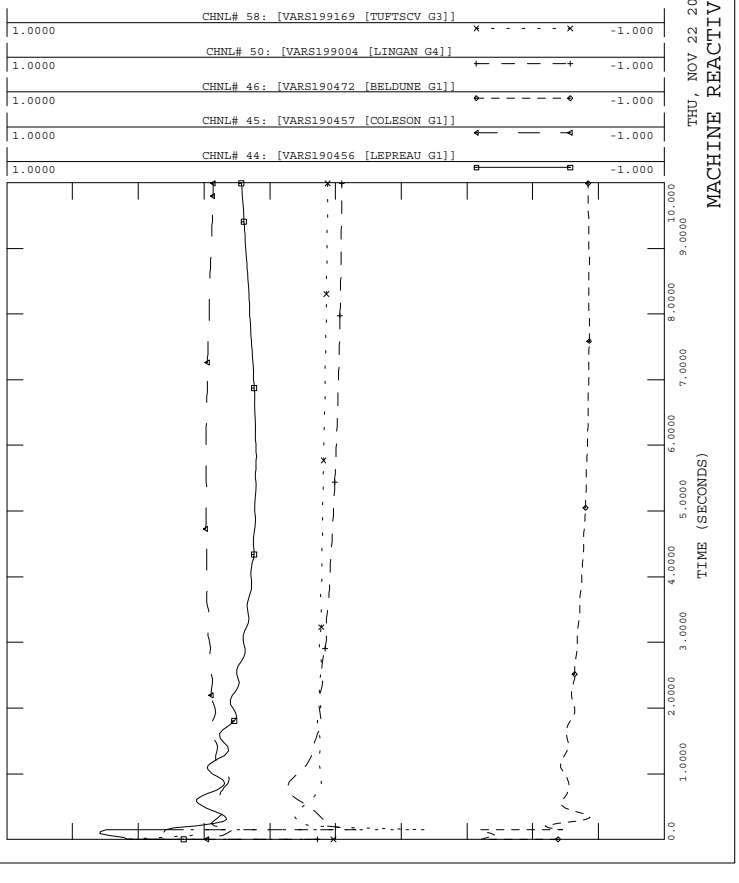

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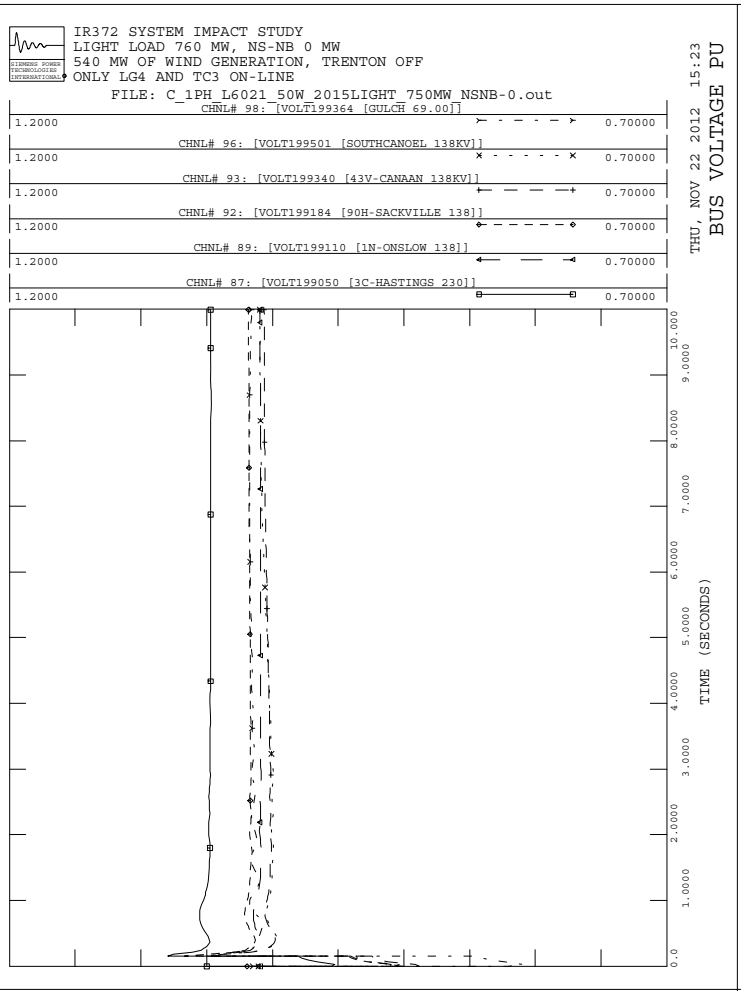
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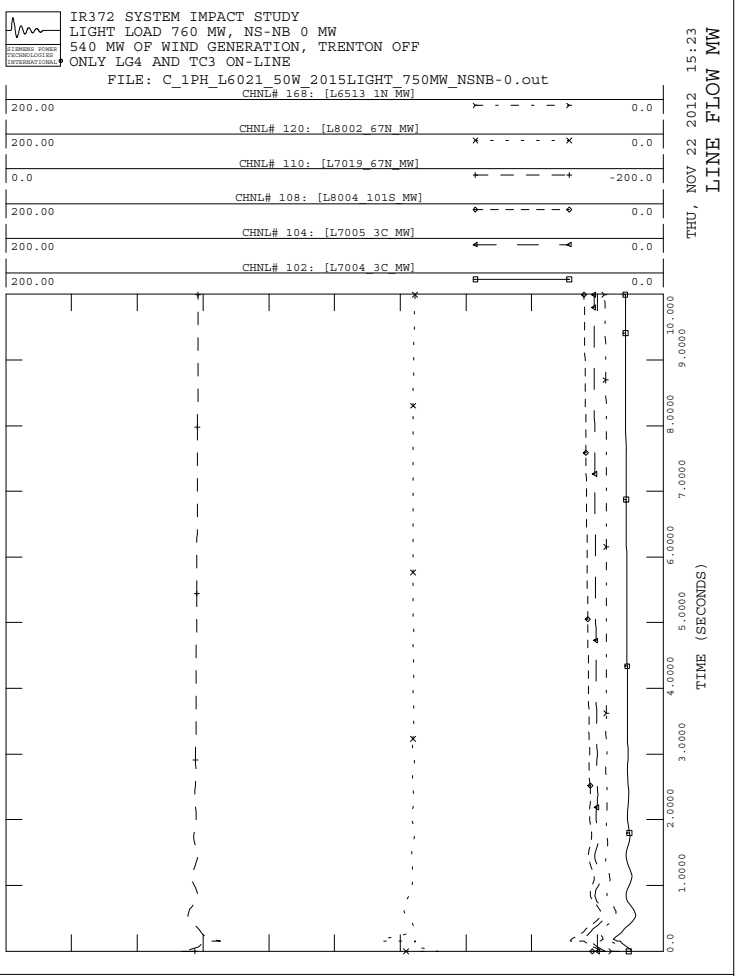
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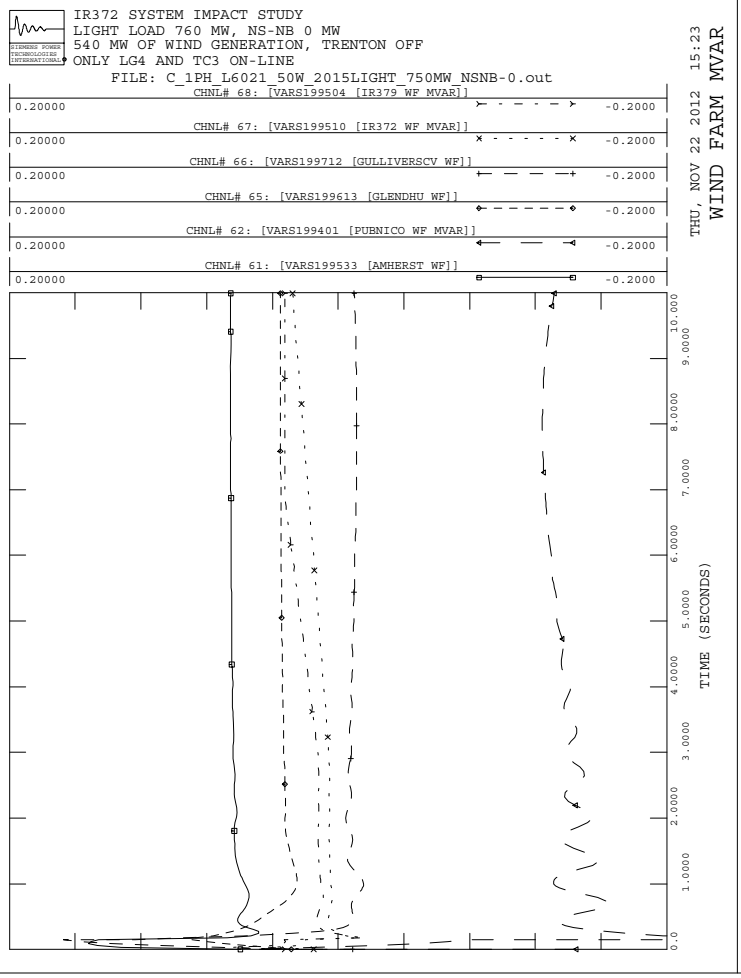
LINE FLOW MW
TIME (SECONDS)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ONLY LG4 AND TC3 ON-LINE
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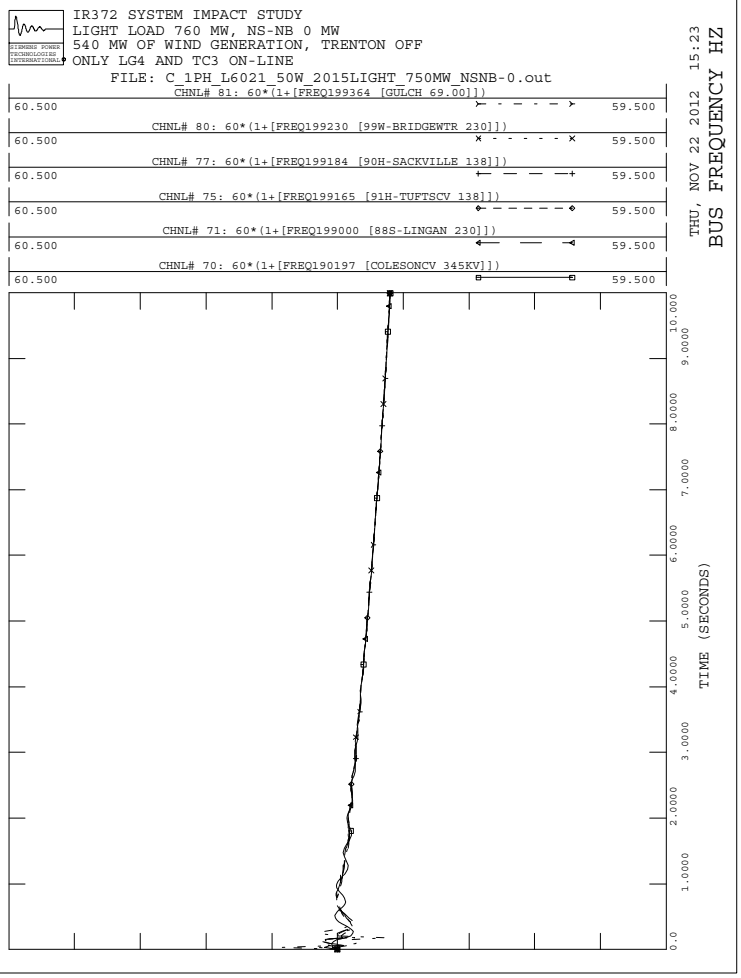
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
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ONLY LG4 AND TC3 ON-LINE
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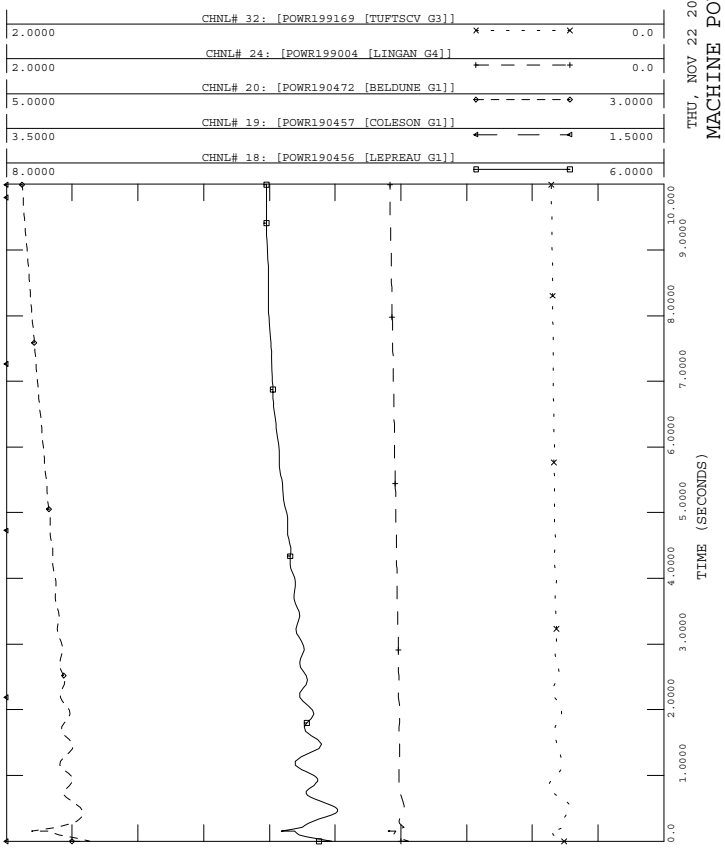
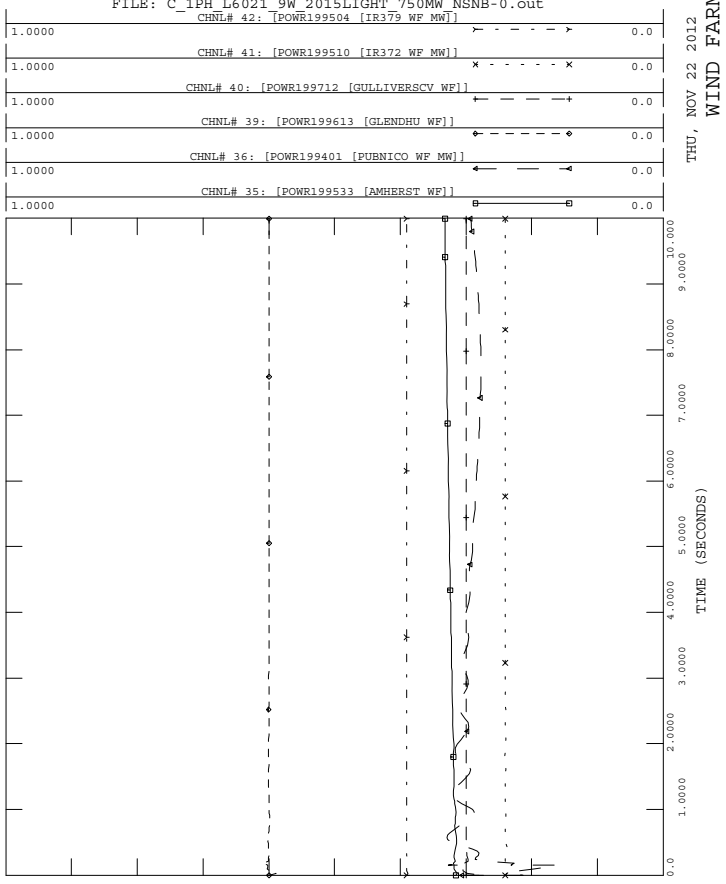
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:23
BUS FREQUENCY HZ
TIME (SECONDS)

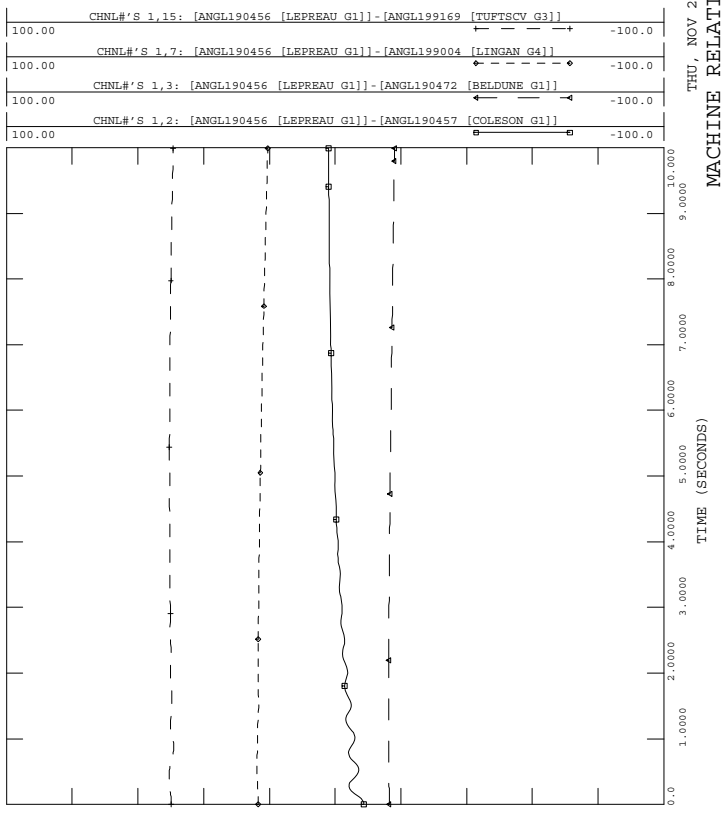
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_1PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out



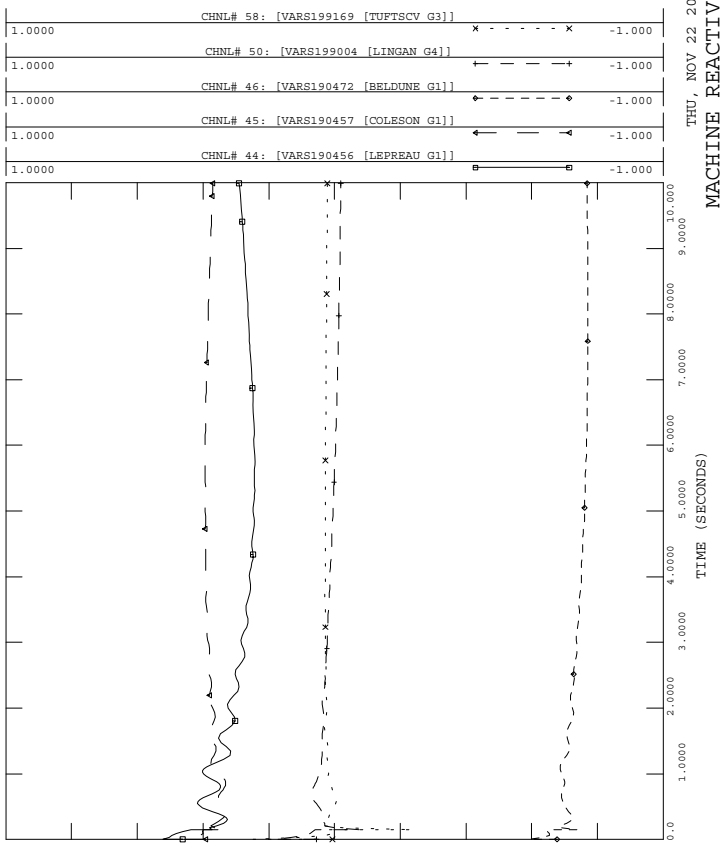
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_1PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out



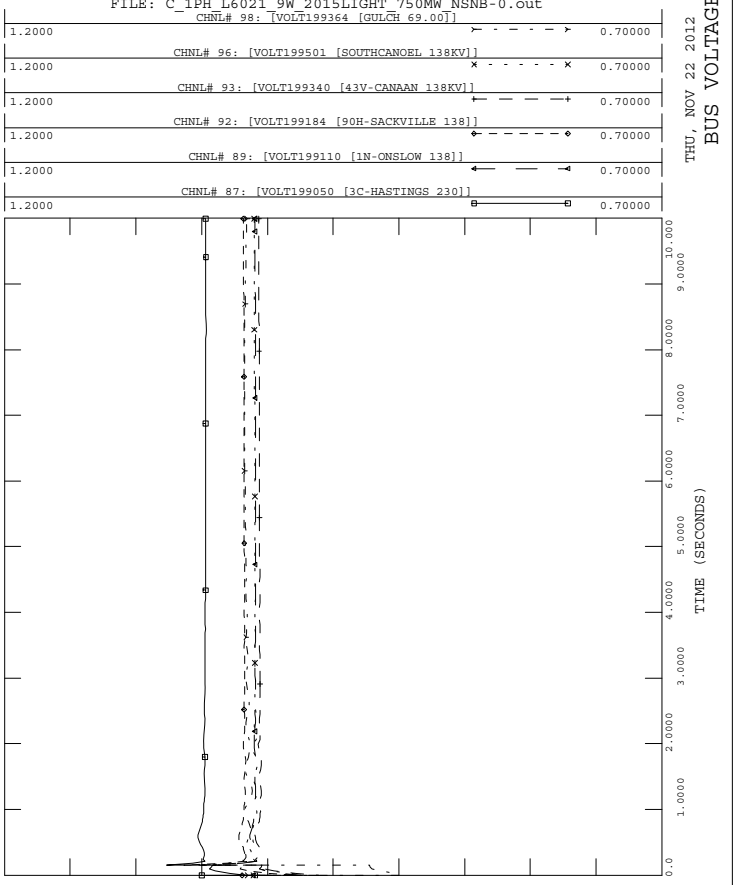
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_1PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out



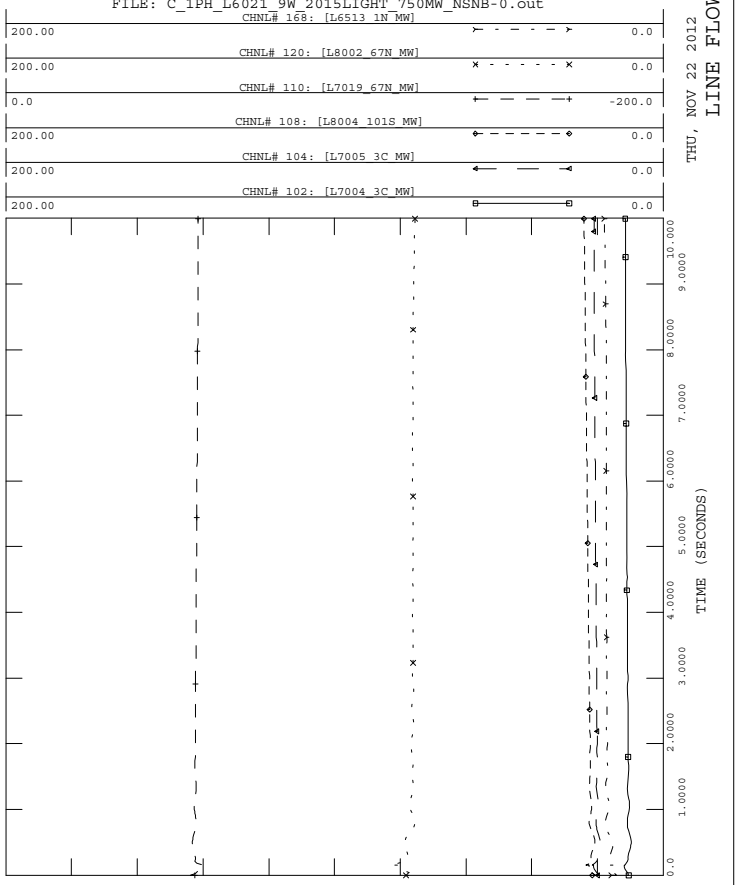
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_1PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out



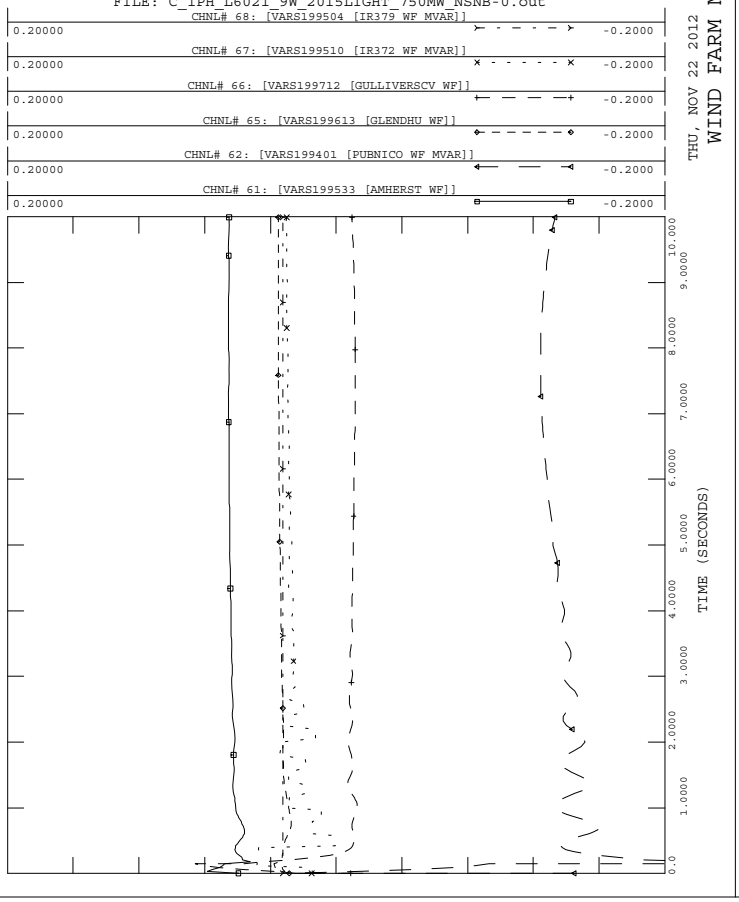
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_1PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out



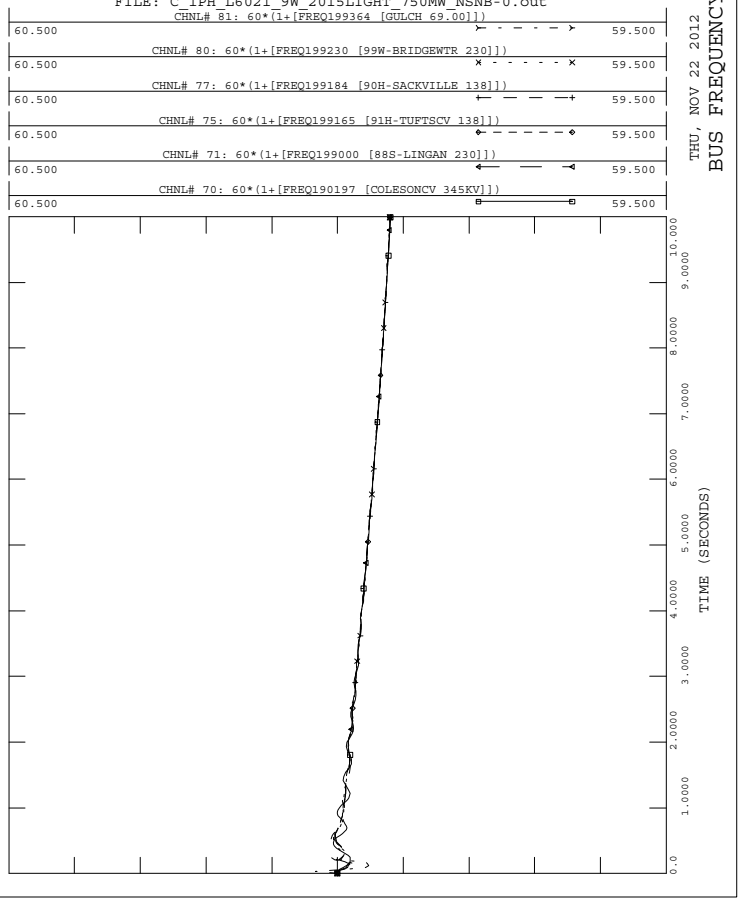
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_1PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out



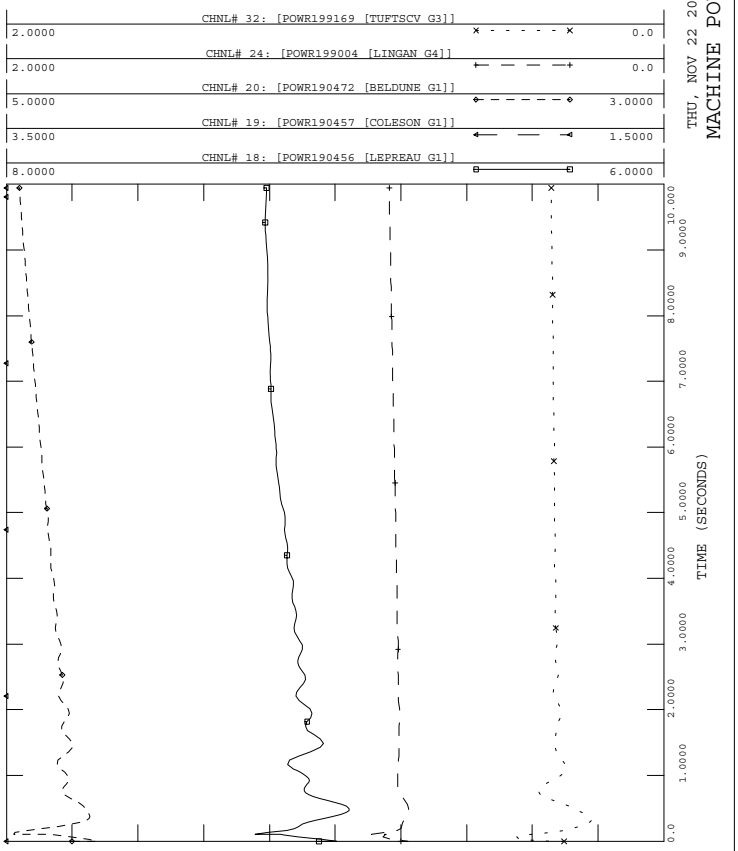
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_1PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out



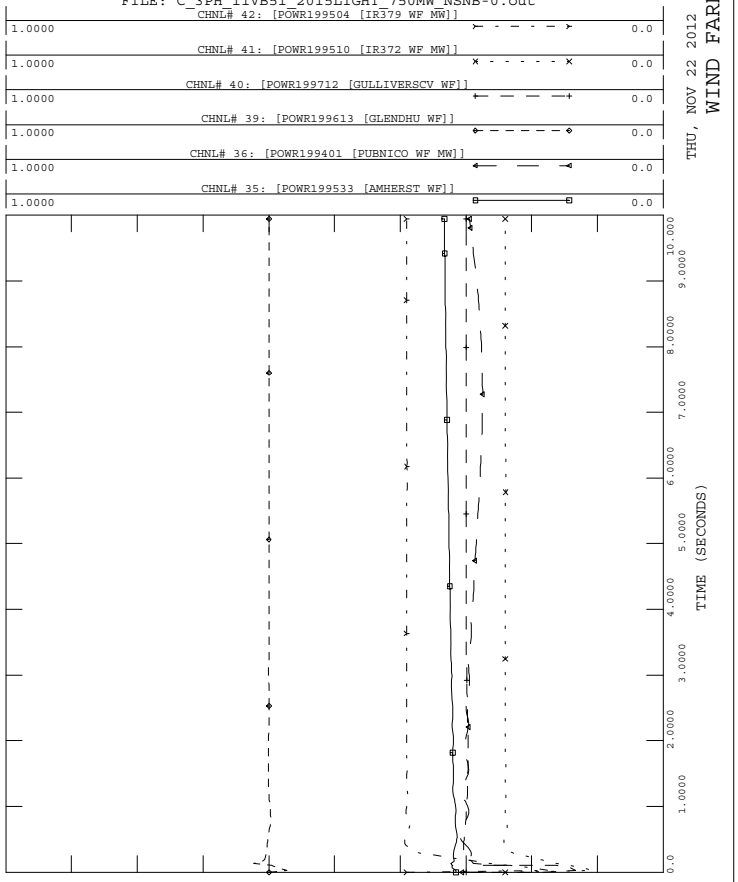
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_1PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out



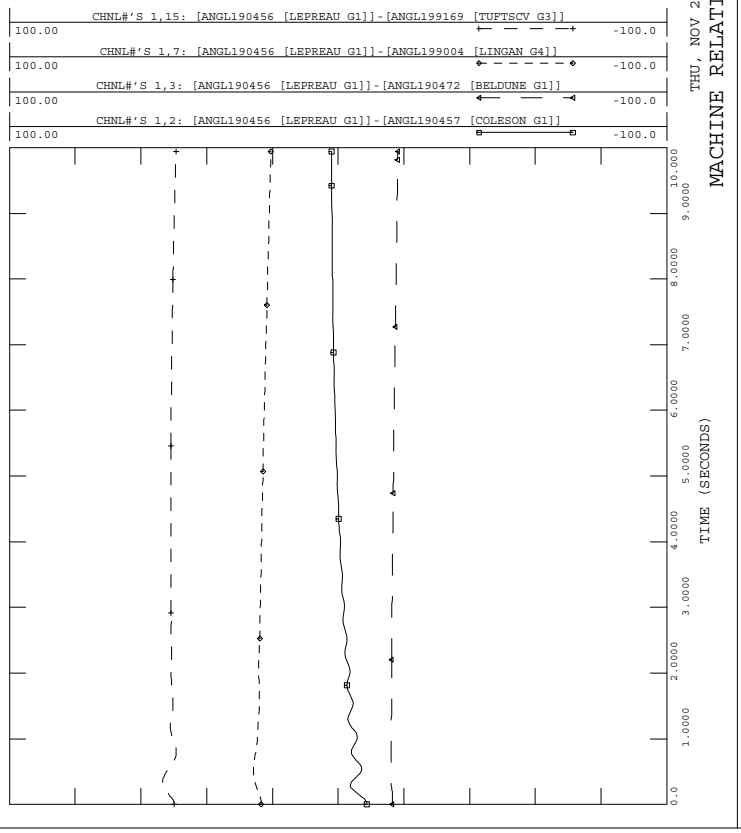
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_11VB51_2015LIGHT_750MW_NSNB-0.out



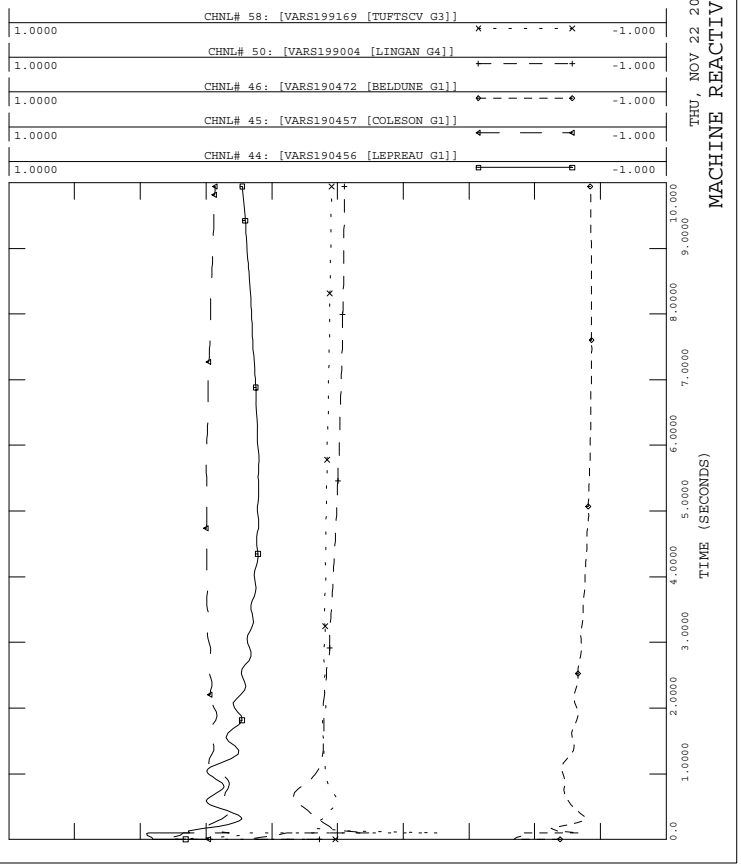
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_11VB51_2015LIGHT_750MW_NSNB-0.out



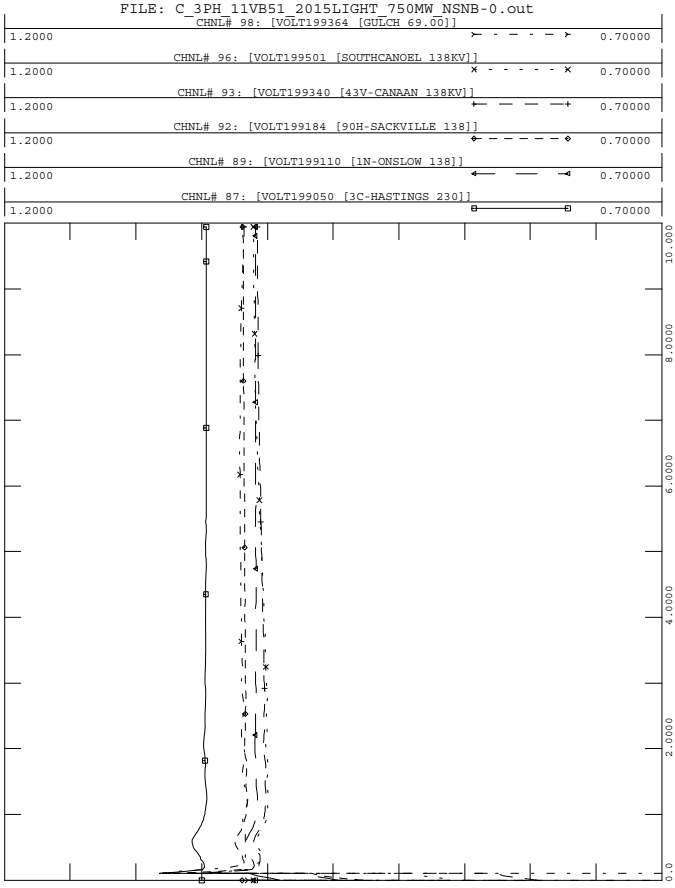
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_11VB51_2015LIGHT_750MW_NSNB-0.out



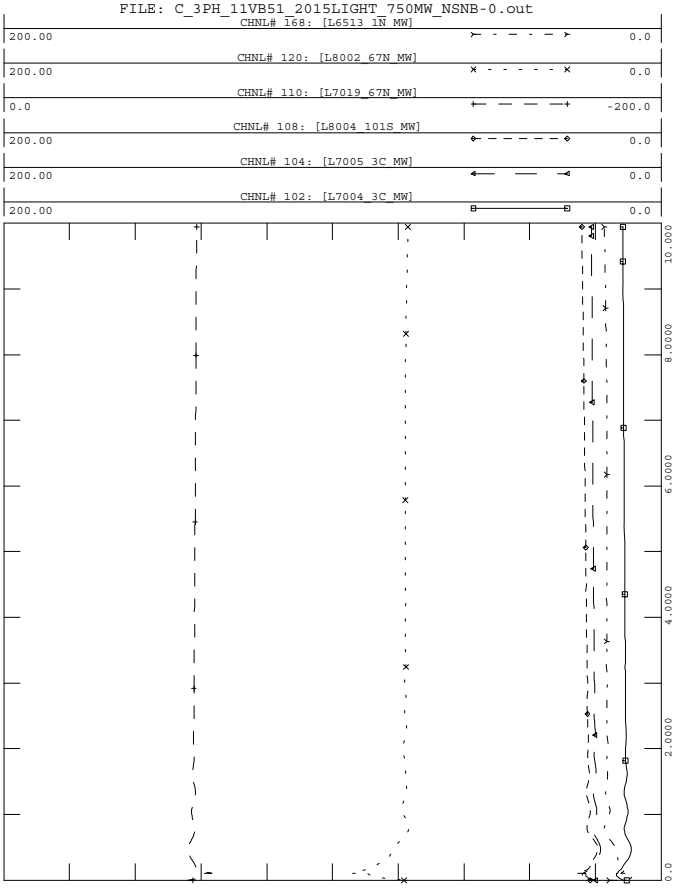
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_11VB51_2015LIGHT_750MW_NSNB-0.out



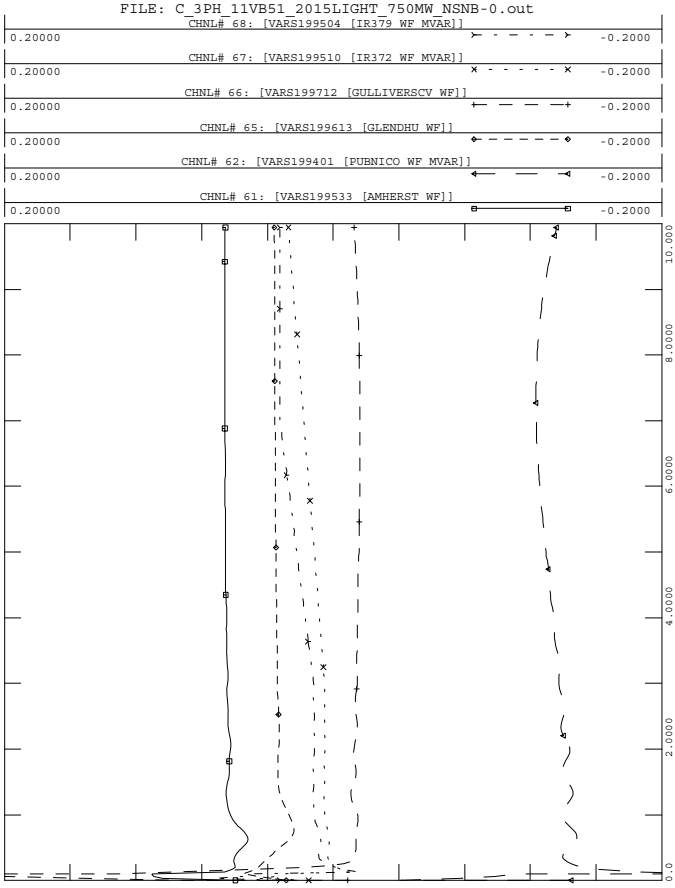
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_11VB51_2015LIGHT_750MW_NSNB-0.out



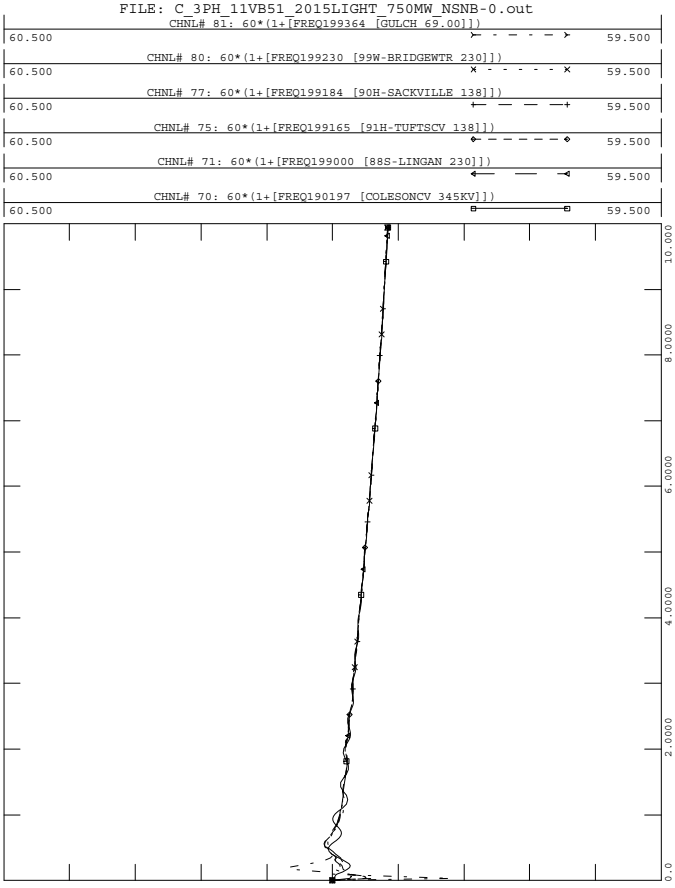
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_11VB51_2015LIGHT_750MW_NSNB-0.out

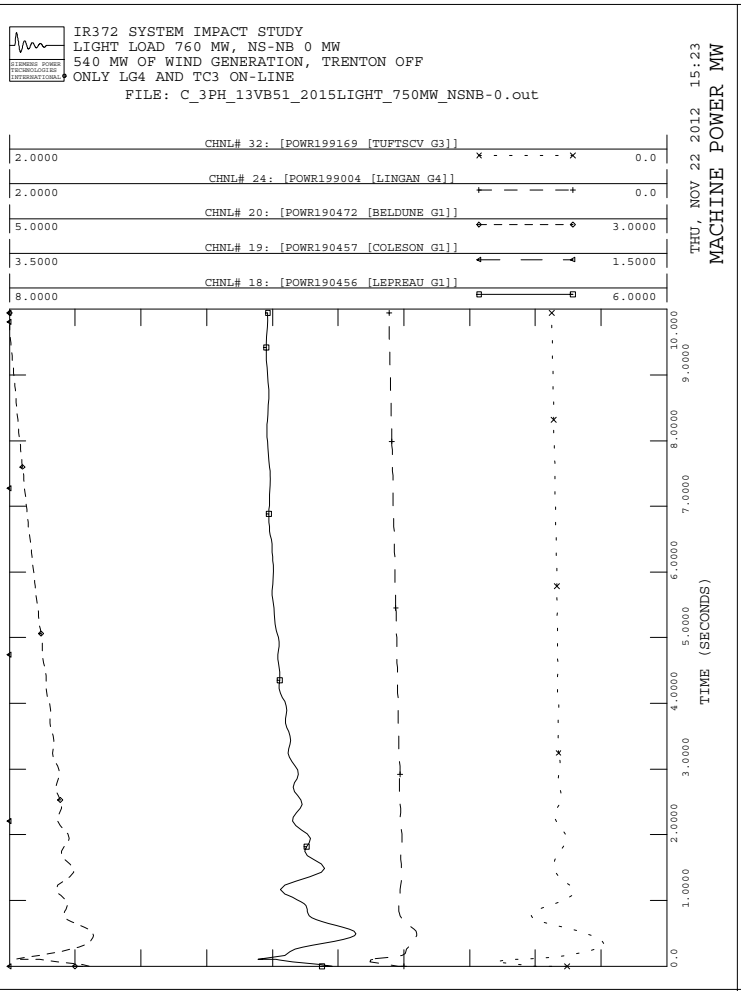


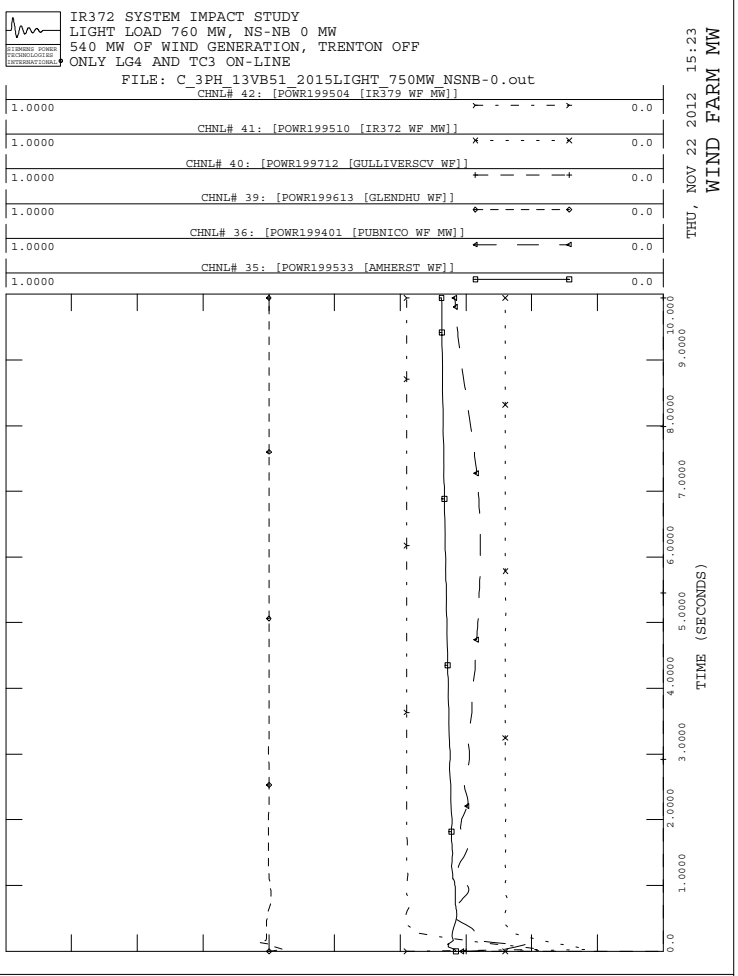
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_11VB51_2015LIGHT_750MW_NSNB-0.out

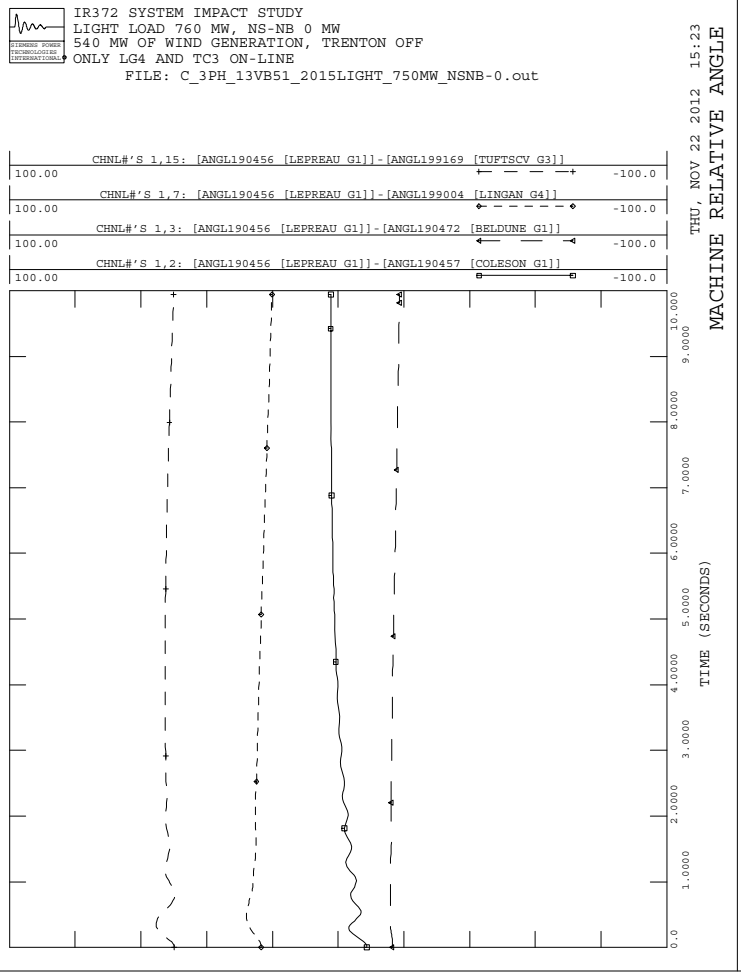


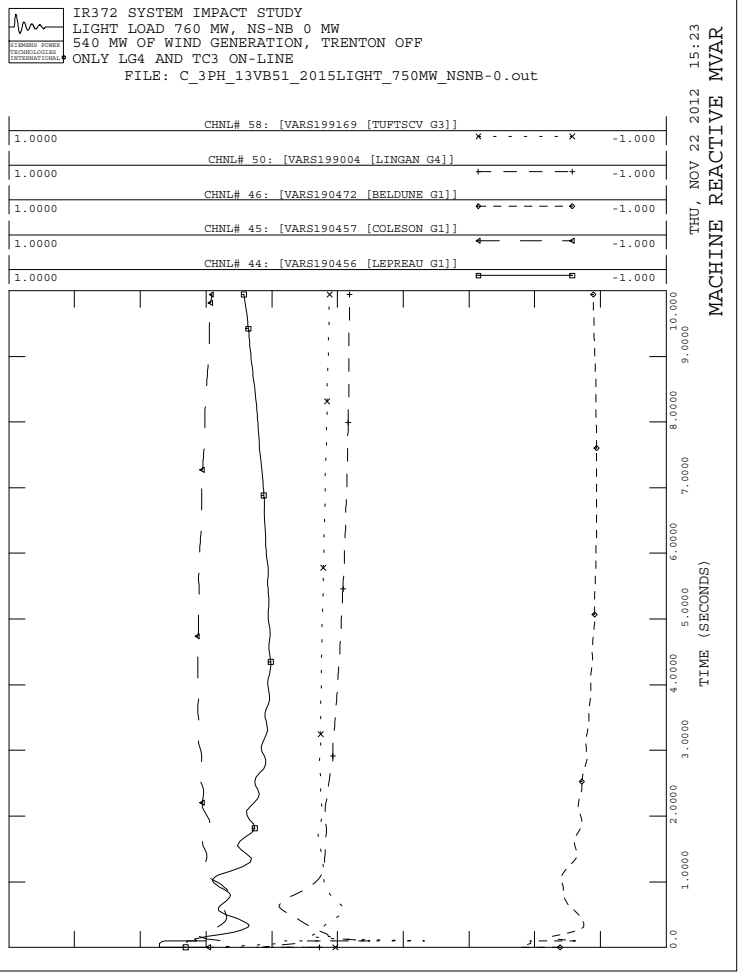
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_11VB51_2015LIGHT_750MW_NSNB-0.out



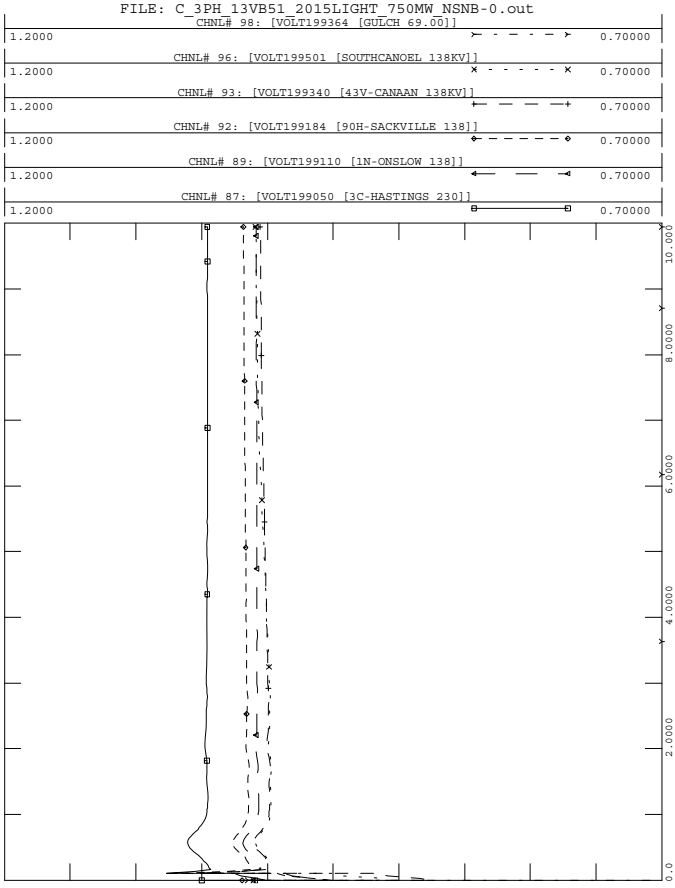

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_13VB51_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
THU, NOV 22 2012 15:23
MACHINE POWER MW
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_13VB51_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
THU, NOV 22 2012 15:23
WIND FARM MW
TIME (SECONDS)

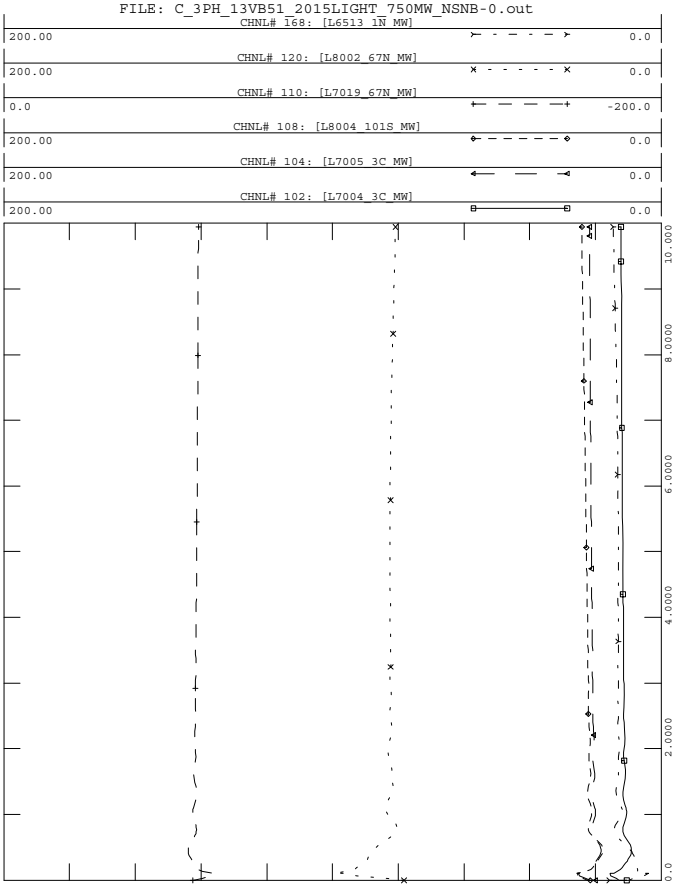

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_13VB51_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
THU, NOV 22 2012 15:23
MACHINE RELATIVE ANGLE
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_13VB51_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
THU, NOV 22 2012 15:23
MACHINE REACTIVE MVAR
TIME (SECONDS)

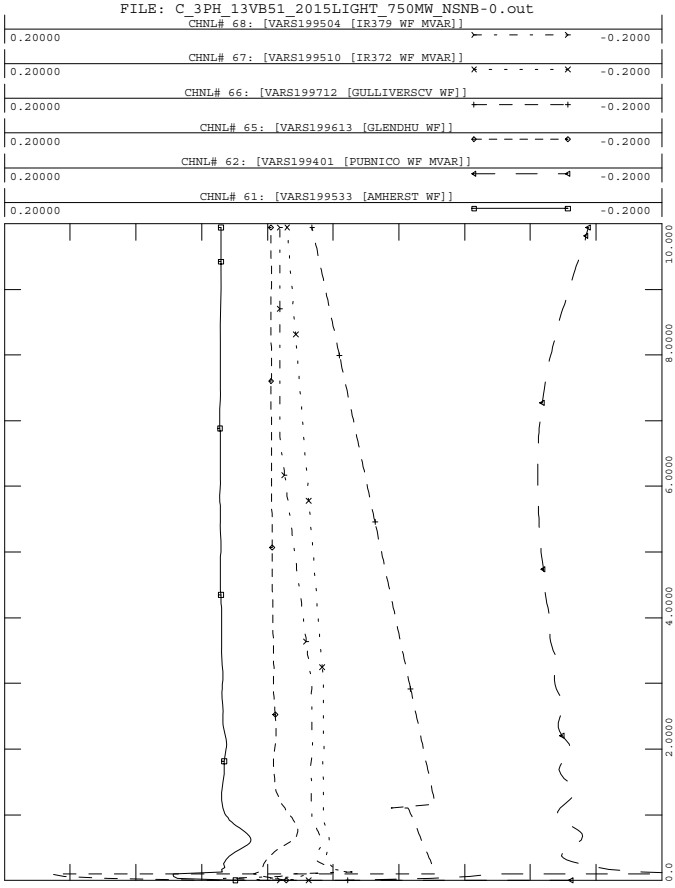
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_13VB51_2015LIGHT_750MW_NSNB-0.out



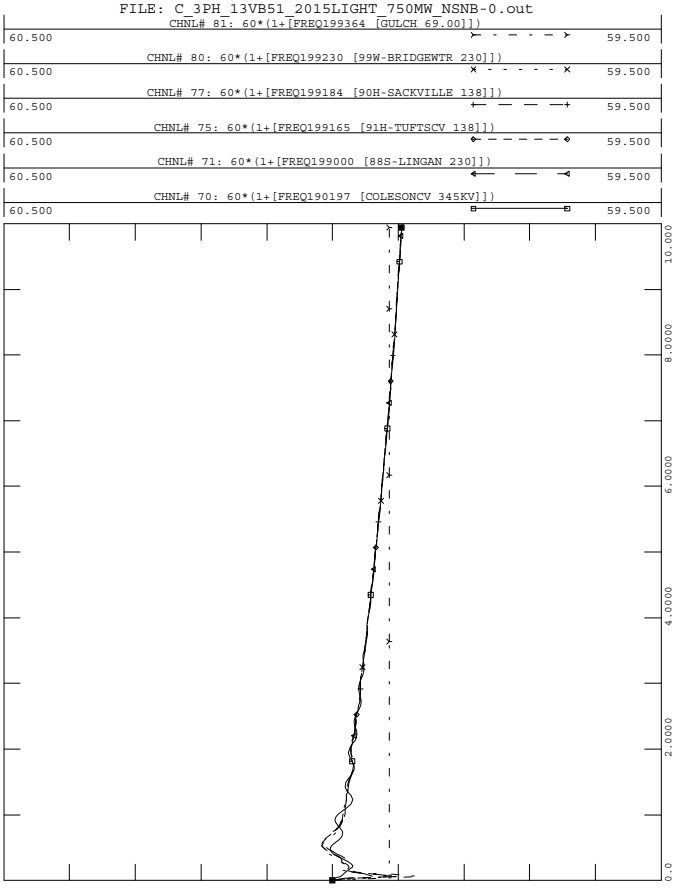
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_13VB51_2015LIGHT_750MW_NSNB-0.out

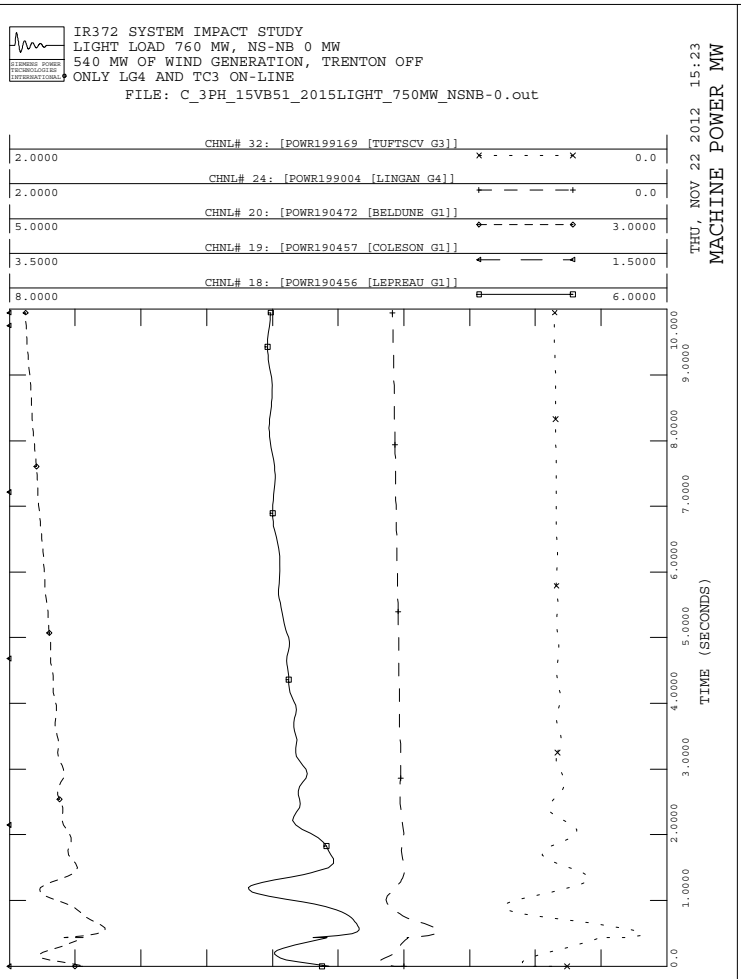


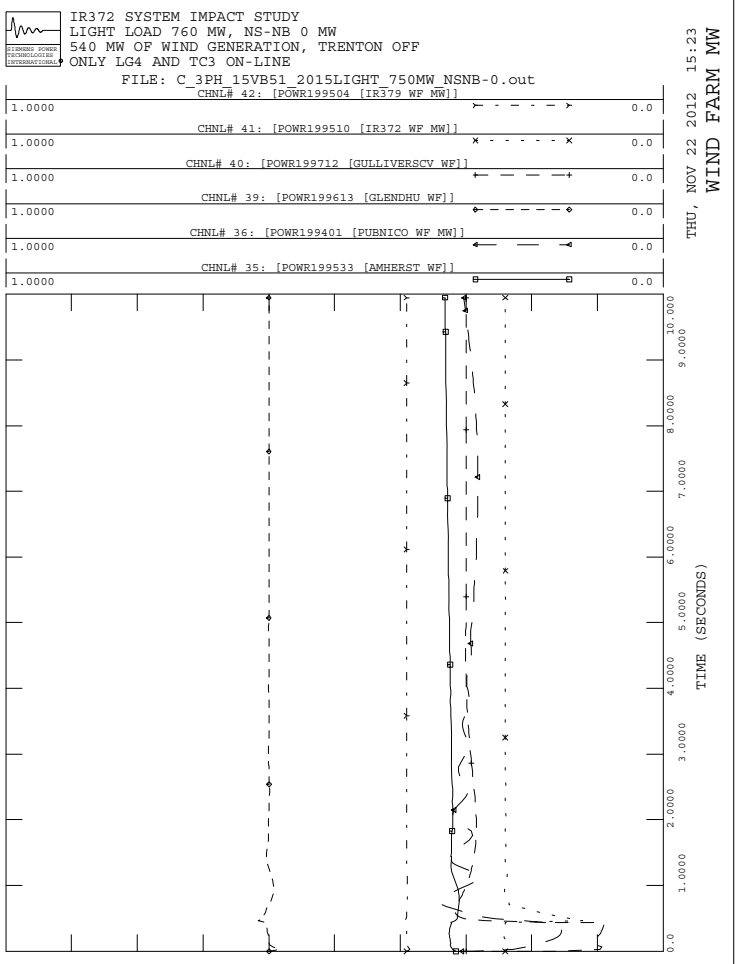
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_13VB51_2015LIGHT_750MW_NSNB-0.out

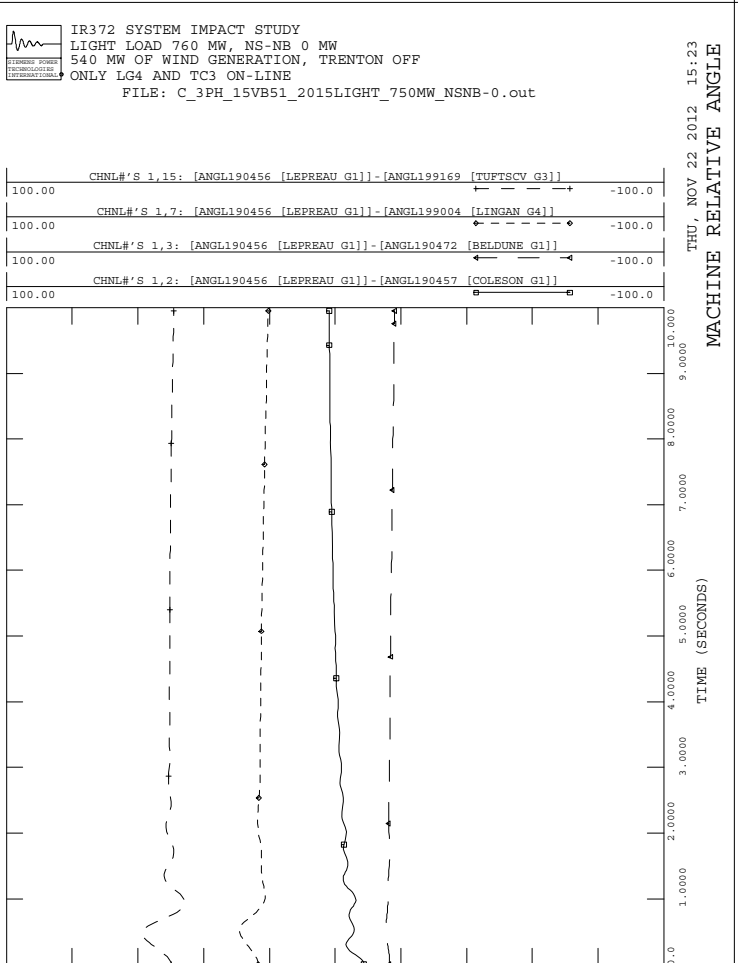


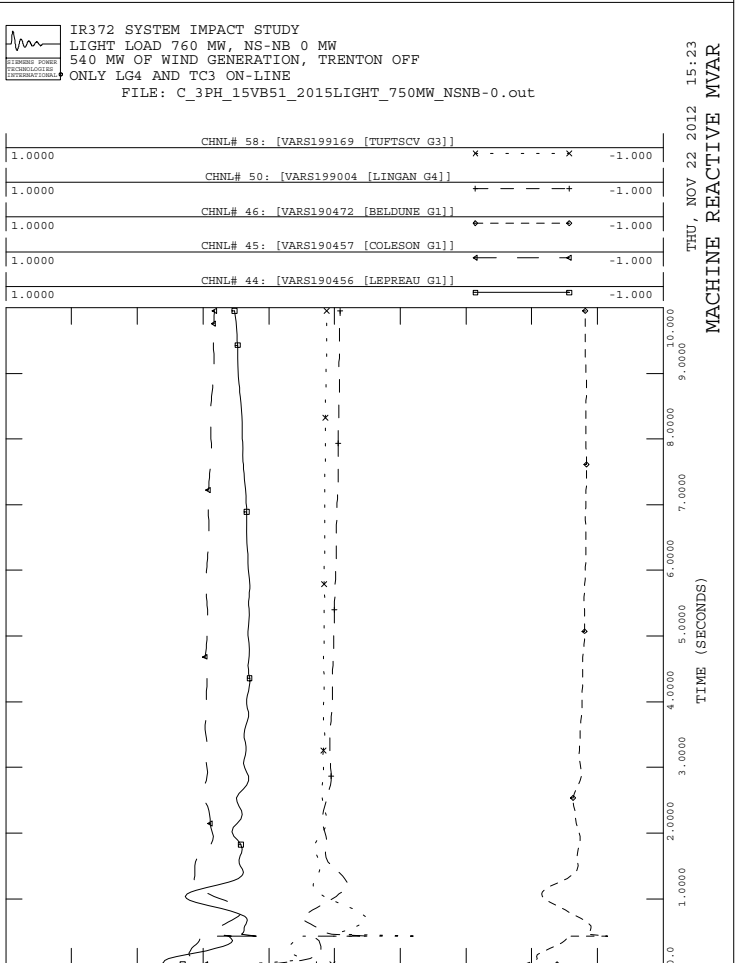
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_13VB51_2015LIGHT_750MW_NSNB-0.out




IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_15VB51_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
TIME (SECONDS)
THU, NOV 22 2012 15:23
MACHINE POWER MW


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_15VB51_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
TIME (SECONDS)
THU, NOV 22 2012 15:23
WIND FARM MW


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_15VB51_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
TIME (SECONDS)
THU, NOV 22 2012 15:23
MACHINE RELATIVE ANGLE


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_15VB51_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
TIME (SECONDS)
THU, NOV 22 2012 15:23
MACHINE REACTIVE MVAR

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_15VB51_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:23
BUS VOLTAGE PU

CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]

TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_15VB51_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:23
LINE FLOW MW

CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]

TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_15VB51_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:23
WIND FARM MVAR

CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]

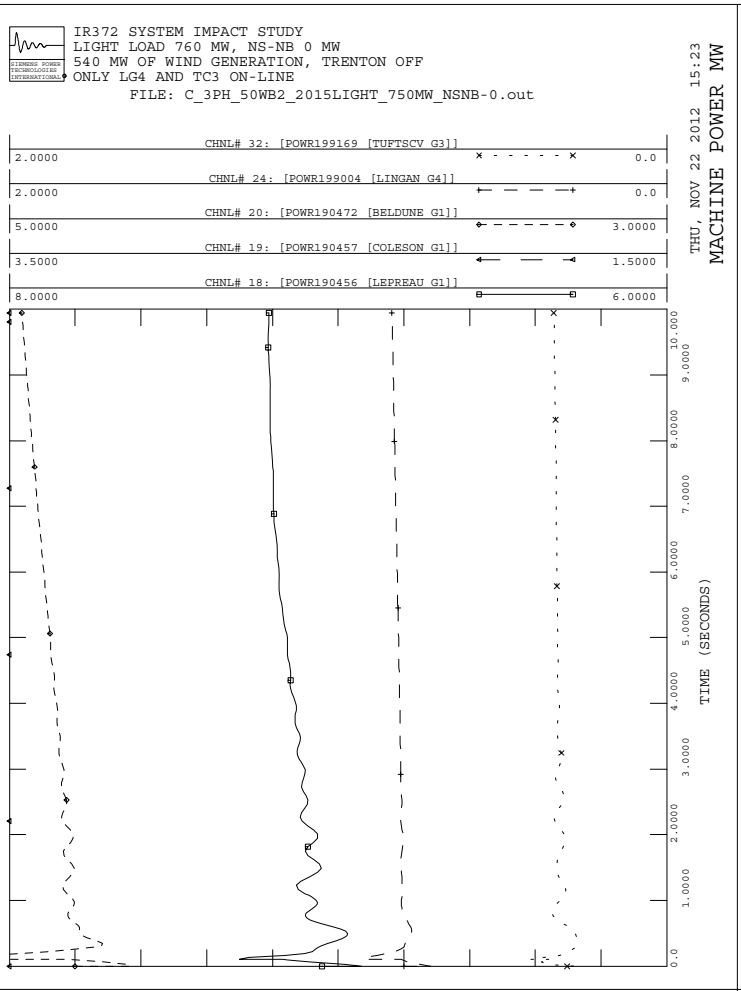
TIME (SECONDS)

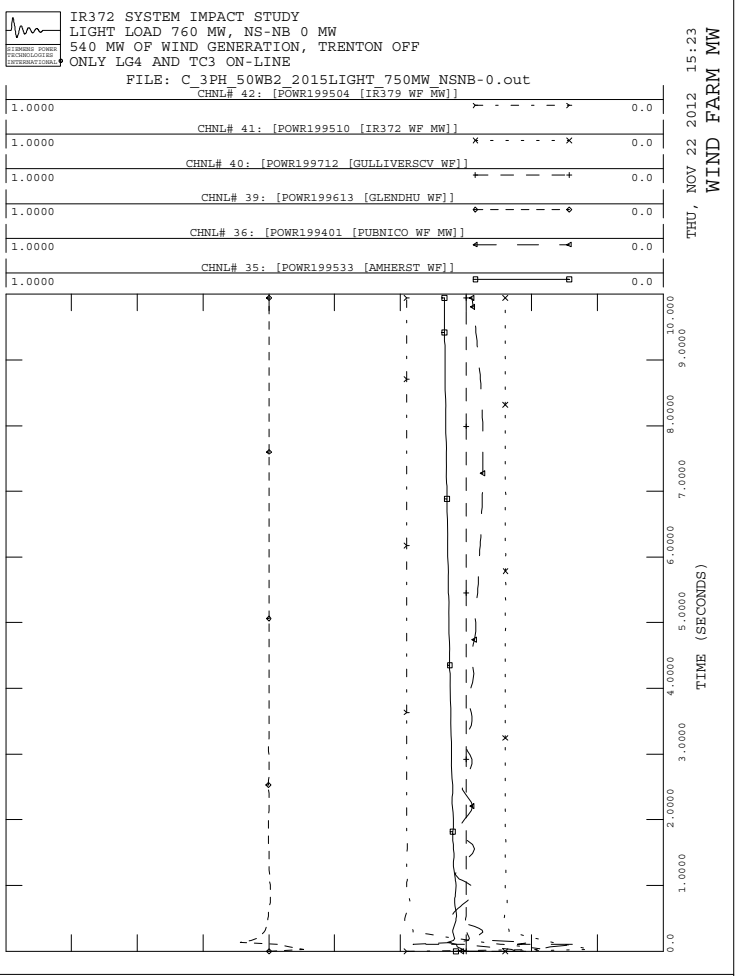
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_15VB51_2015LIGHT_750MW_NSNB-0.out

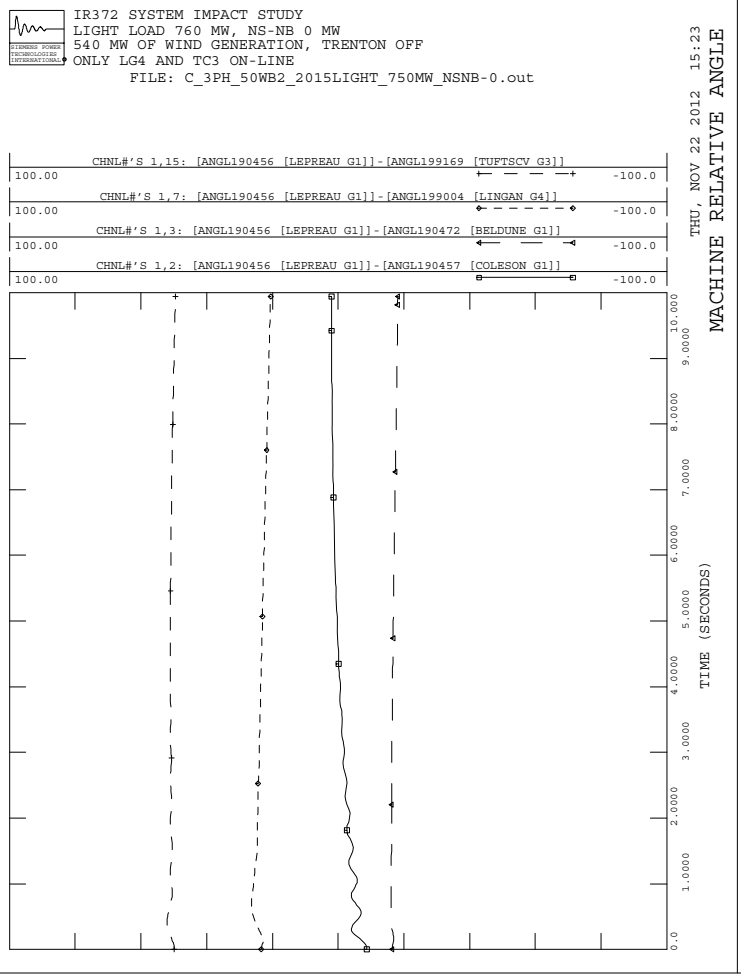
THU, NOV 22 2012 15:23
BUS FREQUENCY HZ

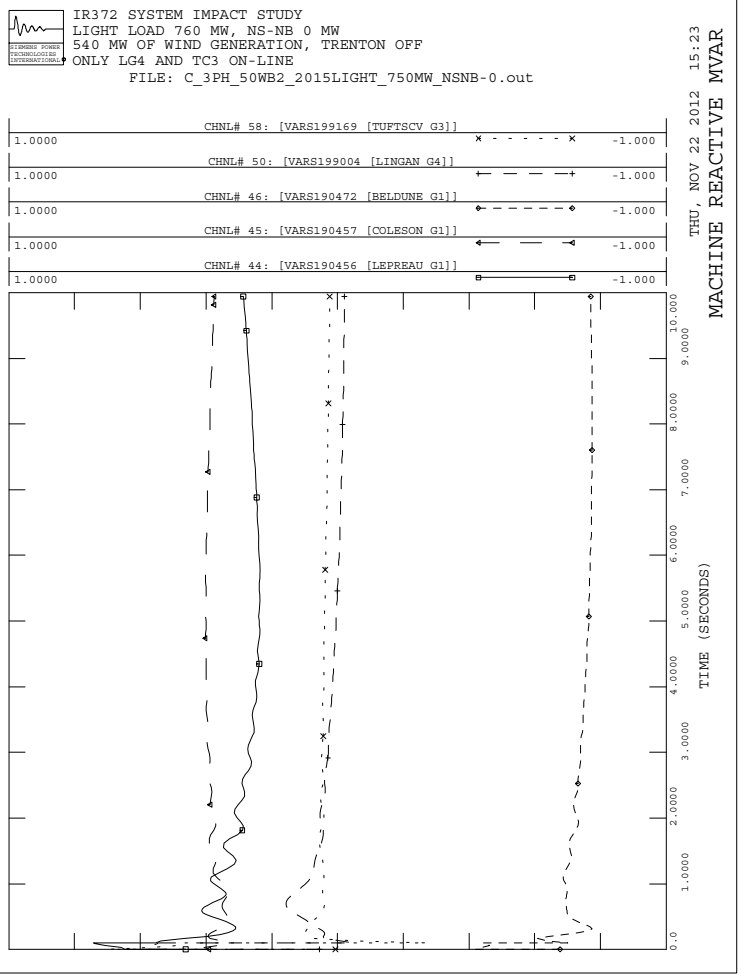
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])

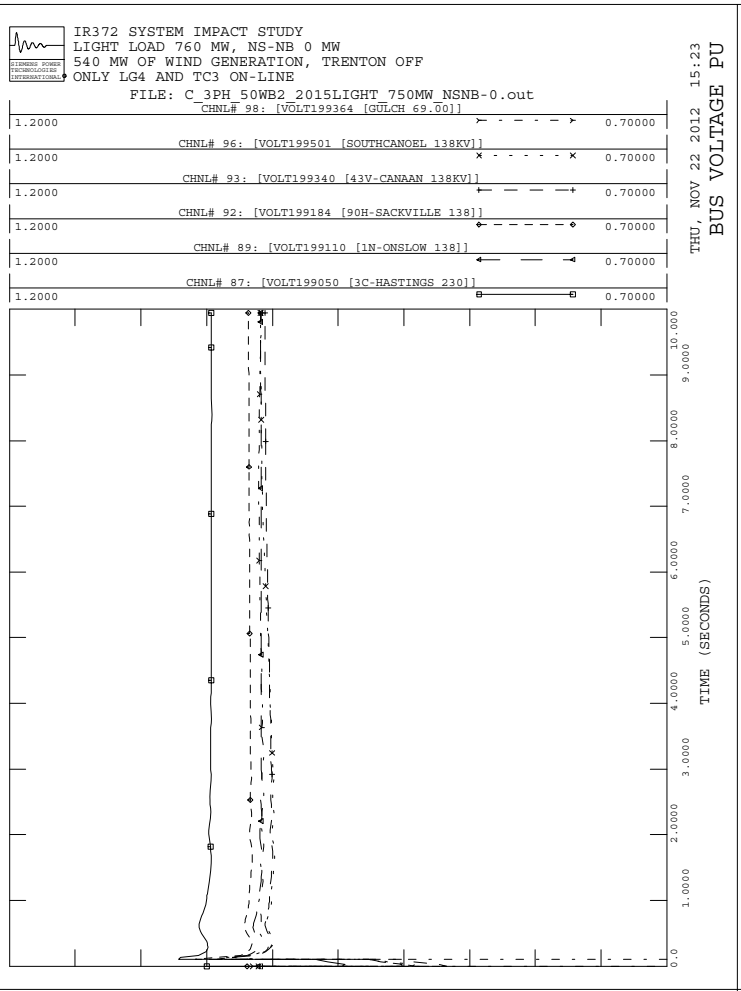
TIME (SECONDS)

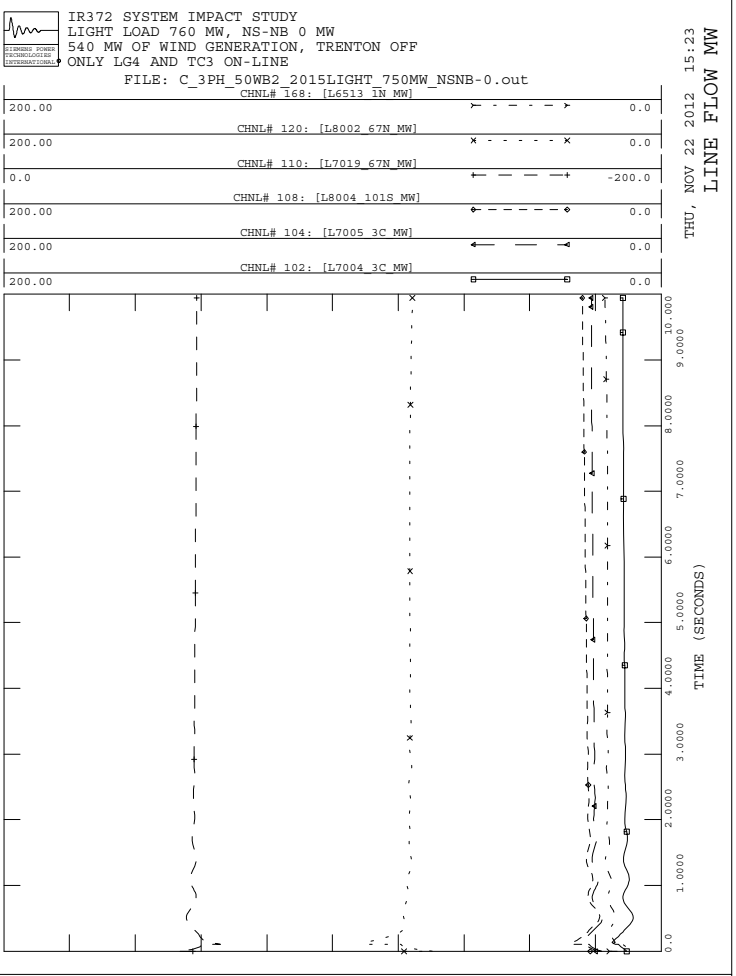

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB2_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
2.0000
0.0
CHNL# 24: [POWR199004 [LINGAN G4]]
2.0000
0.0
CHNL# 20: [POWR190472 [BELDUNE G1]]
5.0000
3.0000
CHNL# 19: [POWR190457 [COLESON G1]]
3.5000
1.5000
CHNL# 18: [POWR190456 [LEPREAU G1]]
8.0000
6.0000
0.0
1.0000
2.0000
3.0000
4.0000
5.0000
6.0000
7.0000
8.0000
9.0000
10.000
TIME (SECONDS)
THU, NOV 22 2012 15:23
MACHINE POWER MW

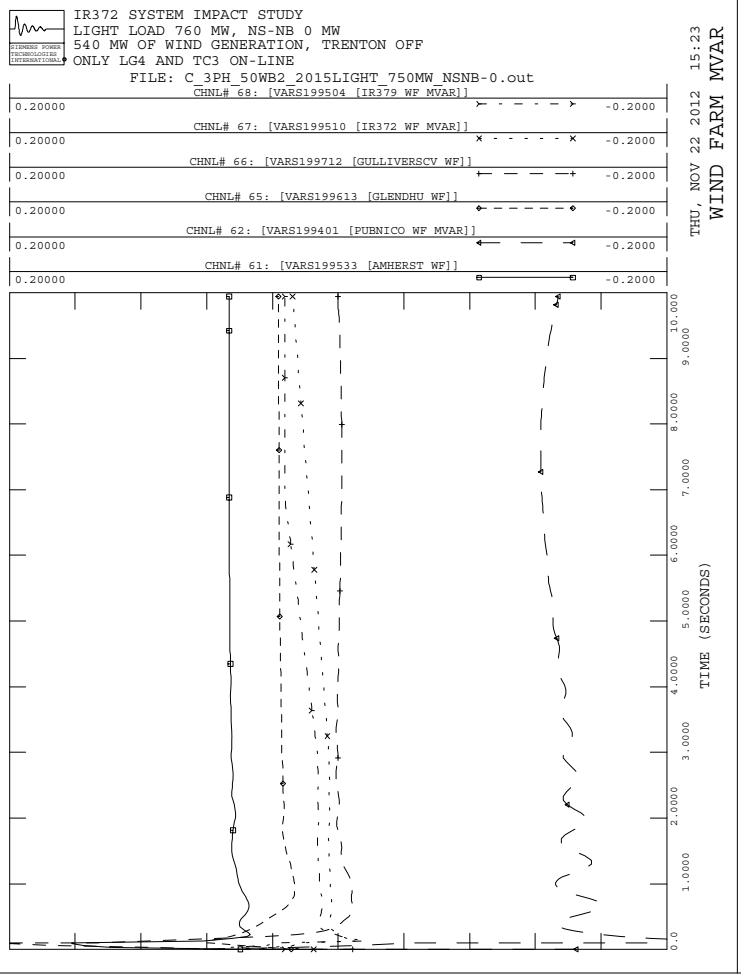

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB2_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
1.0000
0.0
CHNL# 41: [POWR199510 [IR372 WF MW]]
1.0000
0.0
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
1.0000
0.0
CHNL# 39: [POWR199613 [GLENDHU WF]]
1.0000
0.0
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
1.0000
0.0
CHNL# 35: [POWR199533 [AMHERST WF]]
1.0000
0.0
0.0
1.0000
2.0000
3.0000
4.0000
5.0000
6.0000
7.0000
8.0000
9.0000
10.000
TIME (SECONDS)
THU, NOV 22 2012 15:23
WIND FARM MW

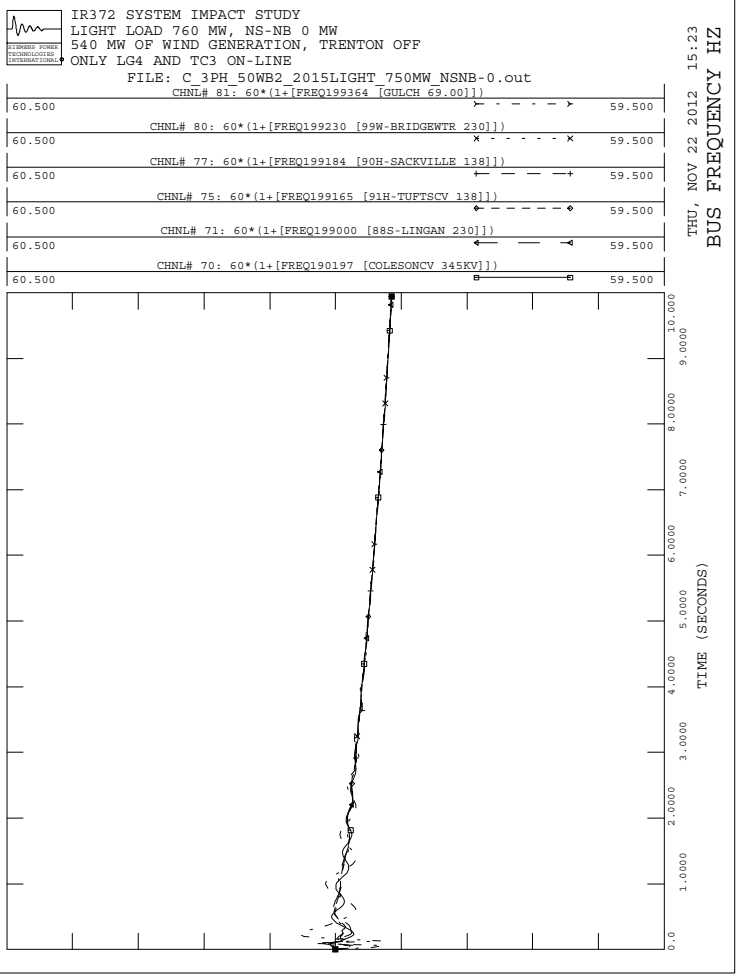

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB2_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
100.00
-100.0
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
100.00
-100.0
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
100.00
-100.0
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
100.00
-100.0
0.0
1.0000
2.0000
3.0000
4.0000
5.0000
6.0000
7.0000
8.0000
9.0000
10.000
TIME (SECONDS)
THU, NOV 22 2012 15:23
MACHINE RELATIVE ANGLE


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB2_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
1.0000
-1.000
CHNL# 50: [VARS199004 [LINGAN G4]]
1.0000
-1.000
CHNL# 46: [VARS190472 [BELDUNE G1]]
1.0000
-1.000
CHNL# 45: [VARS190457 [COLESON G1]]
1.0000
-1.000
CHNL# 44: [VARS190456 [LEPREAU G1]]
1.0000
-1.000
0.0
1.0000
2.0000
3.0000
4.0000
5.0000
6.0000
7.0000
8.0000
9.0000
10.000
TIME (SECONDS)
THU, NOV 22 2012 15:23
MACHINE REACTIVE MVAR

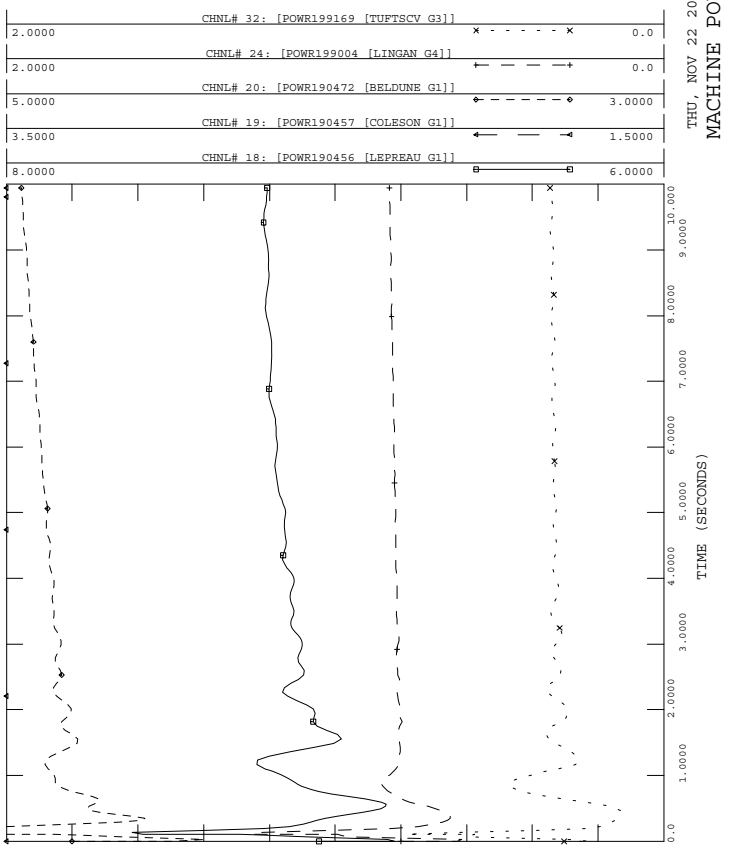

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB2_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
THU, NOV 22 2012 15:23
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB2_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005_3C MW]
CHNL# 102: [L7004_3C MW]
THU, NOV 22 2012 15:23
LINE FLOW MW
TIME (SECONDS)

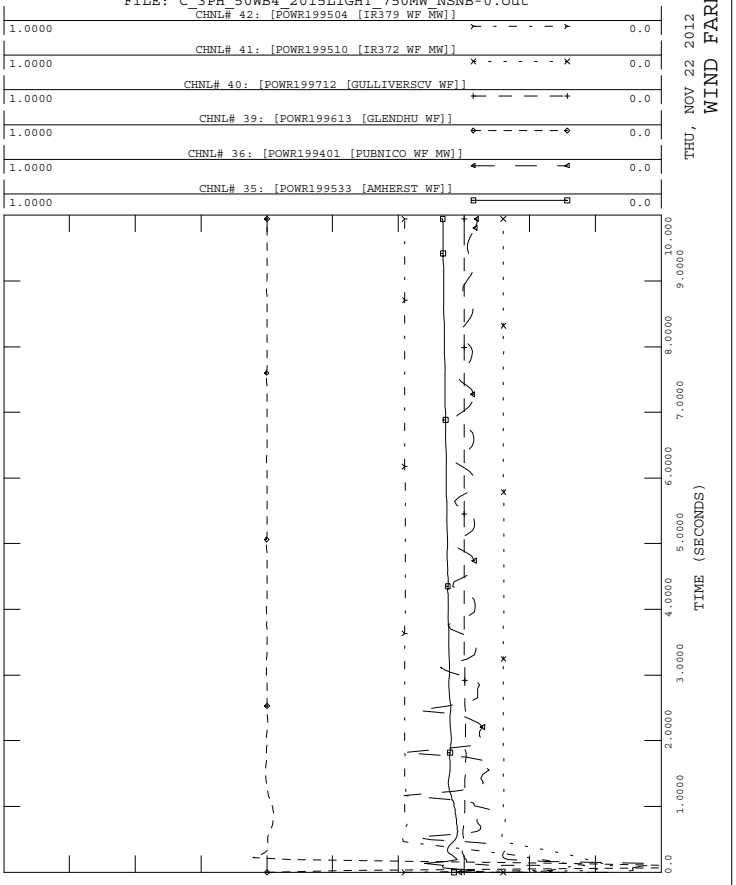

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB2_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
THU, NOV 22 2012 15:23
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB2_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
THU, NOV 22 2012 15:23
BUS FREQUENCY HZ
TIME (SECONDS)

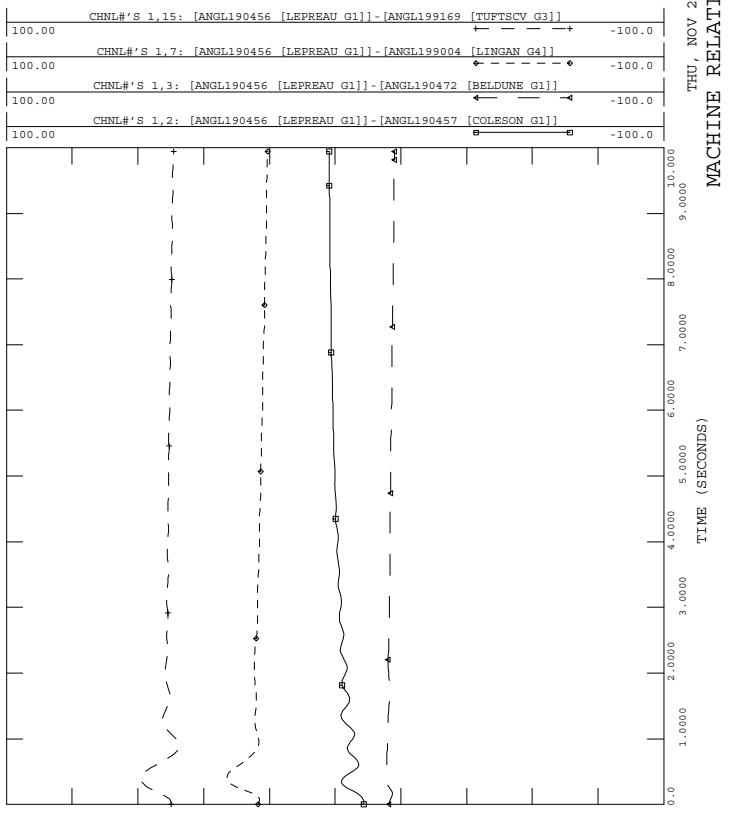
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB4_2015LIGHT_750MW_NSNB-0.out



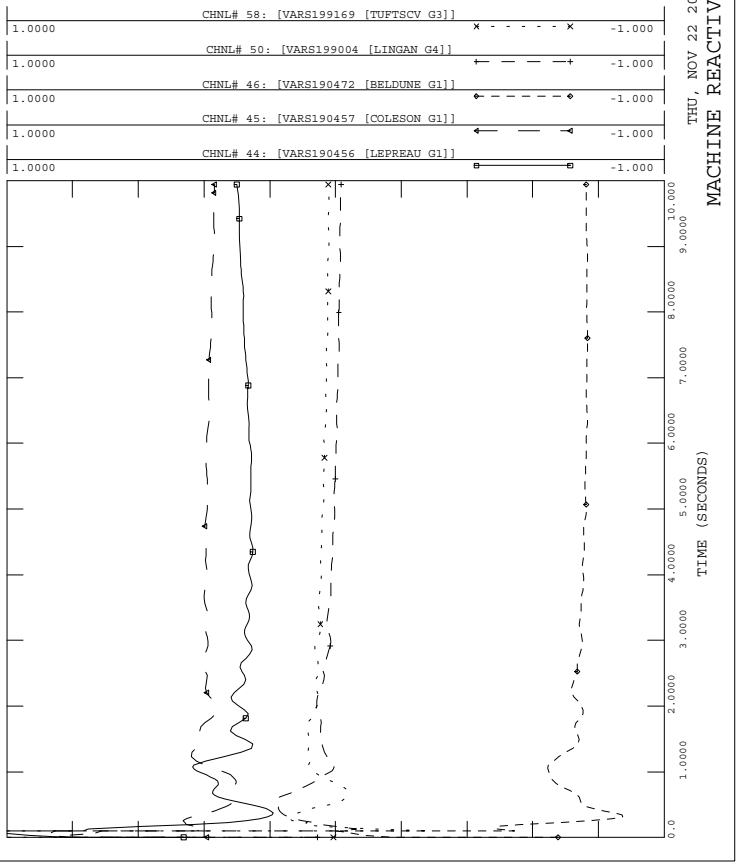
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB4_2015LIGHT_750MW_NSNB-0.out

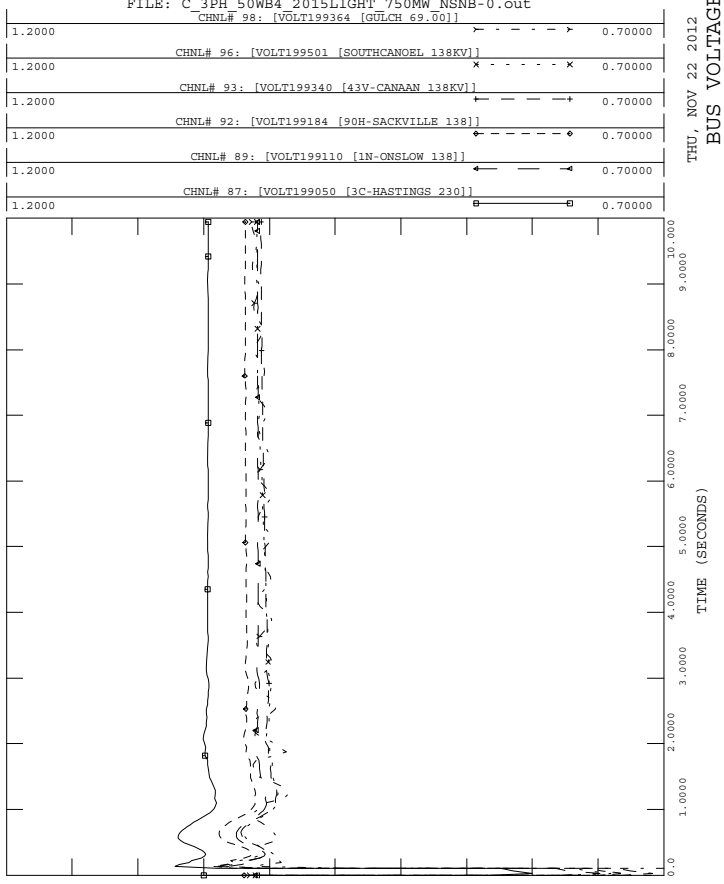


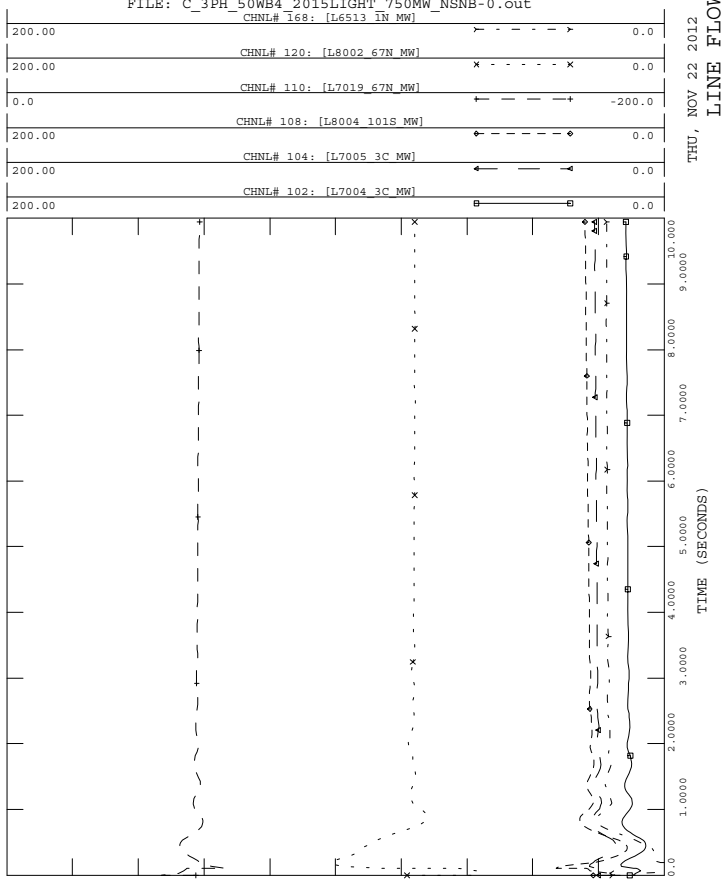
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB4_2015LIGHT_750MW_NSNB-0.out

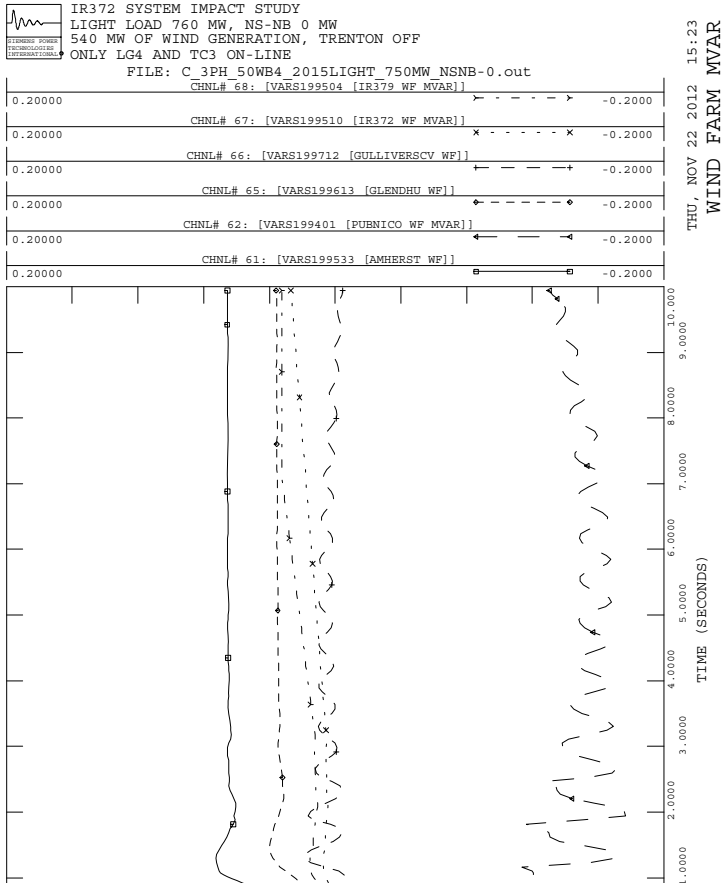


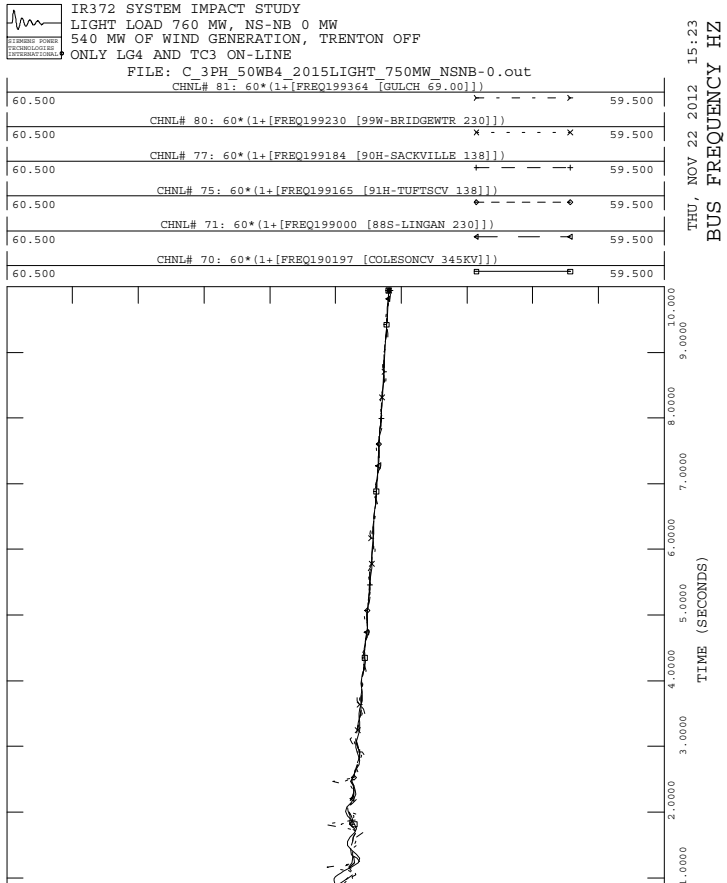
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB4_2015LIGHT_750MW_NSNB-0.out



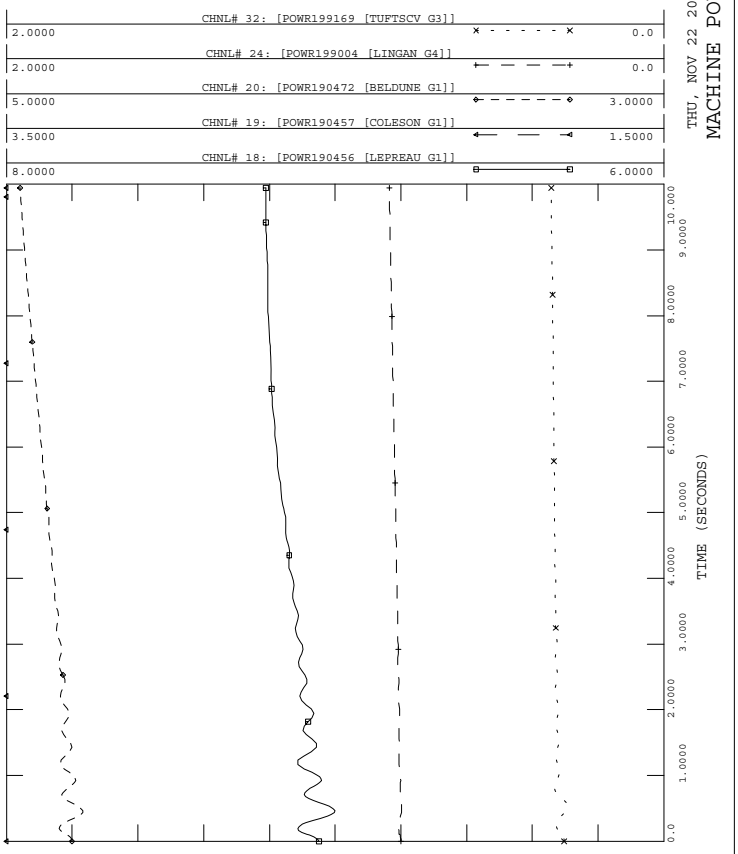

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB4_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
THU, NOV 22 2012 15:23
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB4_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005_3C MW]
CHNL# 102: [L7004_3C MW]
THU, NOV 22 2012 15:23
LINE FLOW MW
TIME (SECONDS)

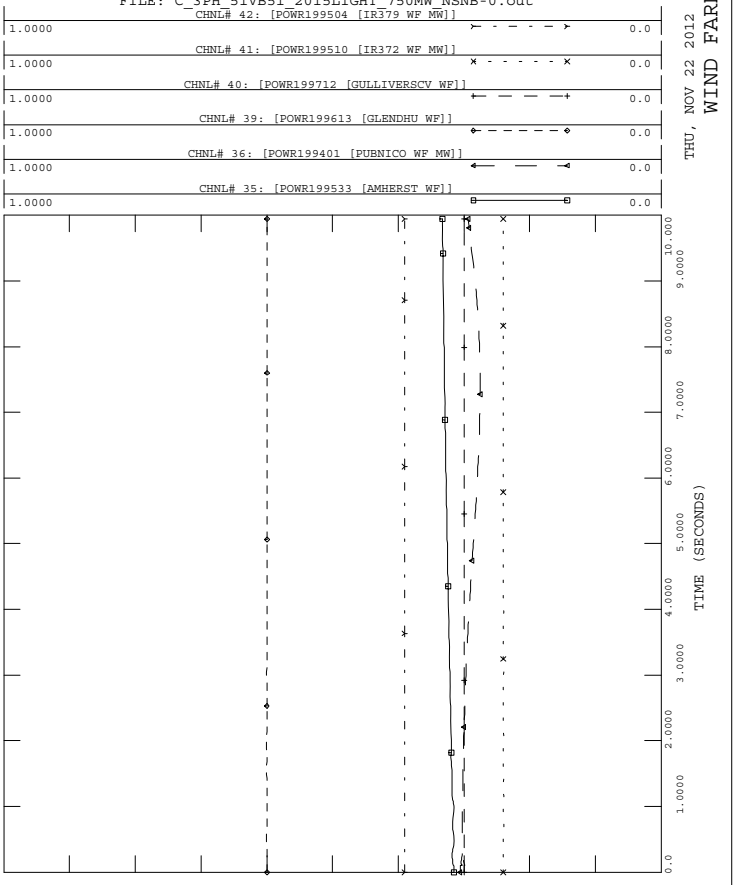

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB4_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
THU, NOV 22 2012 15:23
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_50WB4_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
THU, NOV 22 2012 15:23
BUS FREQUENCY HZ
TIME (SECONDS)

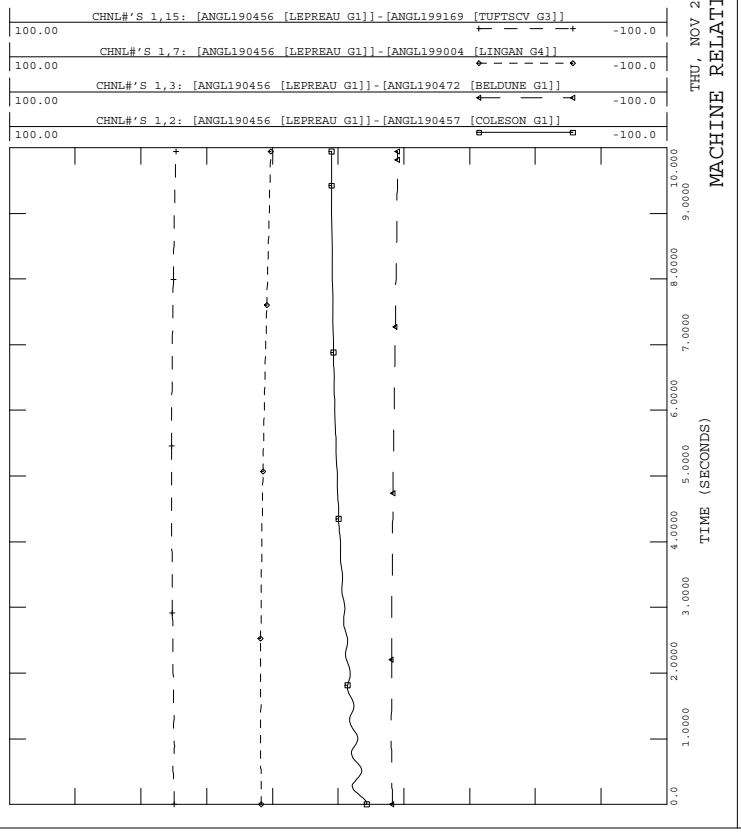
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_51VB51_2015LIGHT_750MW_NSNB-0.out



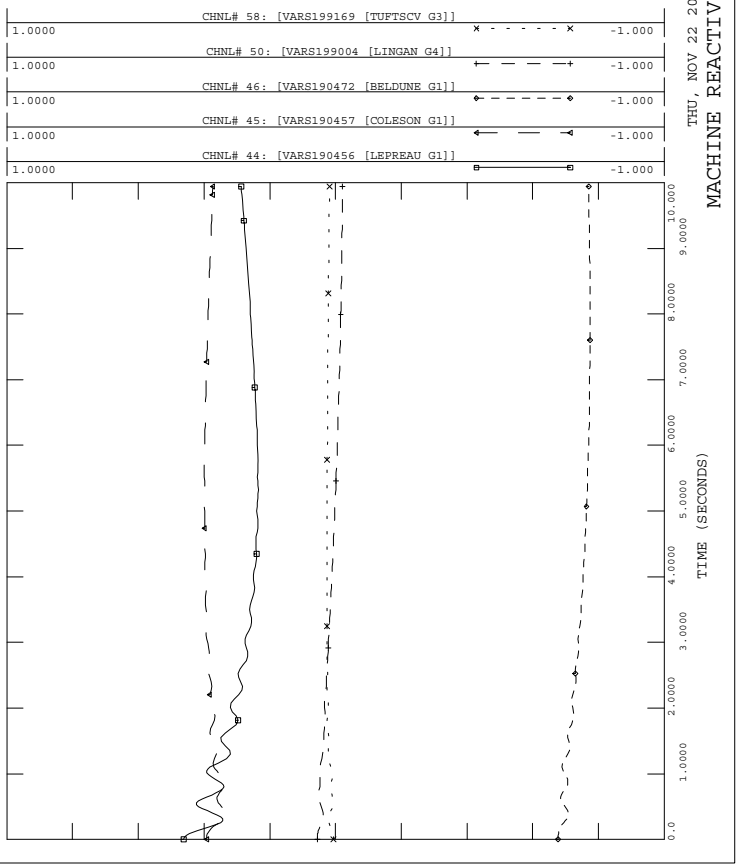
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_51VB51_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_51VB51_2015LIGHT_750MW_NSNB-0.out



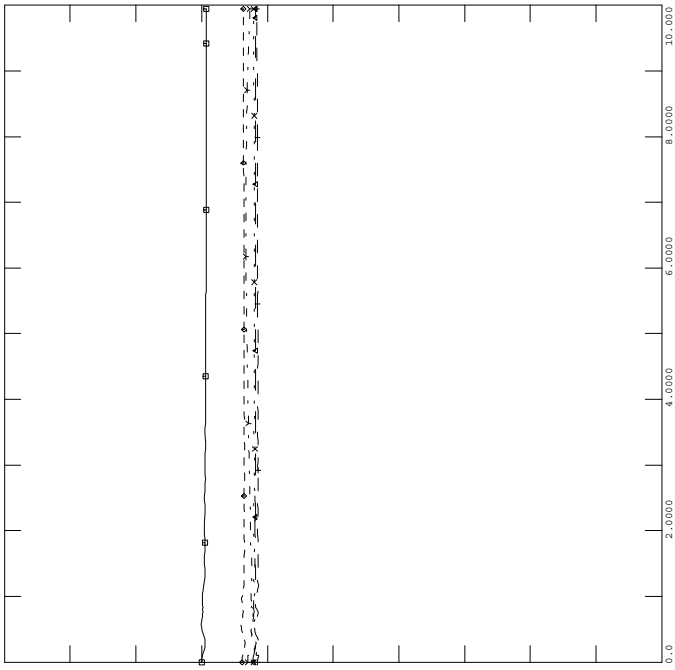
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_51VB51_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_51VB51_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:23
BUS VOLTAGE PU

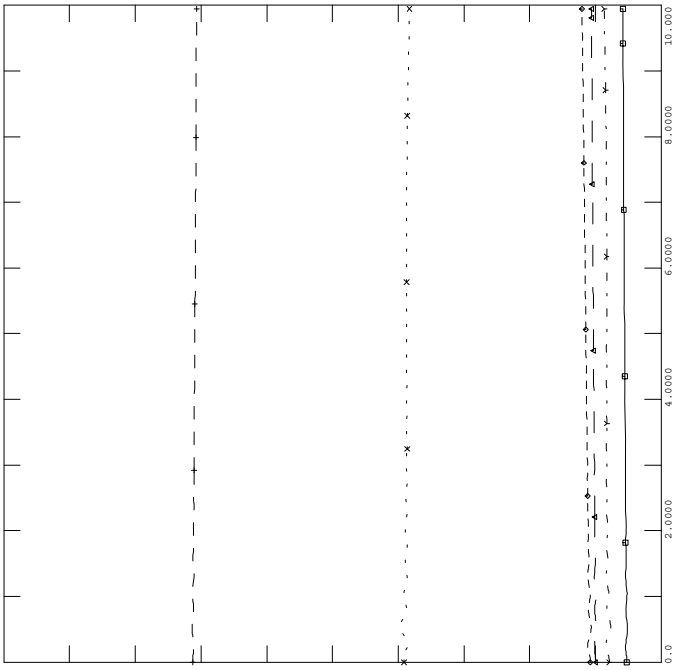
CHNL# 98: [VOLT199364 [GULCH 69.00]] 1.2000 0.70000
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]] 1.2000 0.70000
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]] 1.2000 0.70000
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]] 1.2000 0.70000
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]] 1.2000 0.70000
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]] 1.2000 0.70000



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_51VB51_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:23
LINE FLOW MW

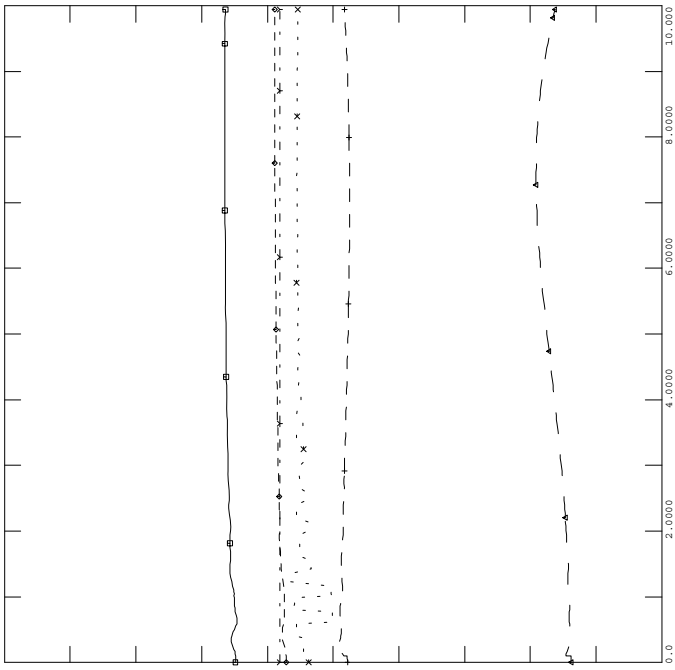
CHNL# 168: [L6513 1N MW] 200.00 0.0
CHNL# 120: [L8002_67N_MW] 200.00 0.0
CHNL# 110: [L7019_67N_MW] 0.0 -200.0
CHNL# 108: [L8004_101S_MW] 200.00 0.0
CHNL# 104: [L7005_3C_MW] 200.00 0.0
CHNL# 102: [L7004_3C_MW] 200.00 0.0



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_51VB51_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:23
WIND FARM MVAR

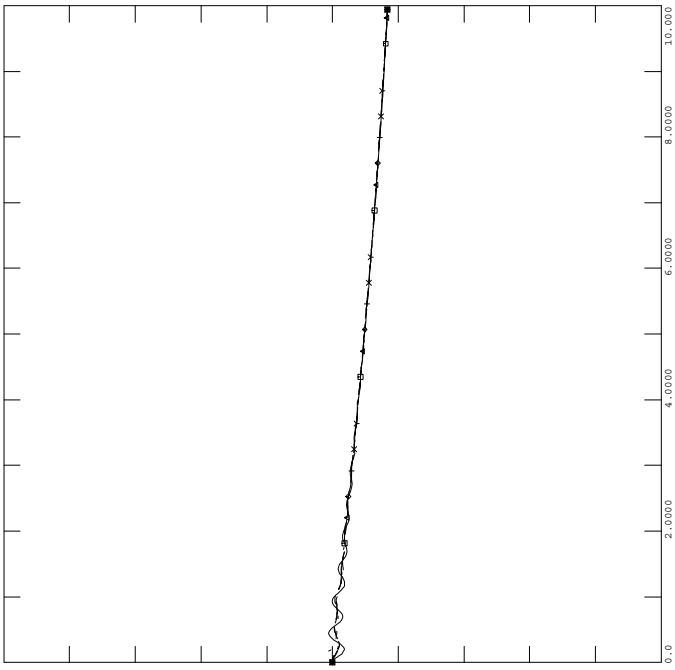
CHNL# 68: [VARS199504 [IR379 WF MVAR]] 0.20000 -0.2000
CHNL# 67: [VARS199510 [IR372 WF MVAR]] 0.20000 -0.2000
CHNL# 66: [VARS199712 [GULLIVERSCV WF]] 0.20000 -0.2000
CHNL# 65: [VARS199613 [GLENDHU WF]] 0.20000 -0.2000
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]] 0.20000 -0.2000
CHNL# 61: [VARS199533 [AMHERST WF]] 0.20000 -0.2000



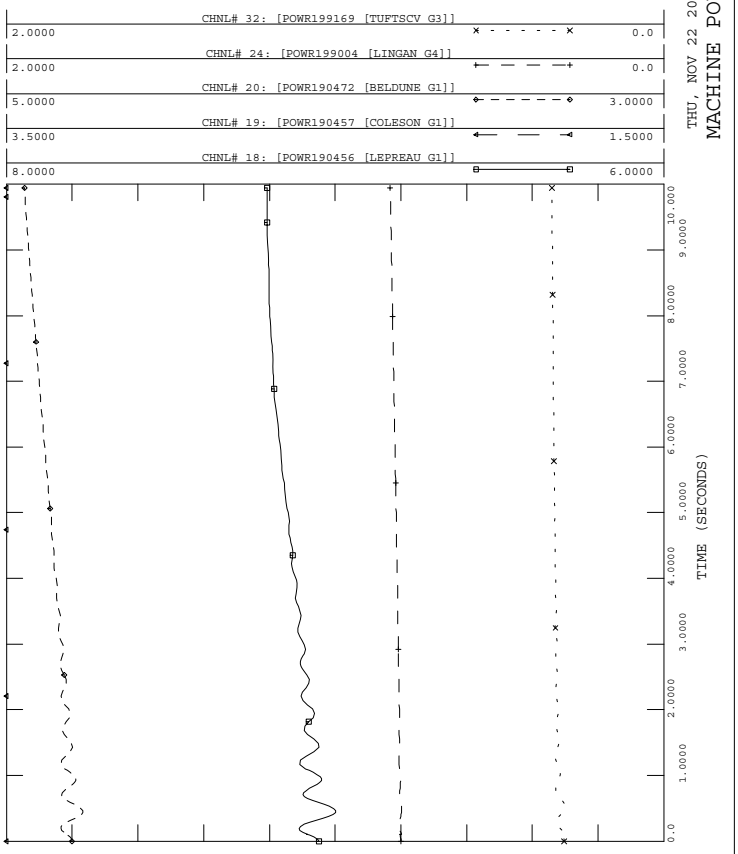
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_51VB51_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:23
BUS FREQUENCY HZ

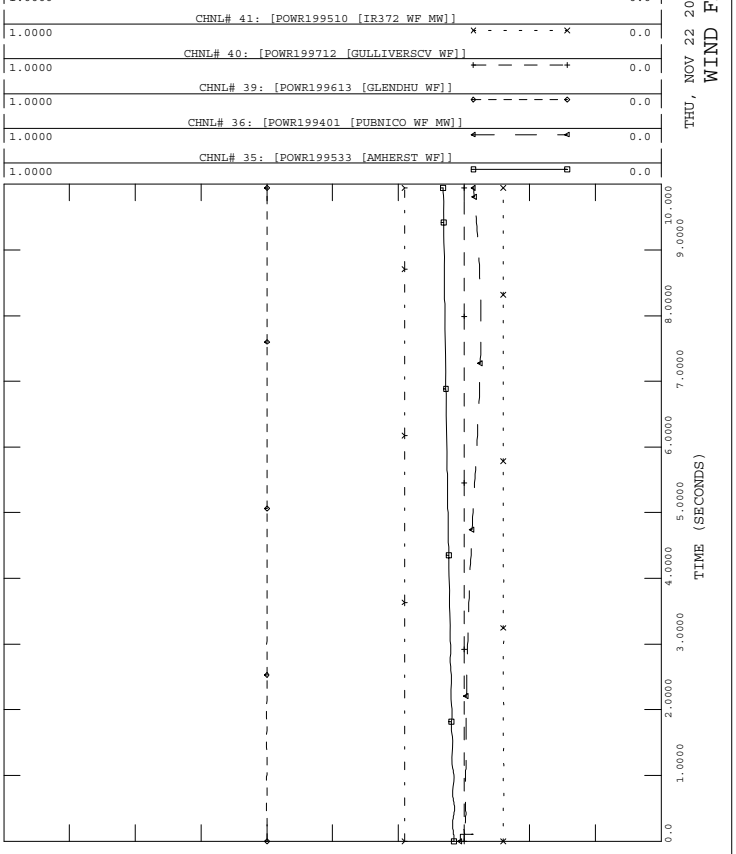
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]]) 60.500 59.500
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]]) 60.500 59.500
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]]) 60.500 59.500
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]]) 60.500 59.500
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]]) 60.500 59.500
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]]) 60.500 59.500



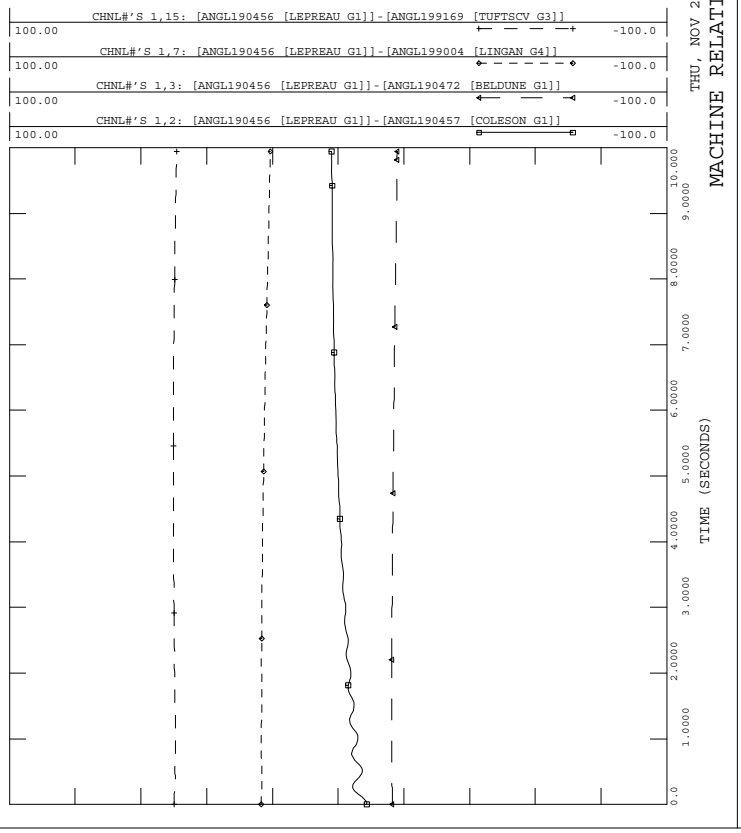
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_9WB53_2015LIGHT_750MW_NSNB-0.out



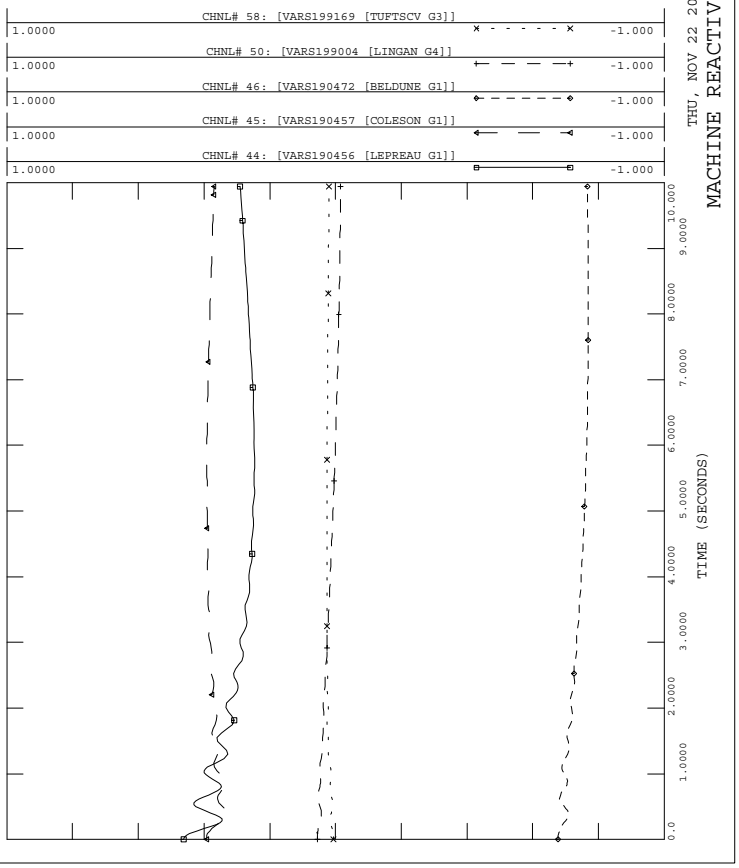
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_9WB53_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_9WB53_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_9WB53_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_9WB53_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:23

BUS VOLTAGE PU

CHNL# 98: [VOLT199364 [GULCH 69.00]] 1.2000 0.70000
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]] 1.2000 0.70000
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]] 1.2000 0.70000
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]] 1.2000 0.70000
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]] 1.2000 0.70000
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]] 1.2000 0.70000

0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000
TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_9WB53_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:23

LINE FLOW MW

CHNL# 168: [L6513 1N MW] 200.00 0.0
CHNL# 120: [L8002_67N_MW] 200.00 0.0
CHNL# 110: [L7019_67N_MW] 0.0 -200.0
CHNL# 108: [L8004_101S_MW] 200.00 0.0
CHNL# 104: [L7005_3C_MW] 200.00 0.0
CHNL# 102: [L7004_3C_MW] 200.00 0.0

0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000
TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_9WB53_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:23

WIND FARM MVAR

CHNL# 68: [VARS199504 [IR379 WF MVAR]] 0.20000 -0.2000
CHNL# 67: [VARS199510 [IR372 WF MVAR]] 0.20000 -0.2000
CHNL# 66: [VARS199712 [GULLIVERSCV WF]] 0.20000 -0.2000
CHNL# 65: [VARS199613 [GLENDHU WF]] 0.20000 -0.2000
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]] 0.20000 -0.2000
CHNL# 61: [VARS199533 [AMHERST WF]] 0.20000 -0.2000

0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000
TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_9WB53_2015LIGHT_750MW_NSNB-0.out

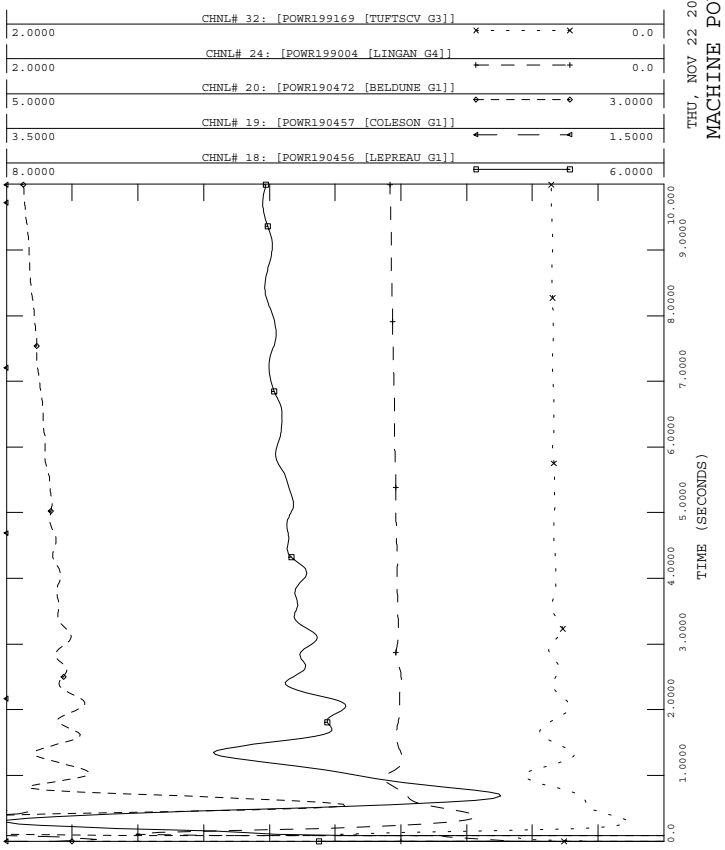
THU, NOV 22 2012 15:23

BUS FREQUENCY HZ

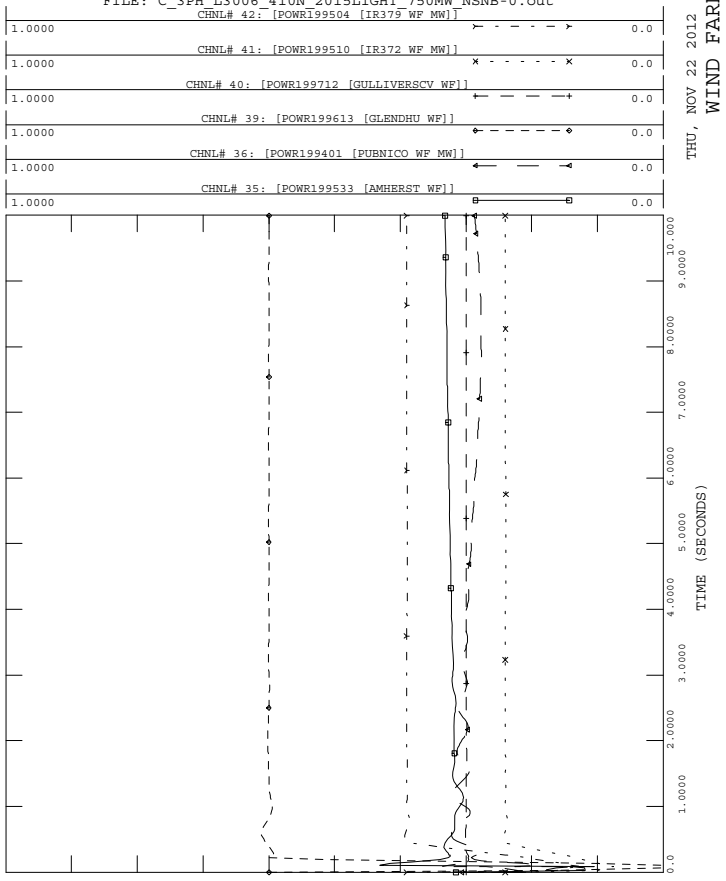
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]]) 60.500 59.500
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]]) 60.500 59.500
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]]) 60.500 59.500
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]]) 60.500 59.500
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]]) 60.500 59.500
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]]) 60.500 59.500

0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000
TIME (SECONDS)

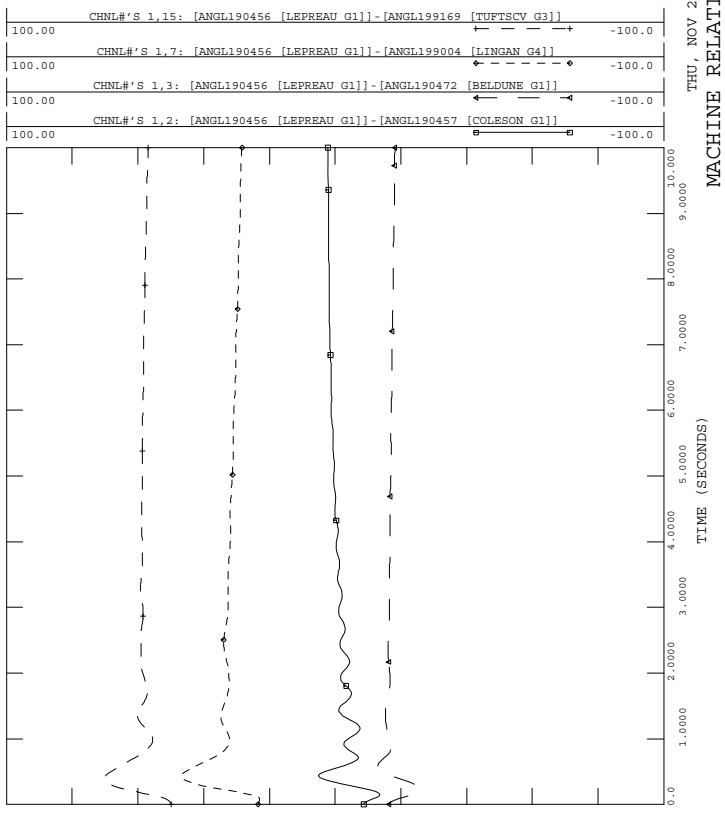
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L3006_410N_2015LIGHT_750MW_NSNB-0.out



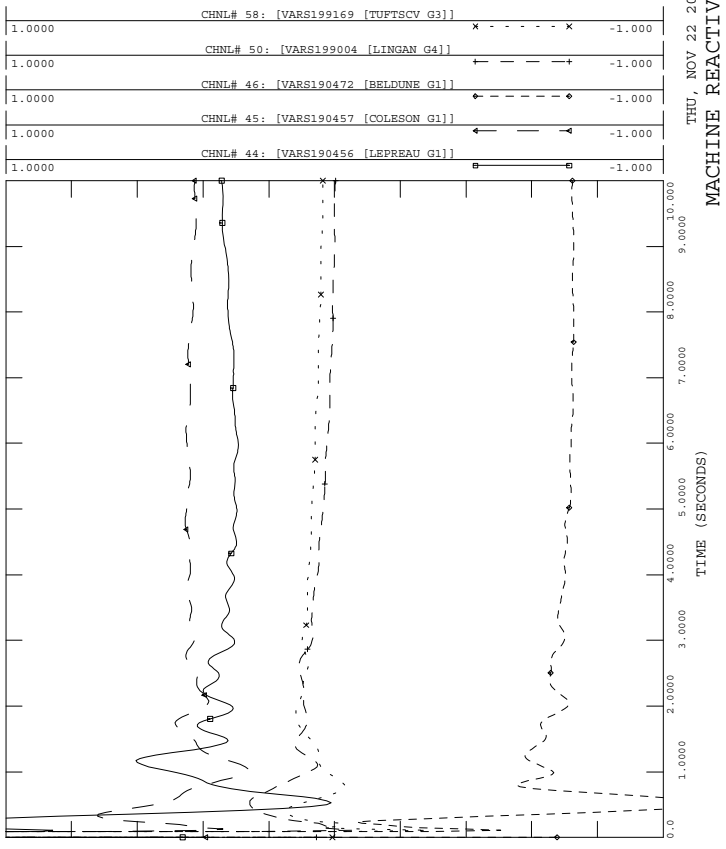
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L3006_410N_2015LIGHT_750MW_NSNB-0.out

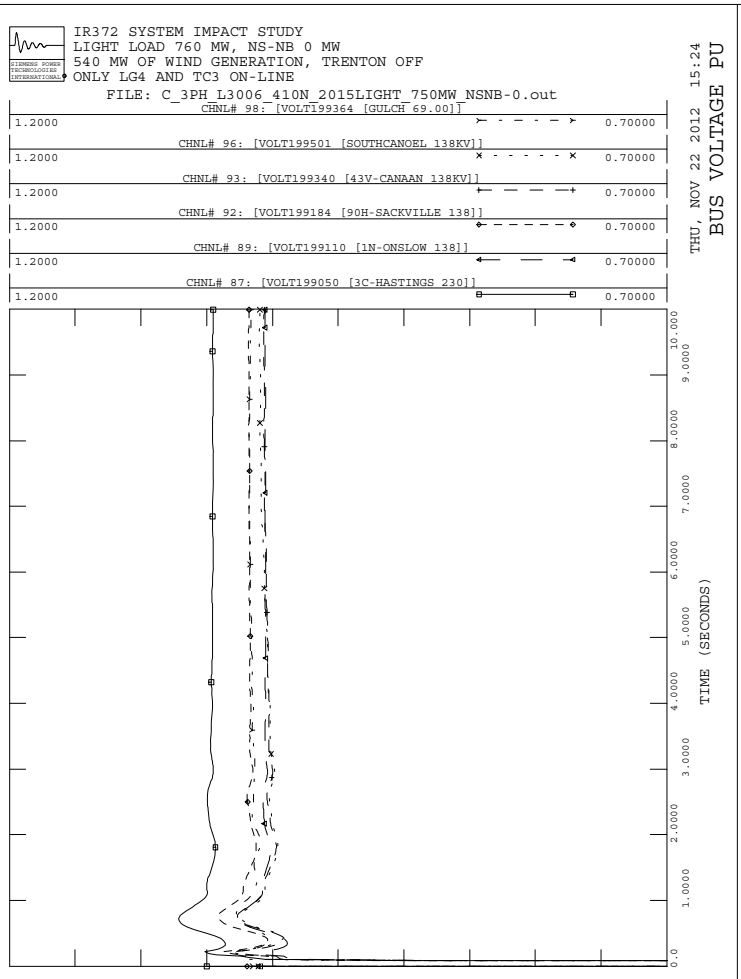


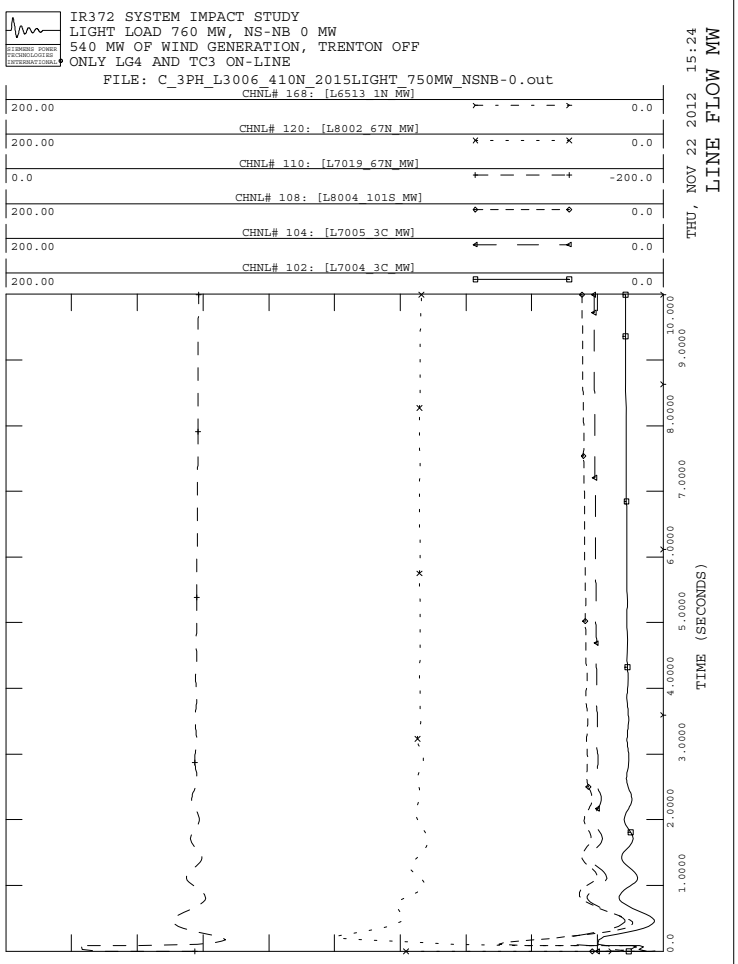
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L3006_410N_2015LIGHT_750MW_NSNB-0.out

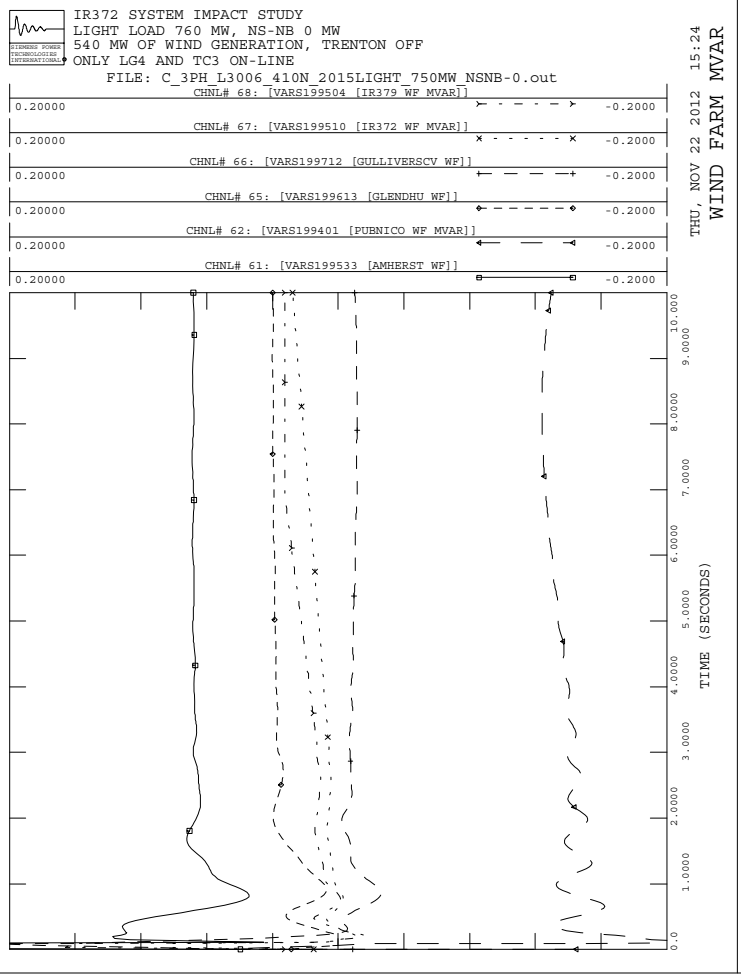


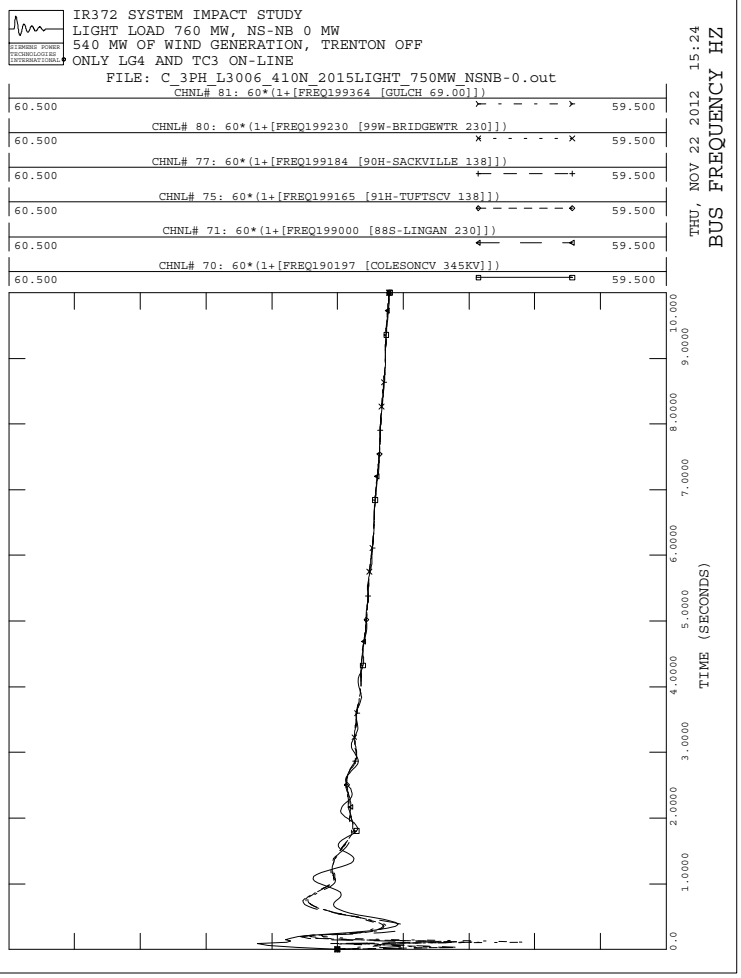
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L3006_410N_2015LIGHT_750MW_NSNB-0.out

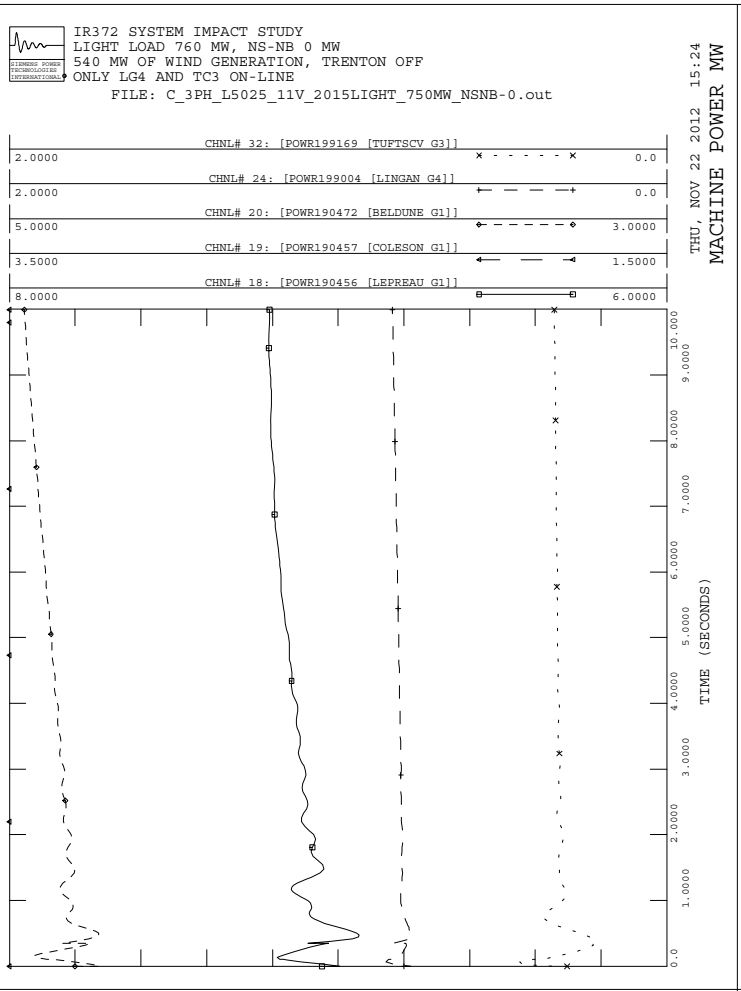


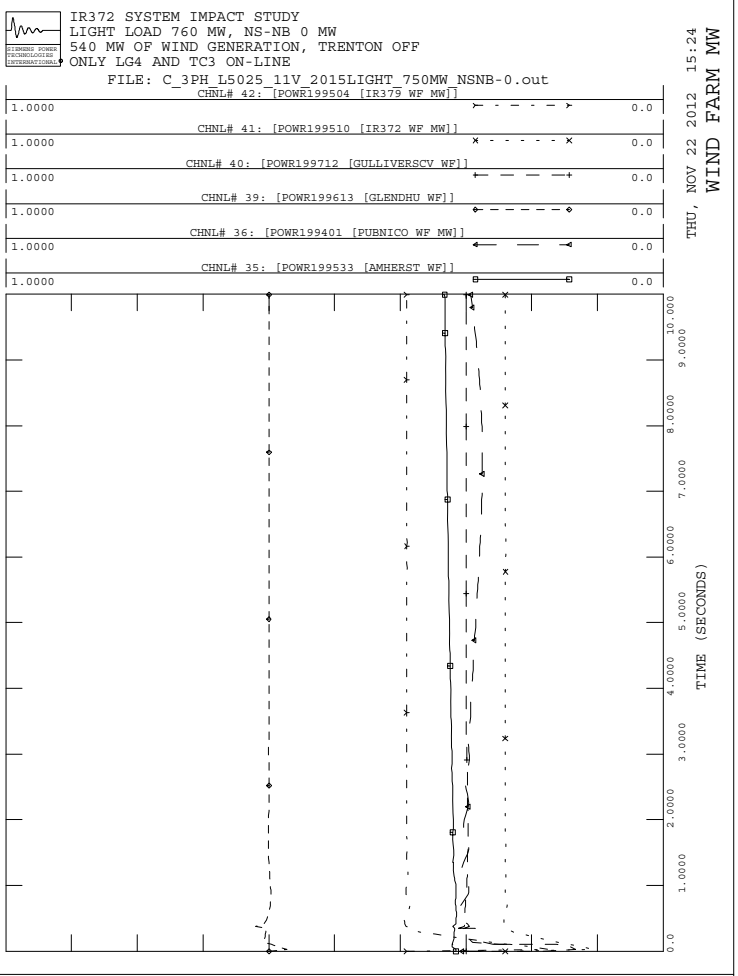

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L3006_410N_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)

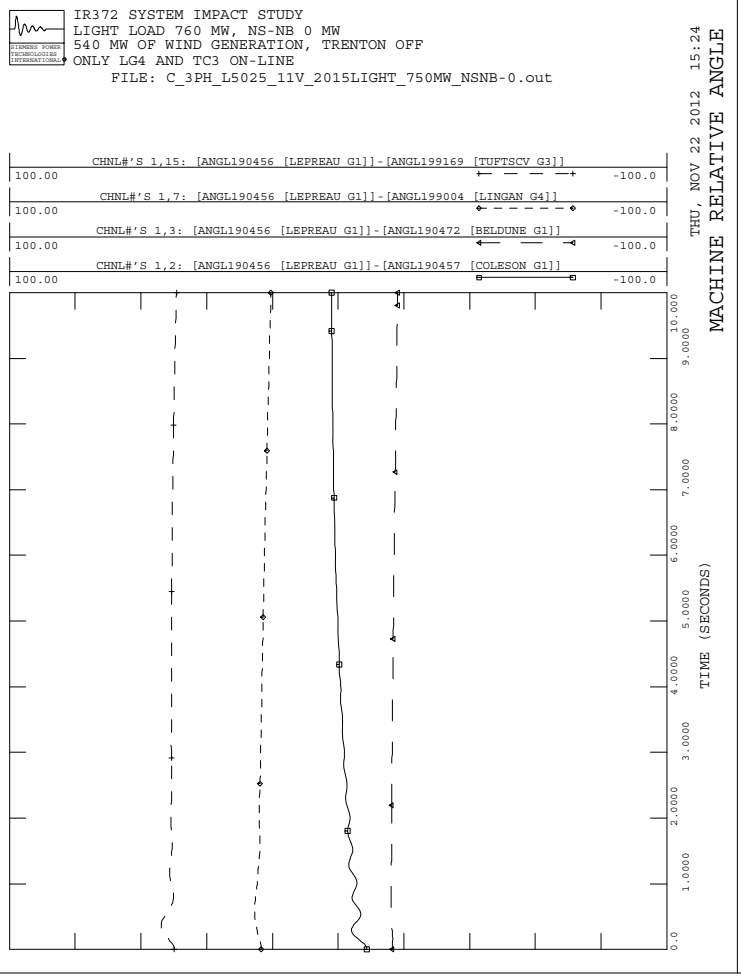

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L3006_410N_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005_3C MW]
CHNL# 102: [L7004_3C MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)

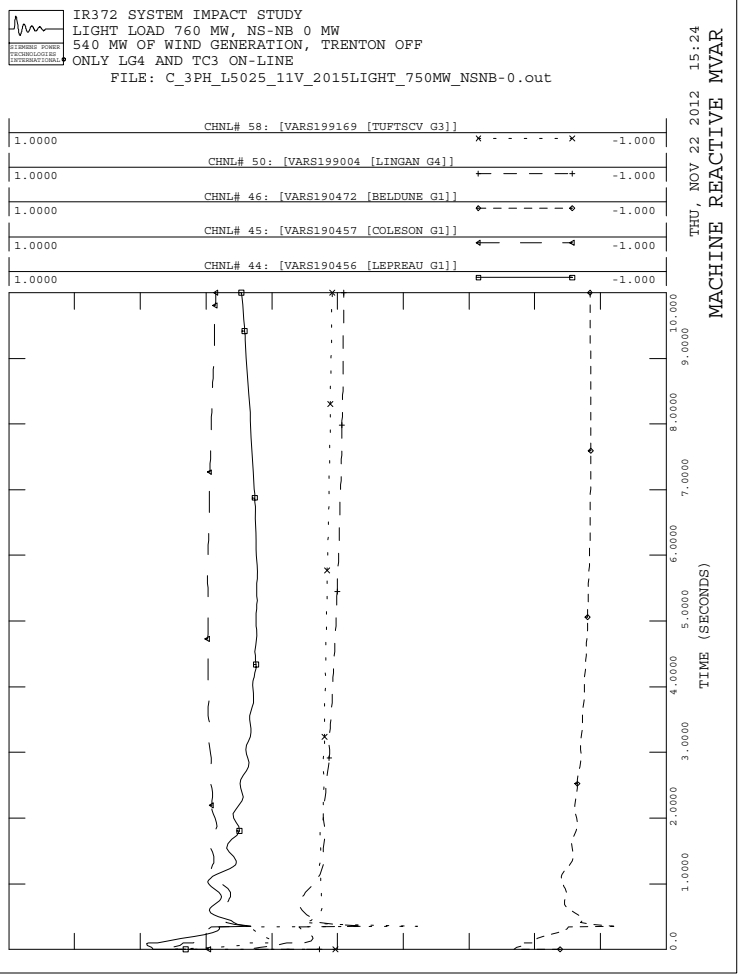

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L3006_410N_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)

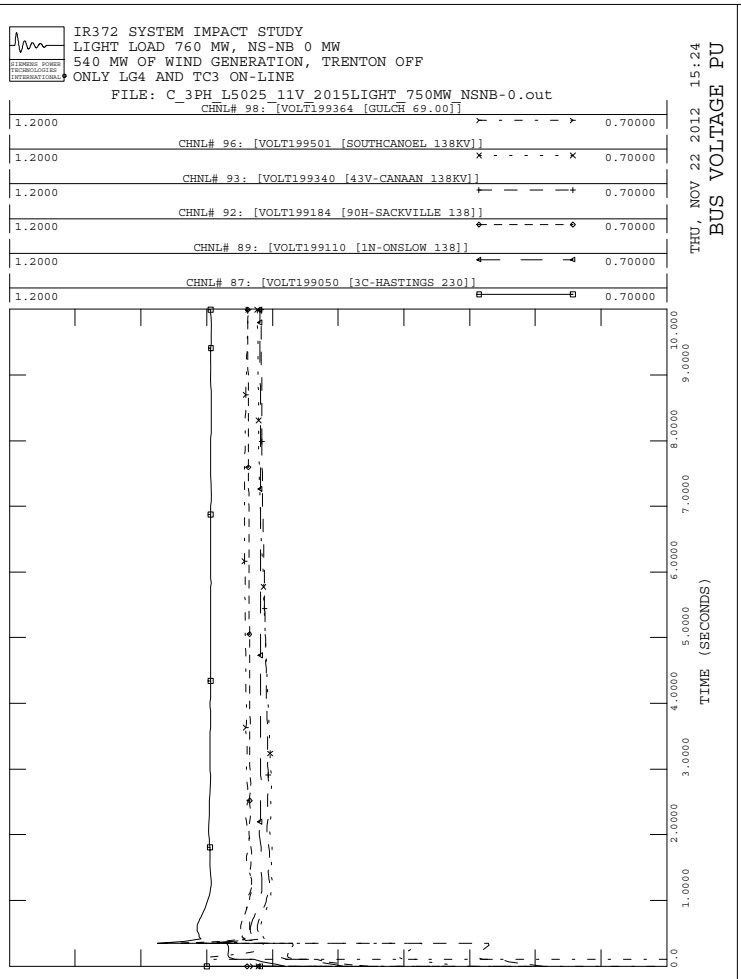

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L3006_410N_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

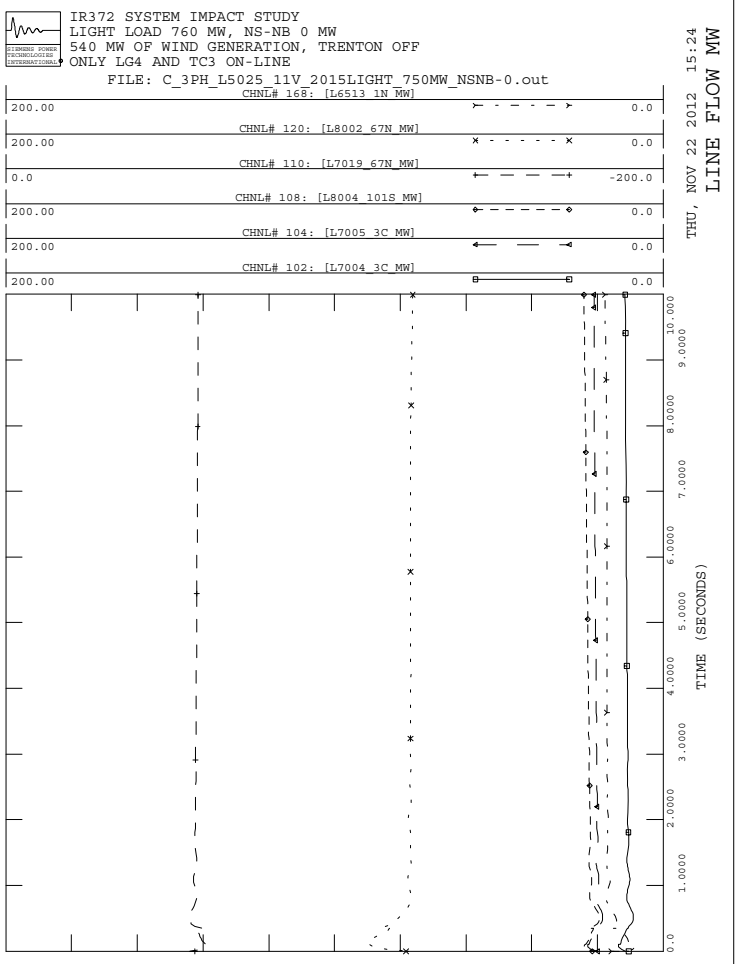

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_11V_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
THU, NOV 22 2012 15:24
MACHINE POWER MW
TIME (SECONDS)

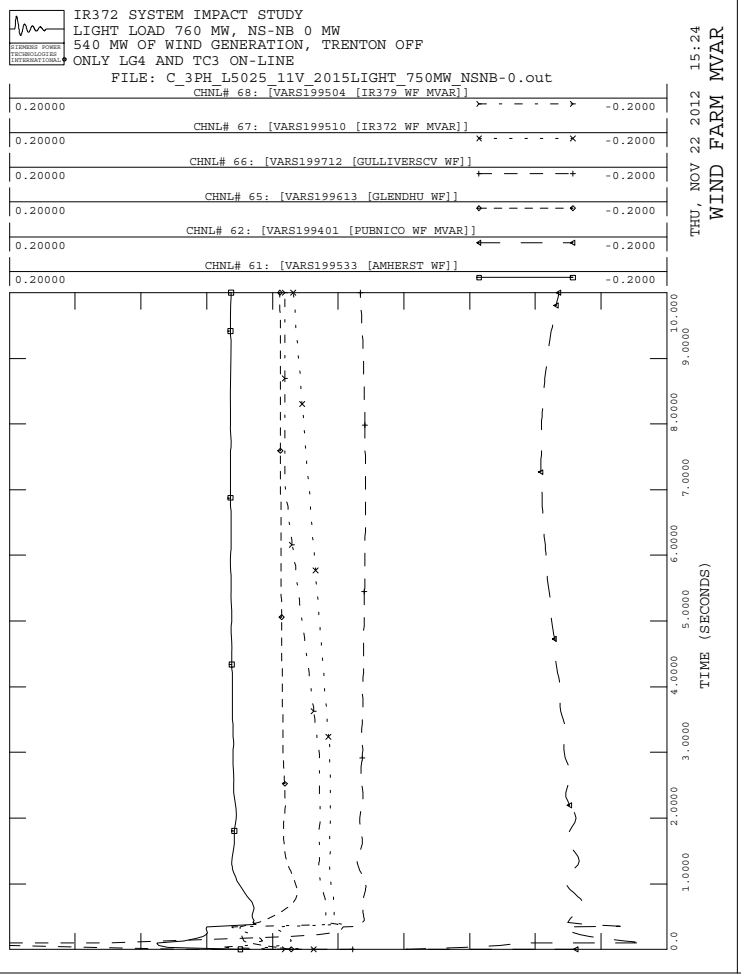

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_11V_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
THU, NOV 22 2012 15:24
WIND FARM MW
TIME (SECONDS)

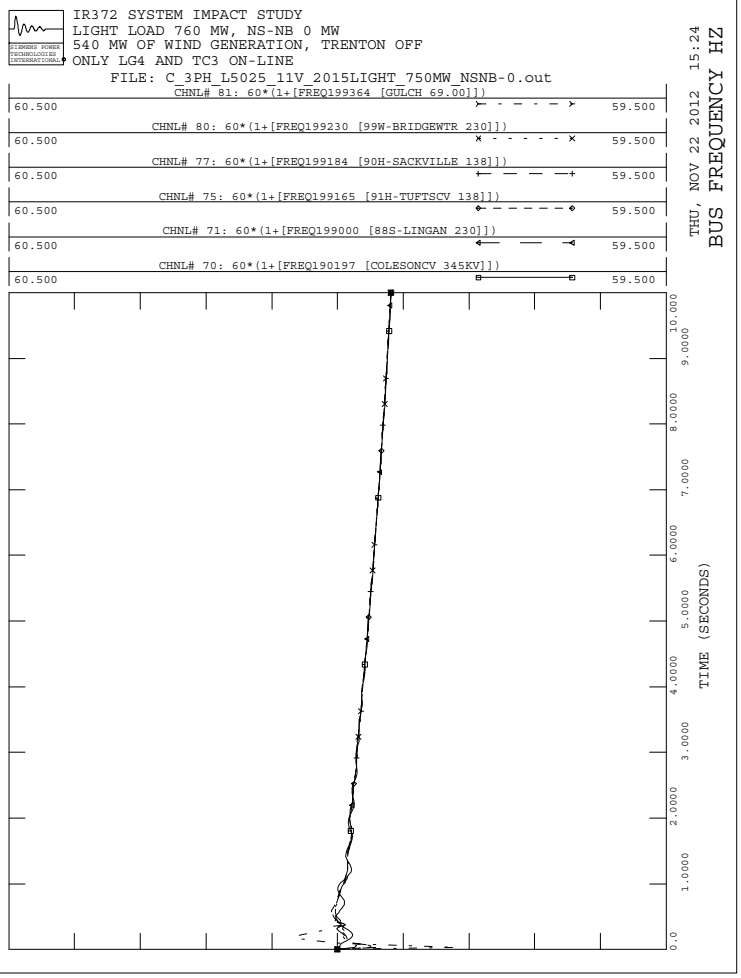

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_11V_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
THU, NOV 22 2012 15:24
MACHINE RELATIVE ANGLE
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_11V_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
THU, NOV 22 2012 15:24
MACHINE REACTIVE MVAR
TIME (SECONDS)

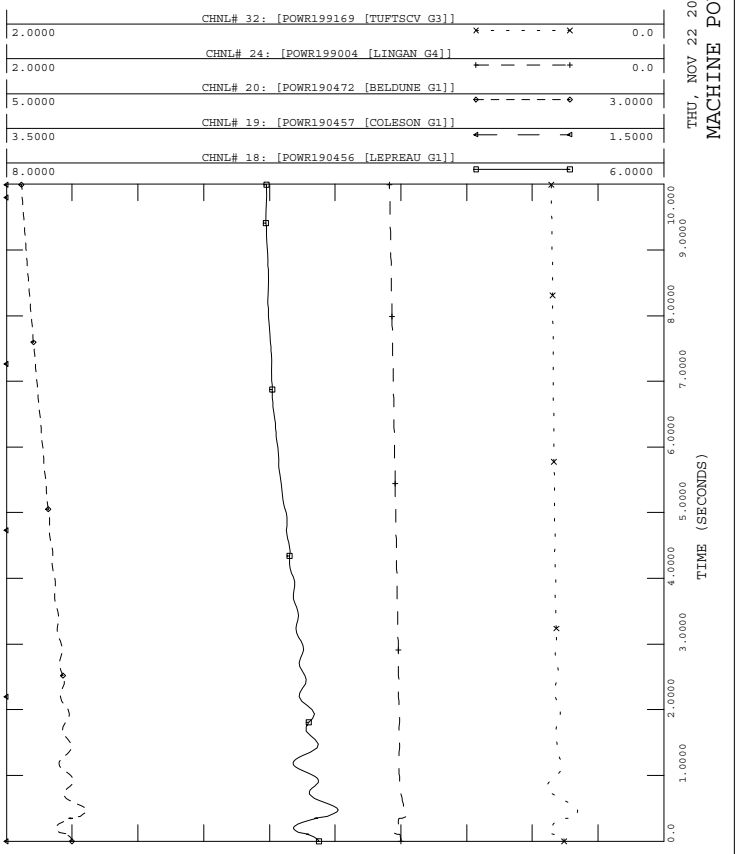

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_11V_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_11V_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)

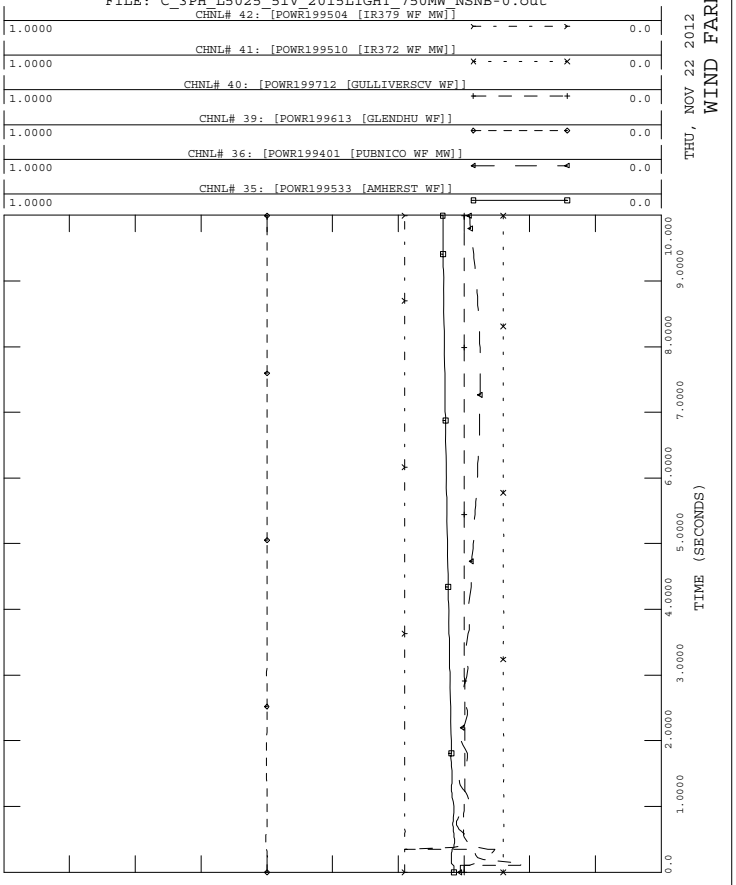

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_11V_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_11V_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

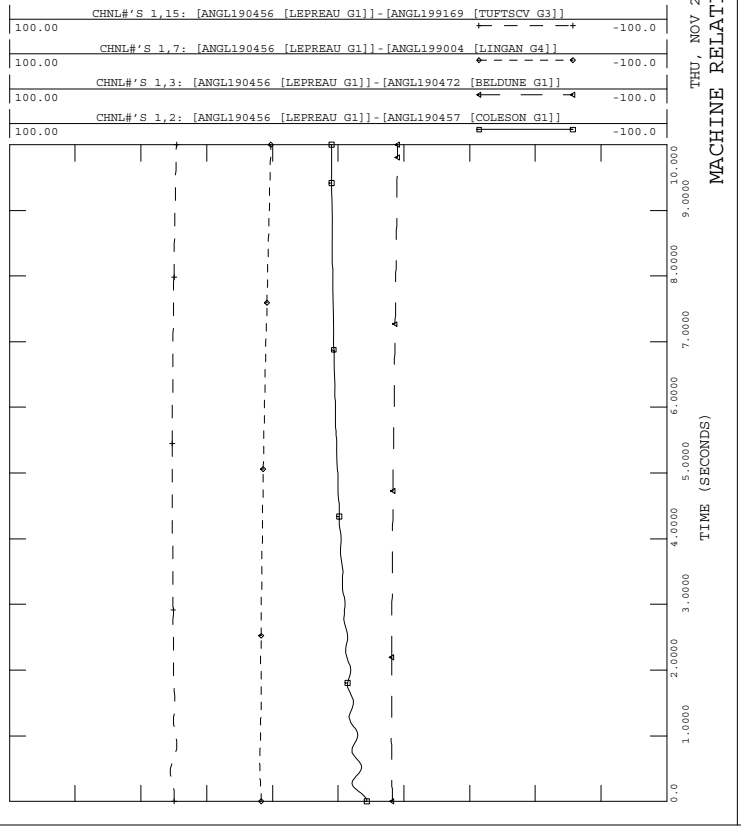
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_51V_2015LIGHT_750MW_NSNB-0.out



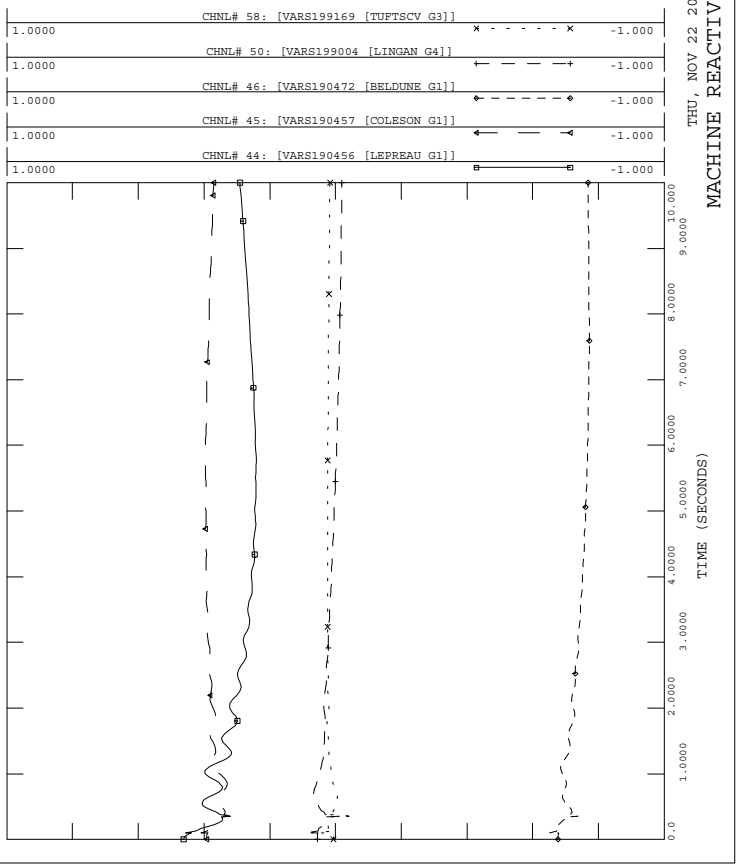
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_51V_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_51V_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_51V_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_51V_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24

BUS VOLTAGE PU

CHNL# 98: [VOLT199364 [GULCH 69.00]] 1.2000 0.70000
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]] 1.2000 0.70000
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]] 1.2000 0.70000
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]] 1.2000 0.70000
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]] 1.2000 0.70000
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]] 1.2000 0.70000

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_51V_2015LIGHT_750MW_NSNB-0.out

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LINE FLOW MW

CHNL# 168: [L6513 1N MW] 200.00 0.0
CHNL# 120: [L8002_67N_MW] 200.00 0.0
CHNL# 110: [L7019_67N_MW] 0.0 -200.0
CHNL# 108: [L8004_101S_MW] 200.00 0.0
CHNL# 104: [L7005_3C_MW] 200.00 0.0
CHNL# 102: [L7004_3C_MW] 200.00 0.0

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_51V_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24

WIND FARM MVAR

CHNL# 68: [VARS199504 [IR379 WF MVAR]] 0.20000 -0.2000
CHNL# 67: [VARS199510 [IR372 WF MVAR]] 0.20000 -0.2000
CHNL# 66: [VARS199712 [GULLIVERSCV WF]] 0.20000 -0.2000
CHNL# 65: [VARS199613 [GLENDHU WF]] 0.20000 -0.2000
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]] 0.20000 -0.2000
CHNL# 61: [VARS199533 [AMHERST WF]] 0.20000 -0.2000

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5025_51V_2015LIGHT_750MW_NSNB-0.out

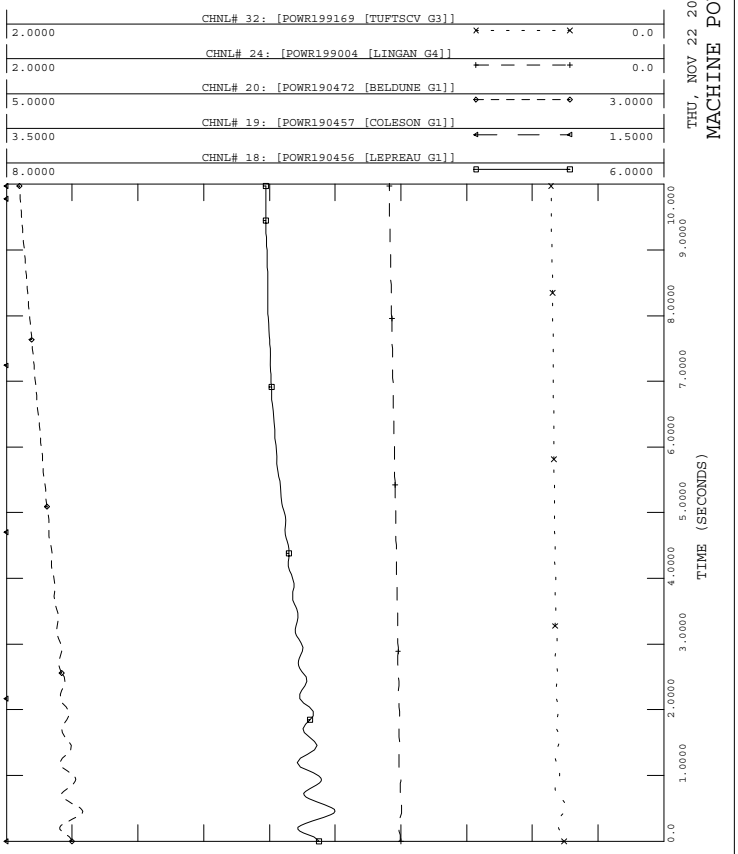
THU, NOV 22 2012 15:24

BUS FREQUENCY HZ

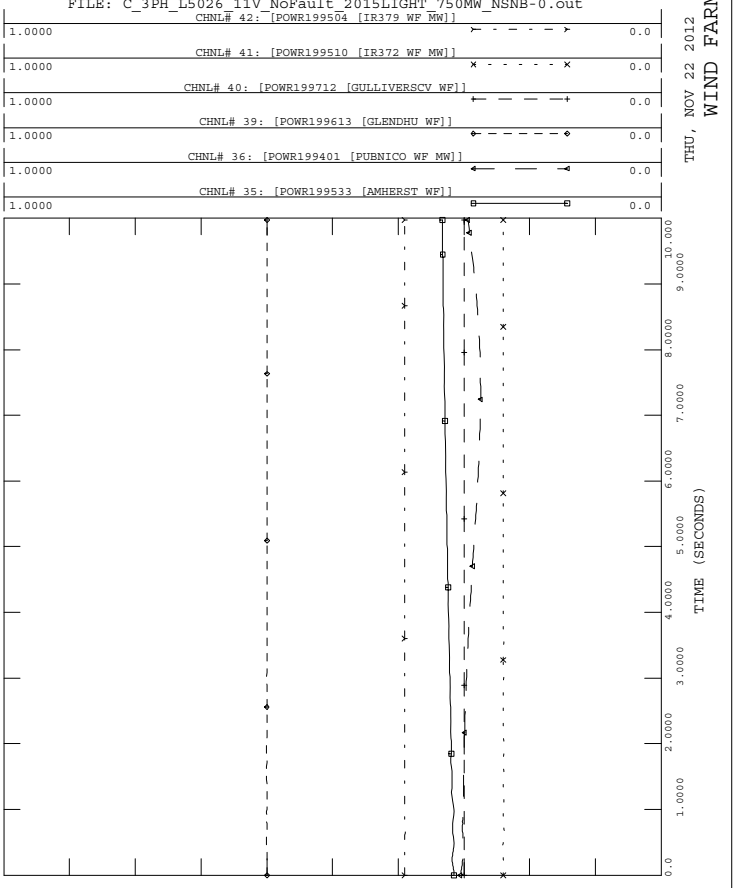
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]]) 60.500 59.500
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]]) 60.500 59.500
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]]) 60.500 59.500
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]]) 60.500 59.500
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]]) 60.500 59.500
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]]) 60.500 59.500

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

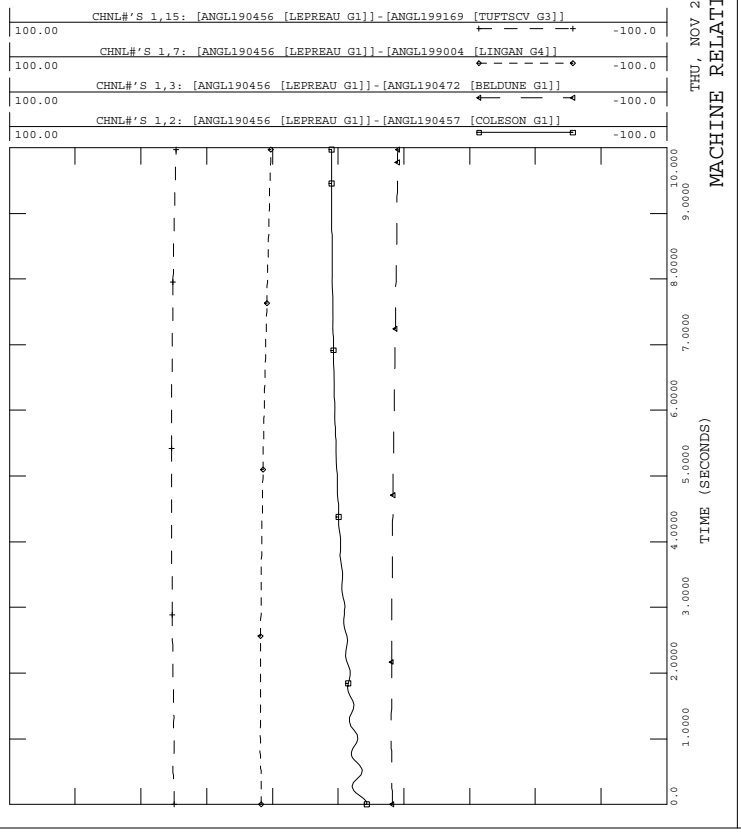
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_11V_NoFault_2015LIGHT_750MW_NSNB-0.out



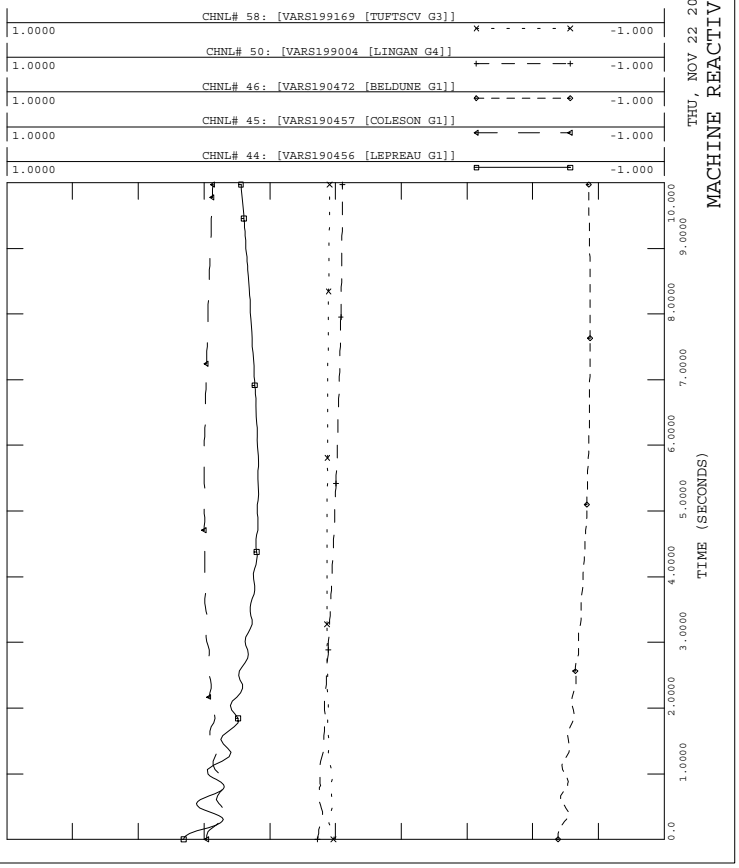
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_11V_NoFault_2015LIGHT_750MW_NSNB-0.out



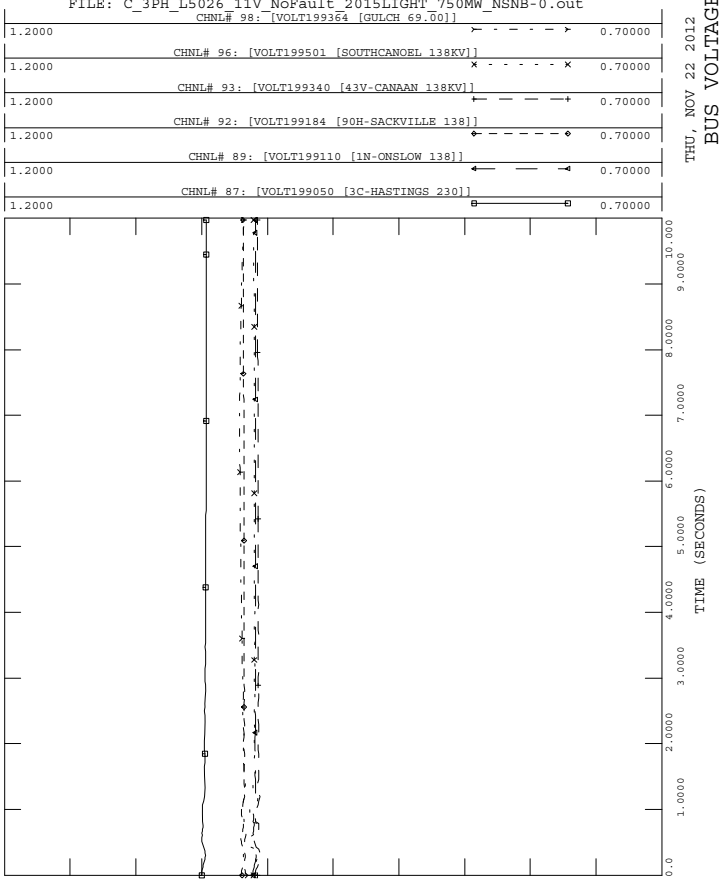
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_11V_NoFault_2015LIGHT_750MW_NSNB-0.out



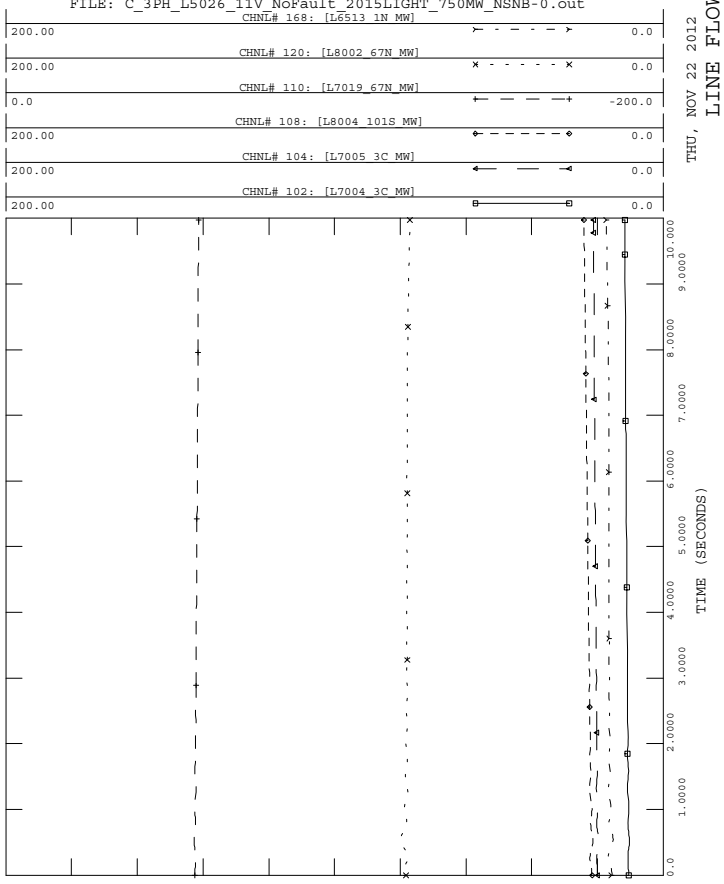
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_11V_NoFault_2015LIGHT_750MW_NSNB-0.out



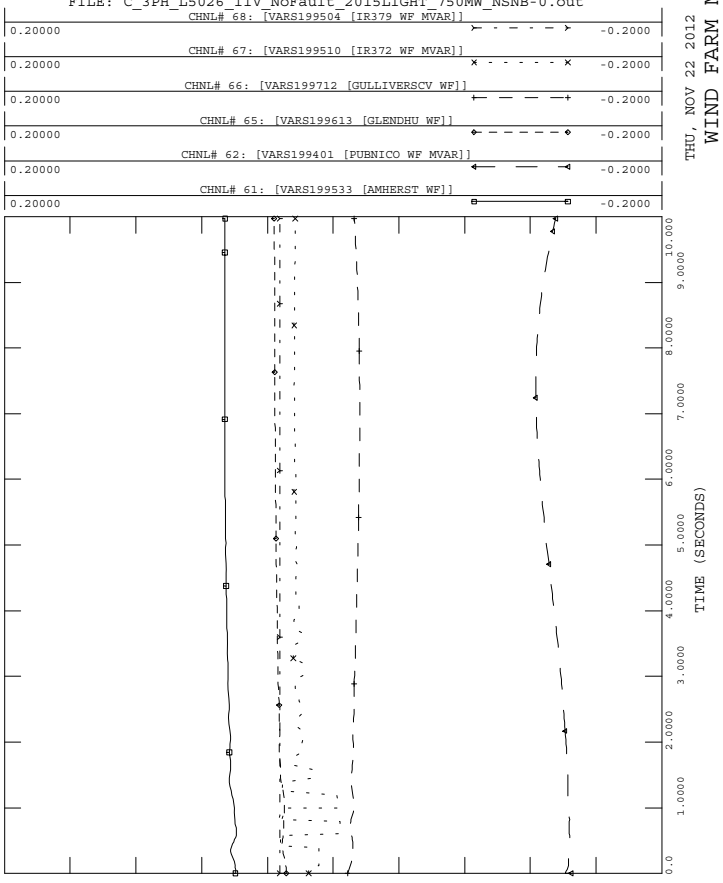
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_11V_NoFault_2015LIGHT_750MW_NSNB-0.out



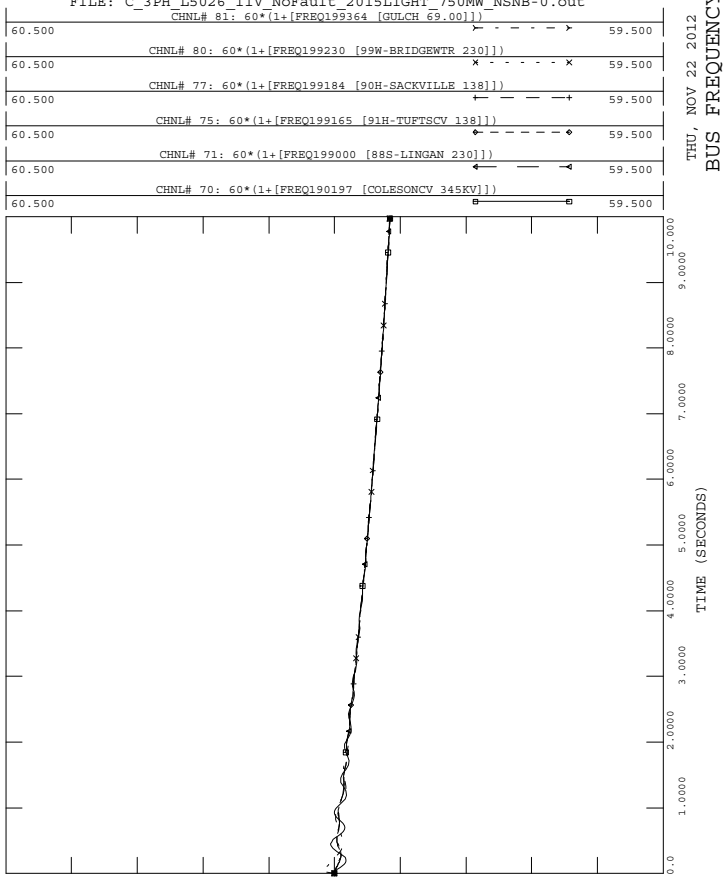
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_11V_NoFault_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_11V_NoFault_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_11V_NoFault_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_13V_NoFault_2015LIGHT_750MW_NSNB-0.out

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MACHINE POWER MW

CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]

TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_13V_NoFault_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24

WIND FARM MW

CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]

TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_13V_NoFault_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24

MACHINE RELATIVE ANGLE

CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]

TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_13V_NoFault_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24

MACHINE REACTIVE MVAR

CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]

TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_13V_NoFault_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24
BUS VOLTAGE PU

CHNL# 98: [VOLT199364 [GULCH 69.00]] 1.2000 0.70000
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]] 1.2000 0.70000
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]] 1.2000 0.70000
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]] 1.2000 0.70000
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]] 1.2000 0.70000
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]] 1.2000 0.70000

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_13V_NoFault_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24
LINE FLOW MW

CHNL# 168: [L6513 1N MW] 200.00 0.0
CHNL# 120: [L8002_67N_MW] 200.00 0.0
CHNL# 110: [L7019_67N_MW] 0.0 -200.0
CHNL# 108: [L8004_101S_MW] 200.00 0.0
CHNL# 104: [L7005_3C_MW] 200.00 0.0
CHNL# 102: [L7004_3C_MW] 200.00 0.0

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_13V_NoFault_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24
WIND FARM MVAR

CHNL# 68: [VARS199504 [IR379 WF MVAR]] 0.20000 -0.2000
CHNL# 67: [VARS199510 [IR372 WF MVAR]] 0.20000 -0.2000
CHNL# 66: [VARS199712 [GULLIVERSCV WF]] 0.20000 -0.2000
CHNL# 65: [VARS199613 [GLENDHU WF]] 0.20000 -0.2000
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]] 0.20000 -0.2000
CHNL# 61: [VARS199533 [AMHERST WF]] 0.20000 -0.2000

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

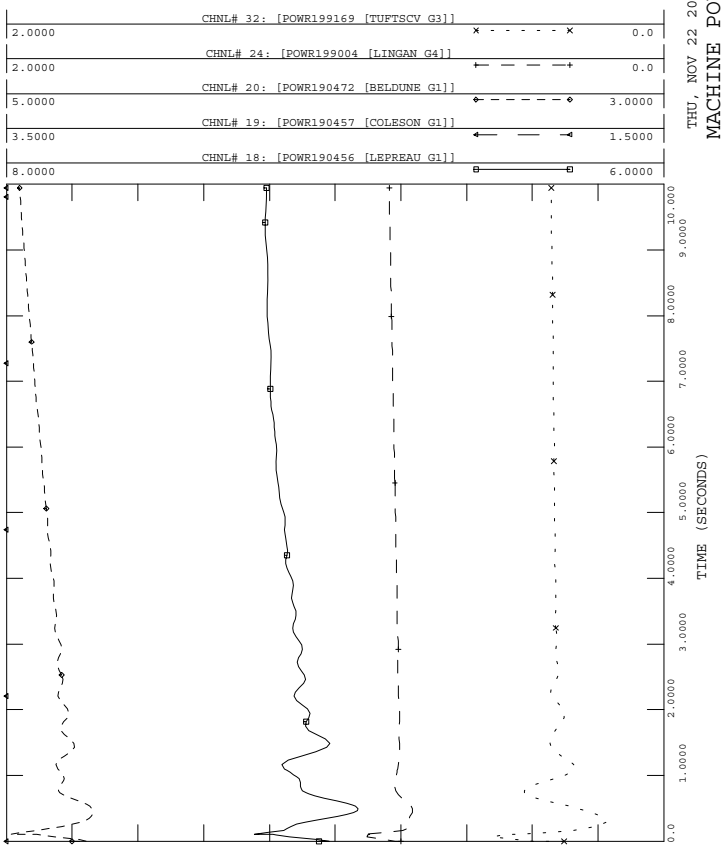
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5026_13V_NoFault_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24
BUS FREQUENCY HZ

CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]]) 60.500 59.500
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]]) 60.500 59.500
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]]) 60.500 59.500
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]]) 60.500 59.500
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]]) 60.500 59.500
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]]) 60.500 59.500

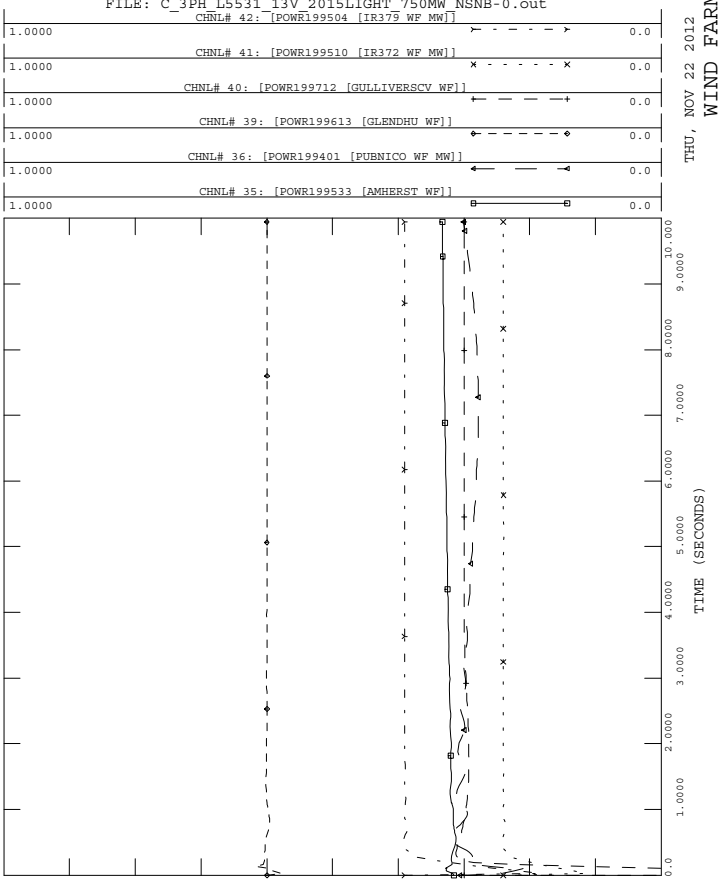
TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5531_13V_2015LIGHT_750MW_NSNB-0.out



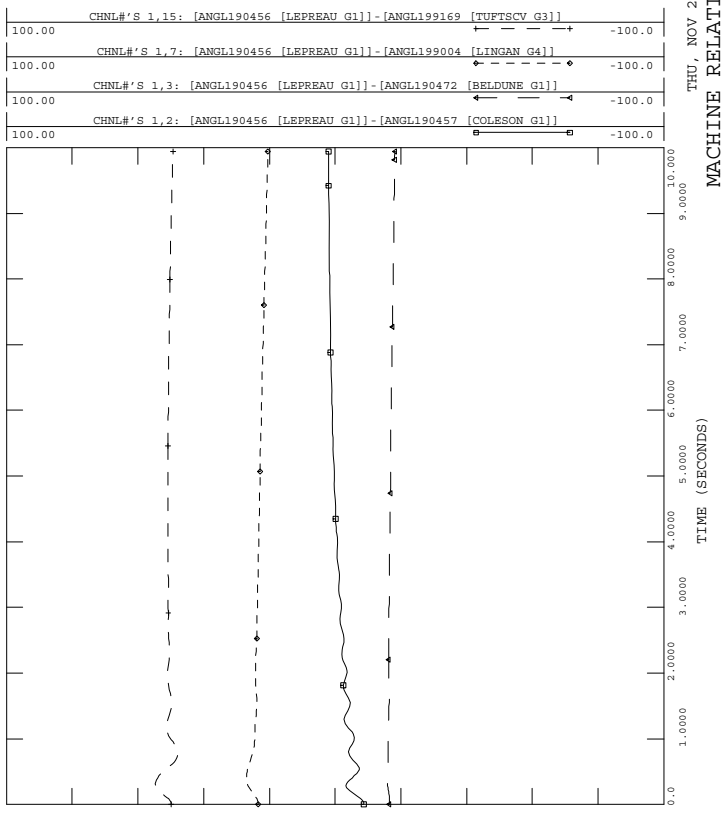
THU, NOV 22 2012 15:24
MACHINE POWER MW

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5531_13V_2015LIGHT_750MW_NSNB-0.out



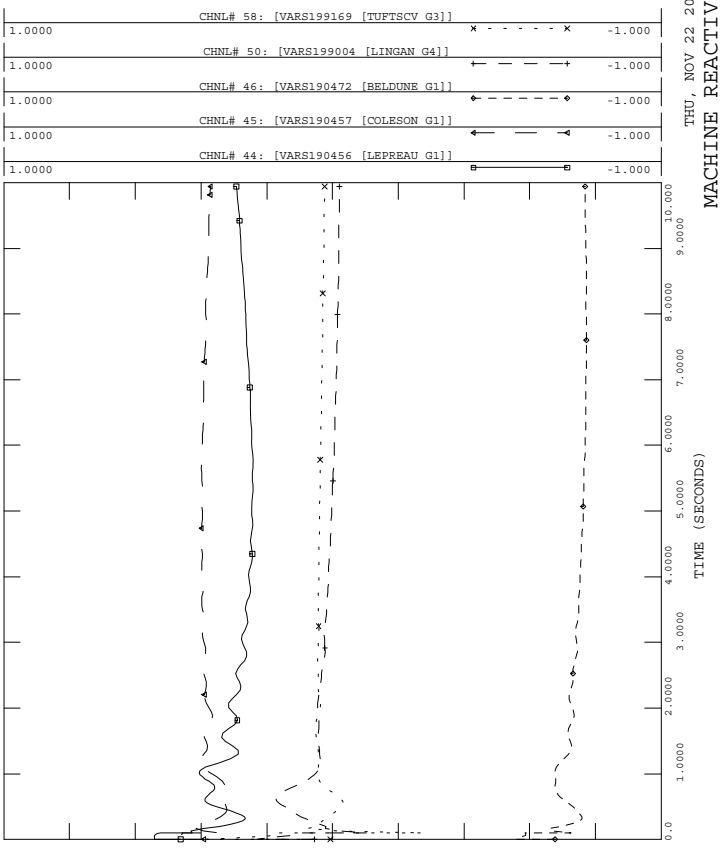
THU, NOV 22 2012 15:24
WIND FARM MW

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5531_13V_2015LIGHT_750MW_NSNB-0.out

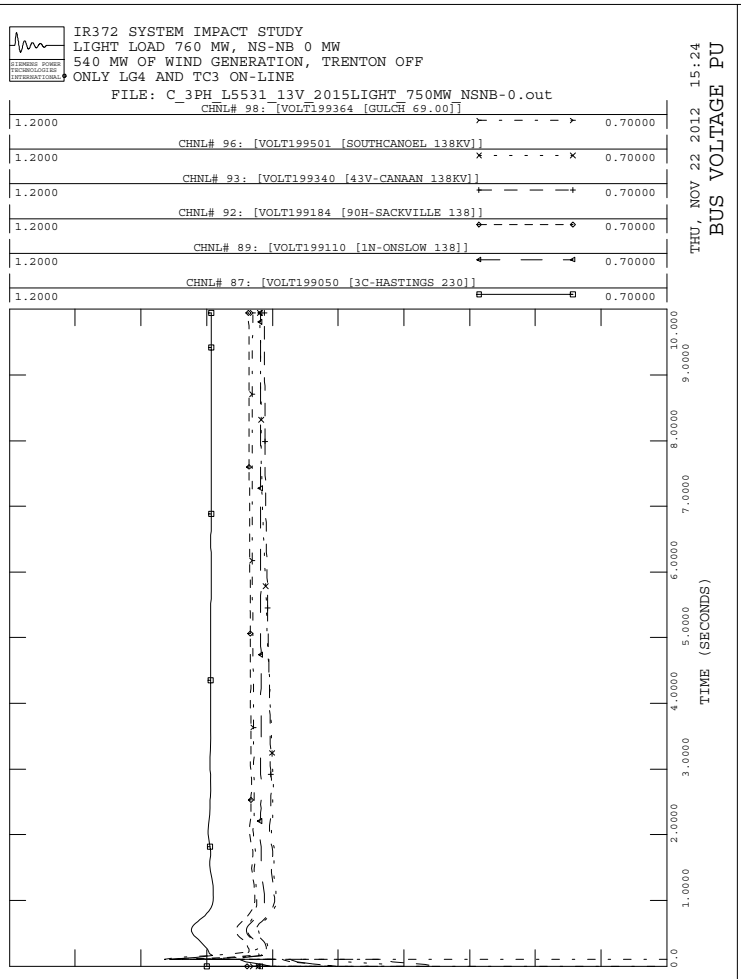


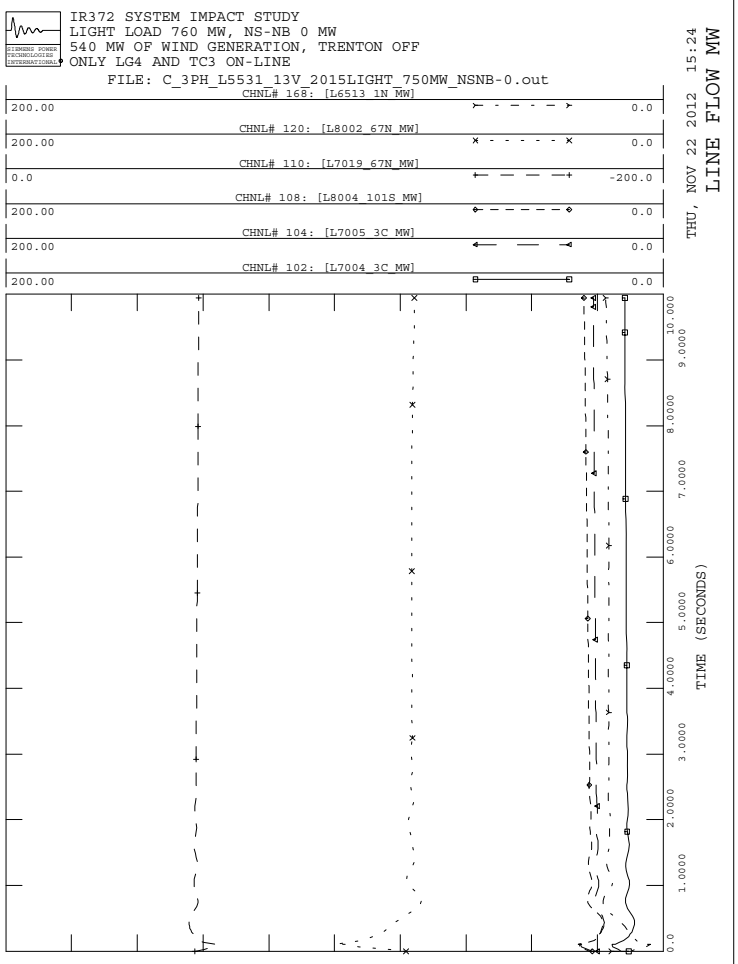
THU, NOV 22 2012 15:24
MACHINE RELATIVE ANGLE

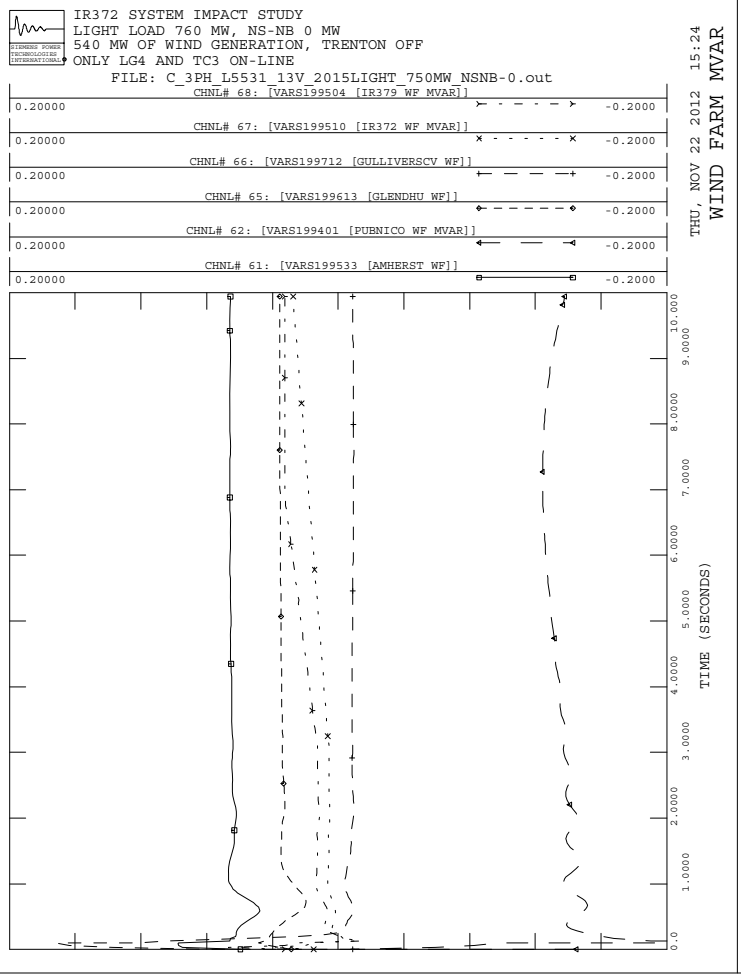
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5531_13V_2015LIGHT_750MW_NSNB-0.out

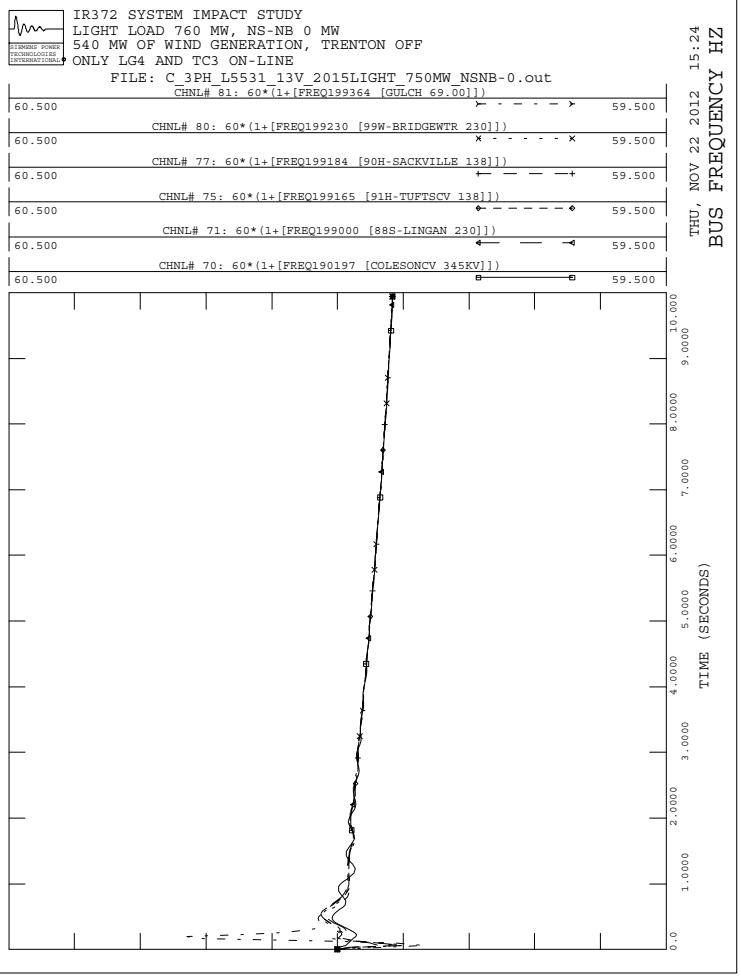


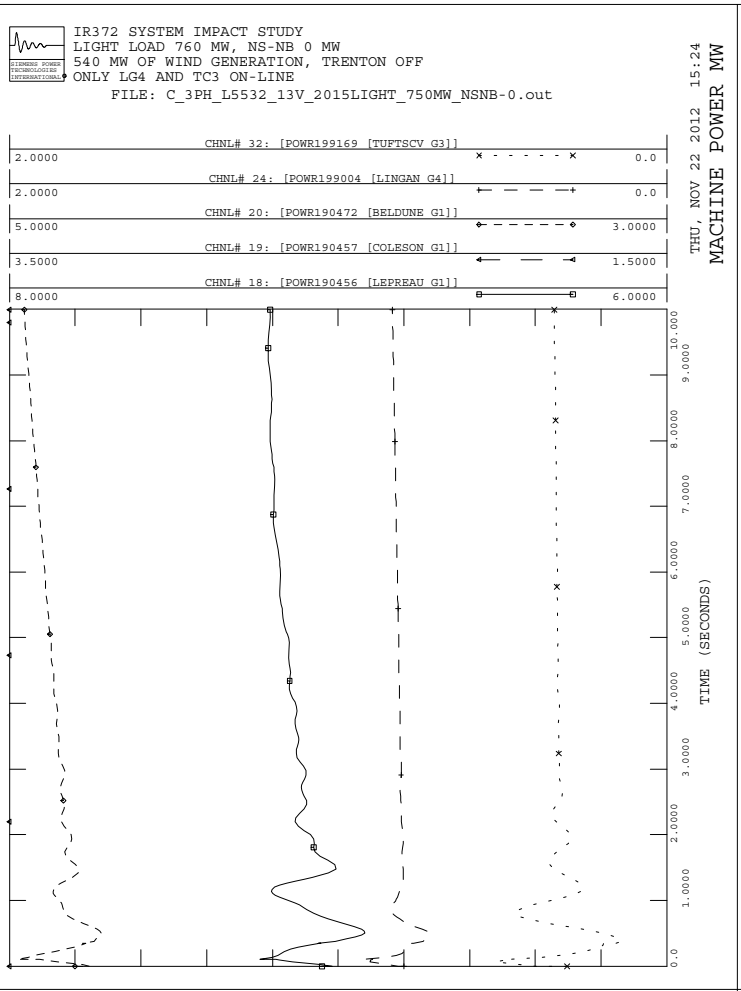
THU, NOV 22 2012 15:24
MACHINE REACTIVE MVAR

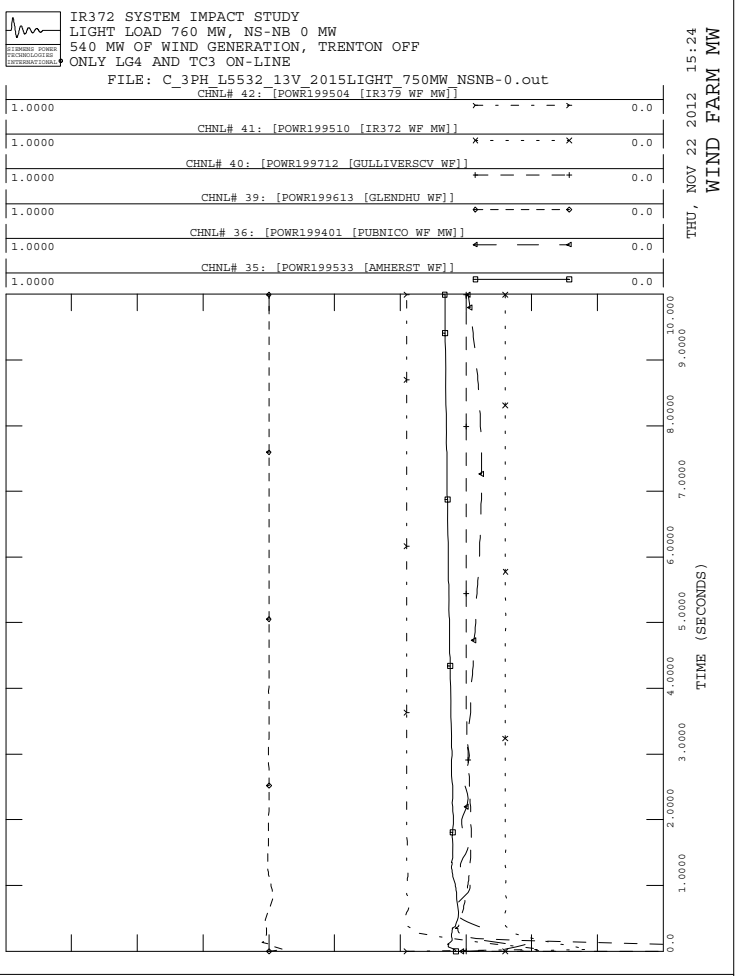

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5531_13V_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)

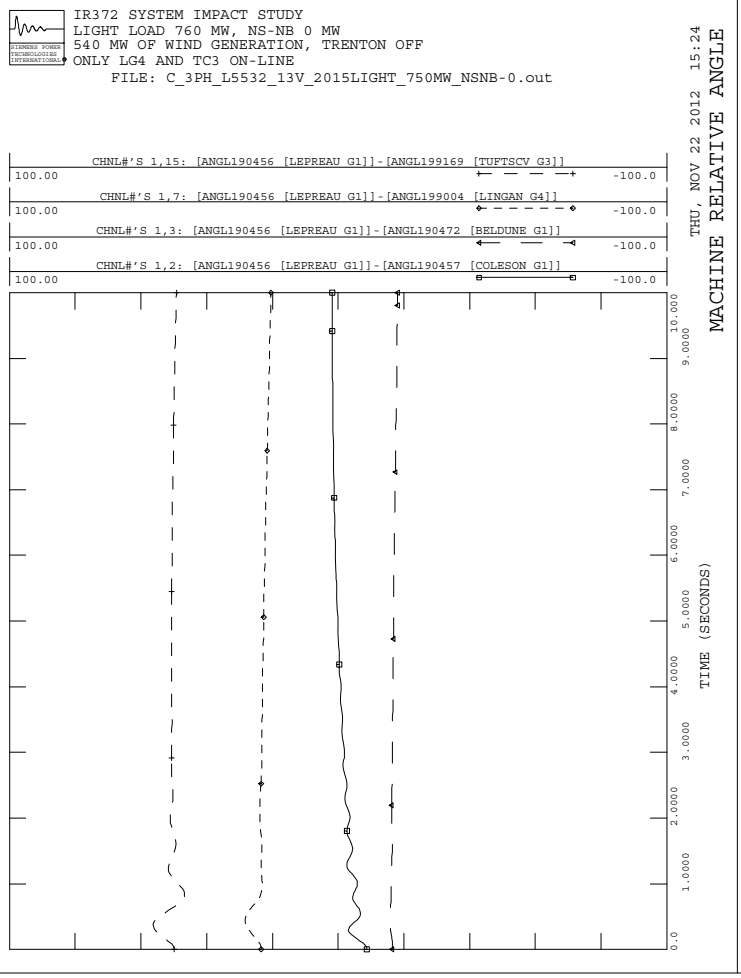

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5531_13V_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)

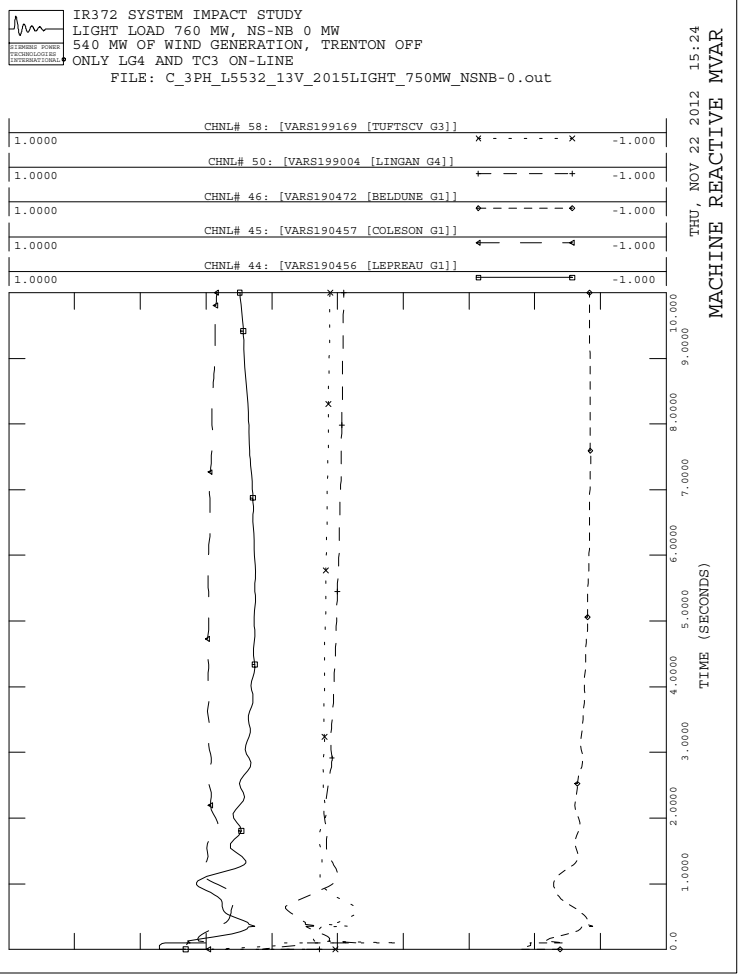

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5531_13V_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)

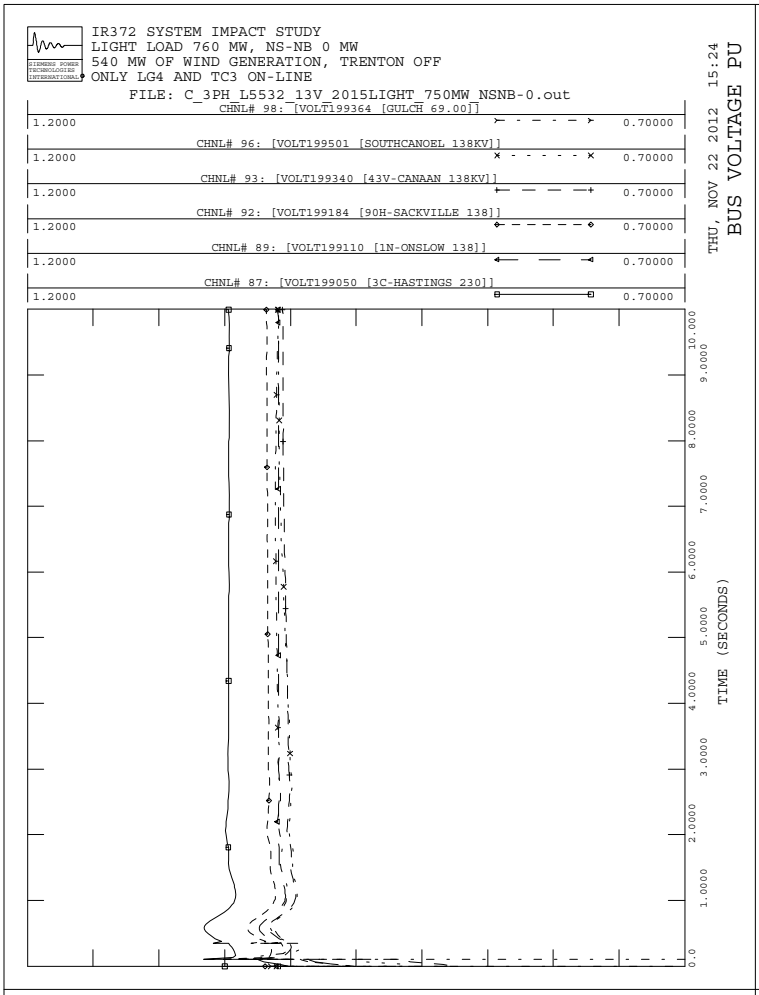

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5531_13V_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

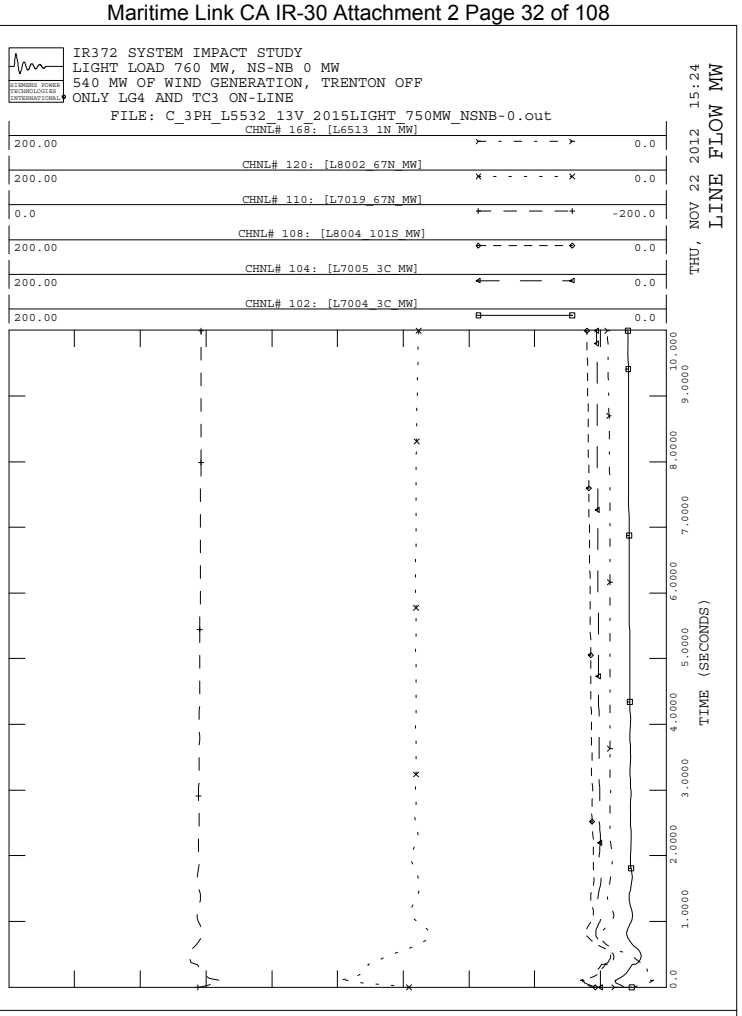

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5532_13V_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
TIME (SECONDS)
THU, NOV 22 2012 15:24
MACHINE POWER MW

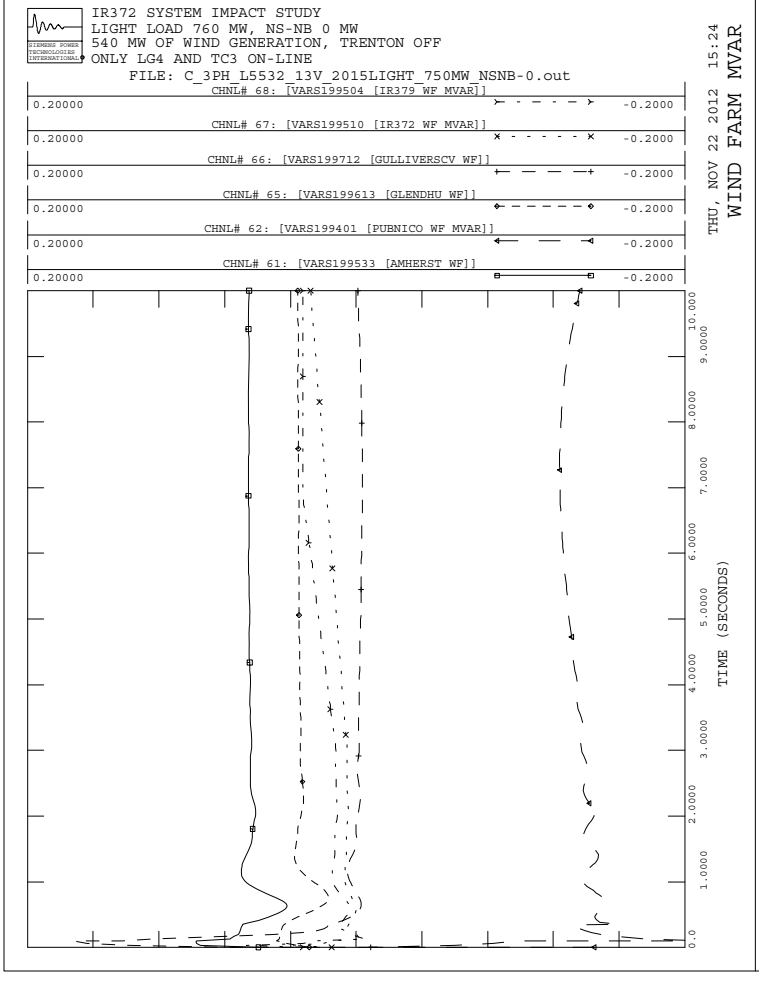

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5532_13V_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
TIME (SECONDS)
THU, NOV 22 2012 15:24
WIND FARM MW

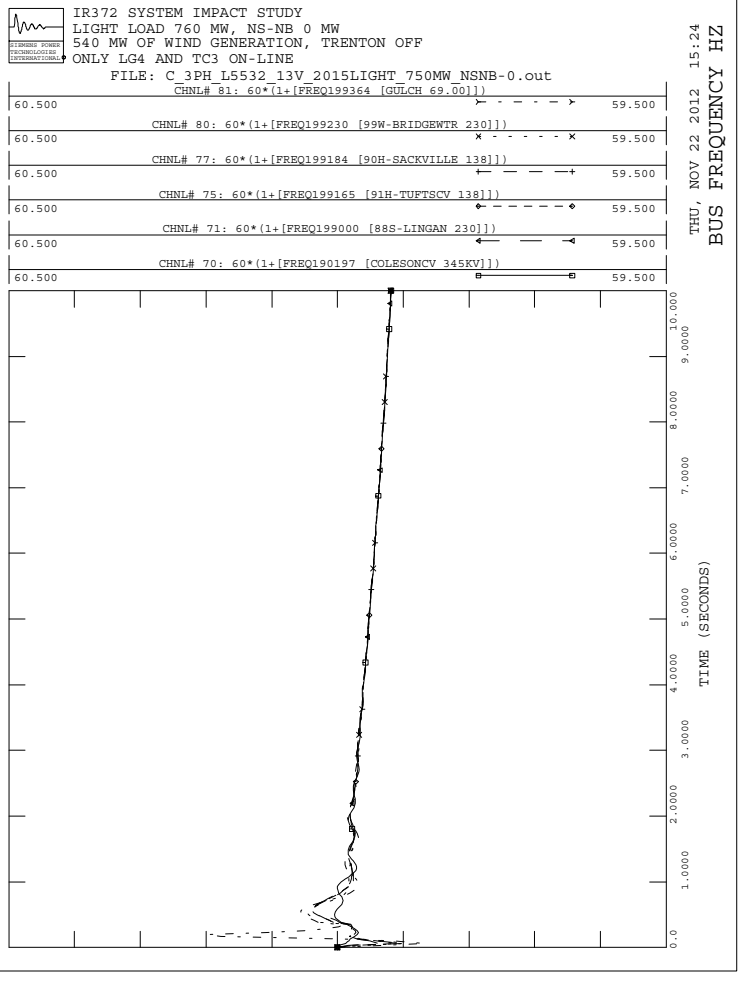

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5532_13V_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
TIME (SECONDS)
THU, NOV 22 2012 15:24
MACHINE RELATIVE ANGLE


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5532_13V_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
TIME (SECONDS)
THU, NOV 22 2012 15:24
MACHINE REACTIVE MVAR

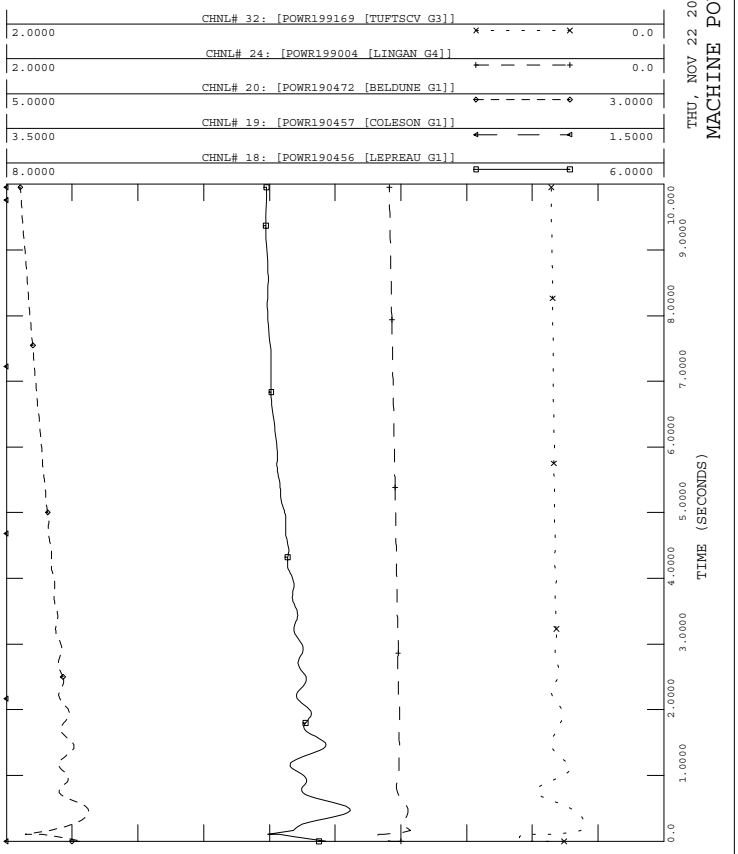

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5532_13V_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5532_13V_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005 3C MW]
CHNL# 102: [L7004_3C_MW]
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)

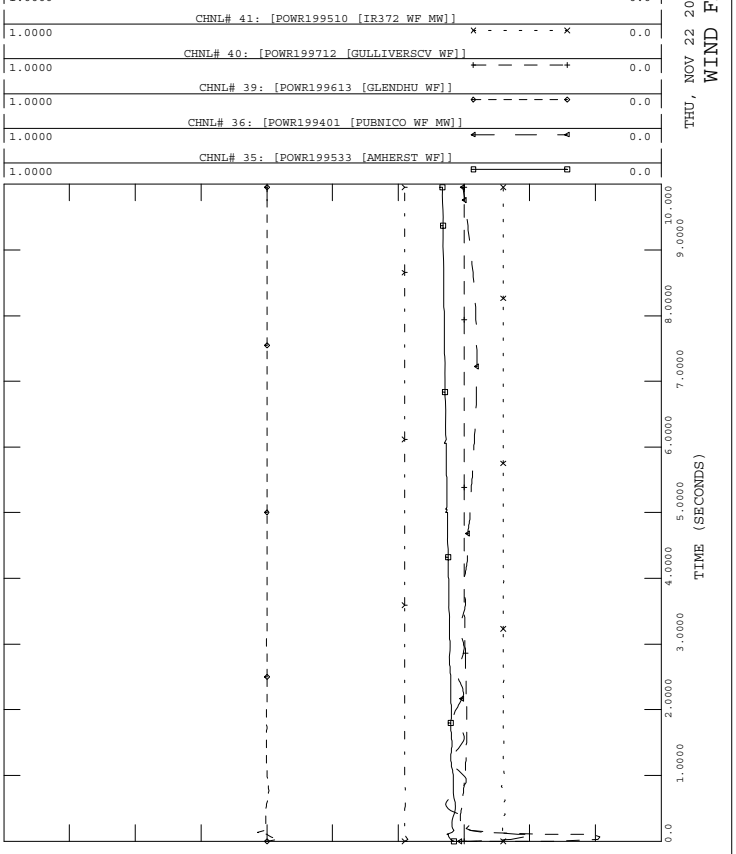

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5532_13V_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5532_13V_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

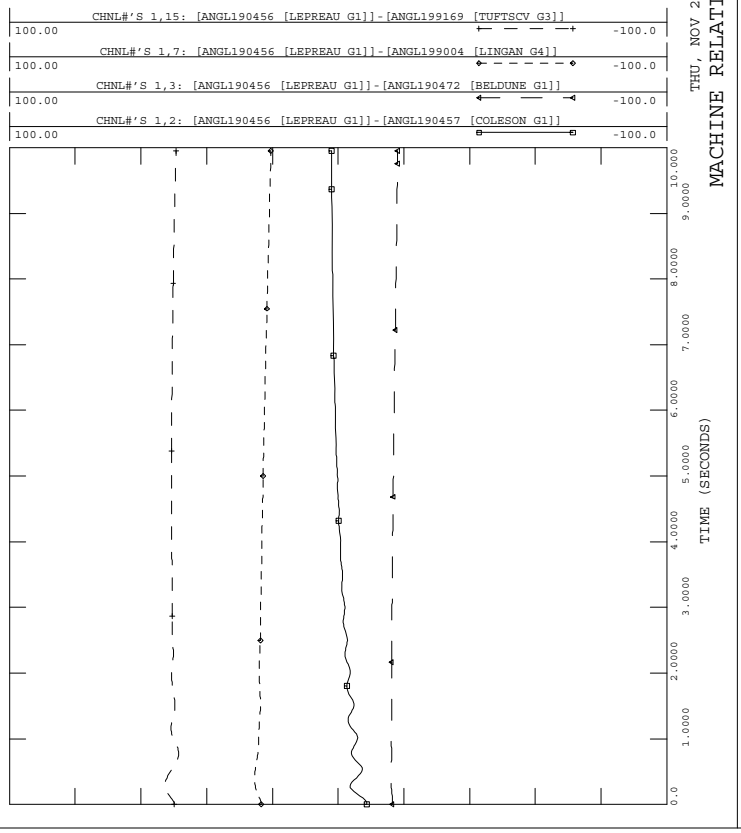
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_15V_2015LIGHT_750MW_NSNB-0.out



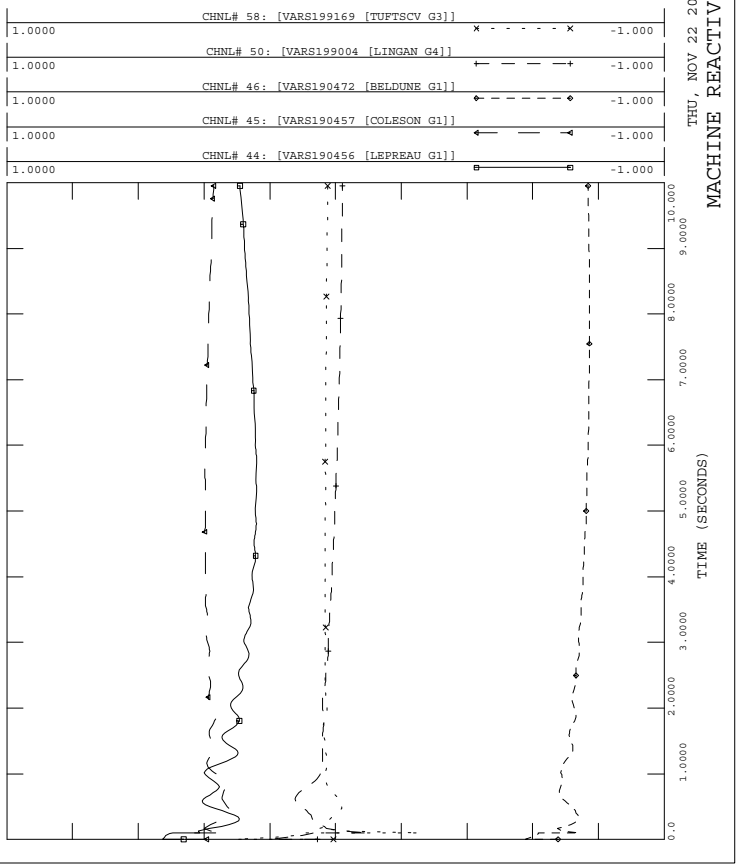
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_15V_2015LIGHT_750MW_NSNB-0.out

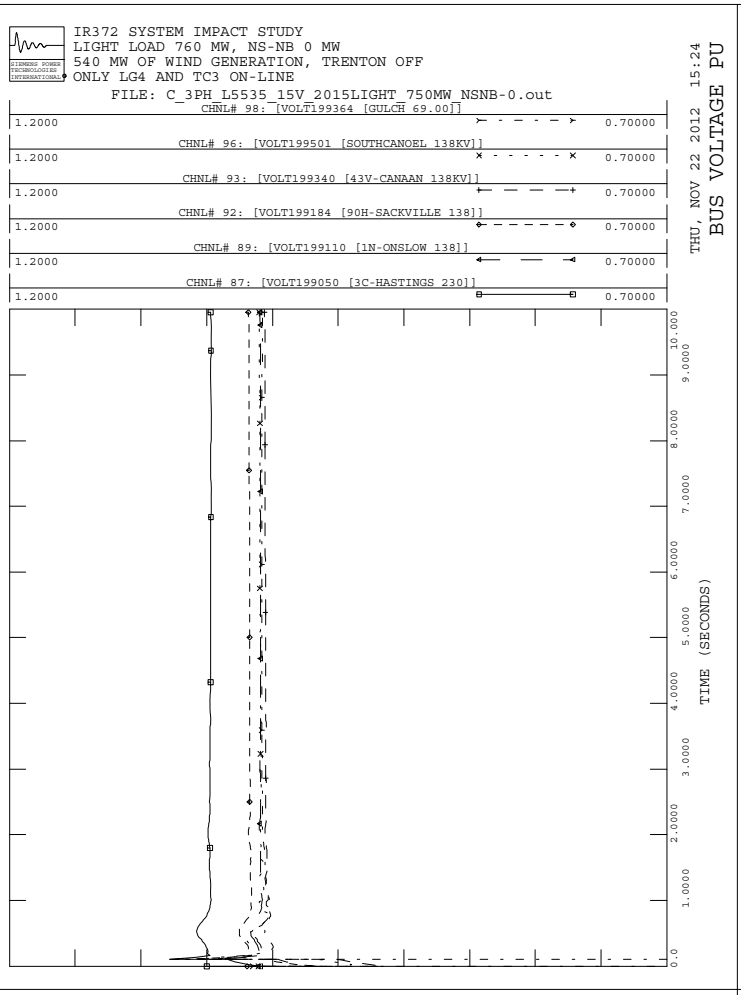


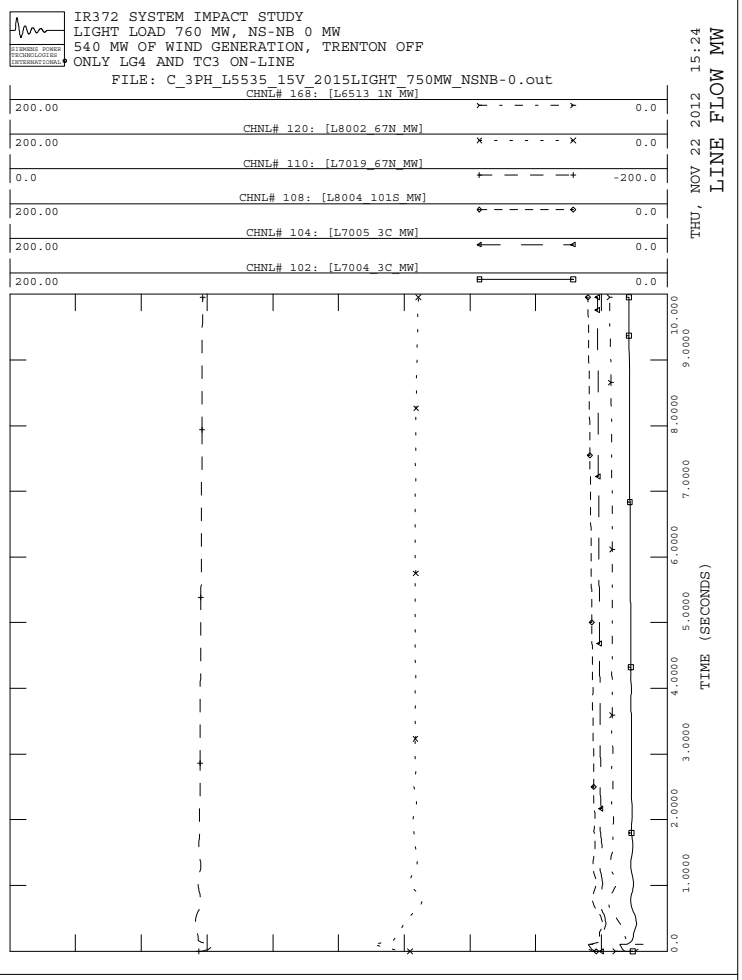
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_15V_2015LIGHT_750MW_NSNB-0.out

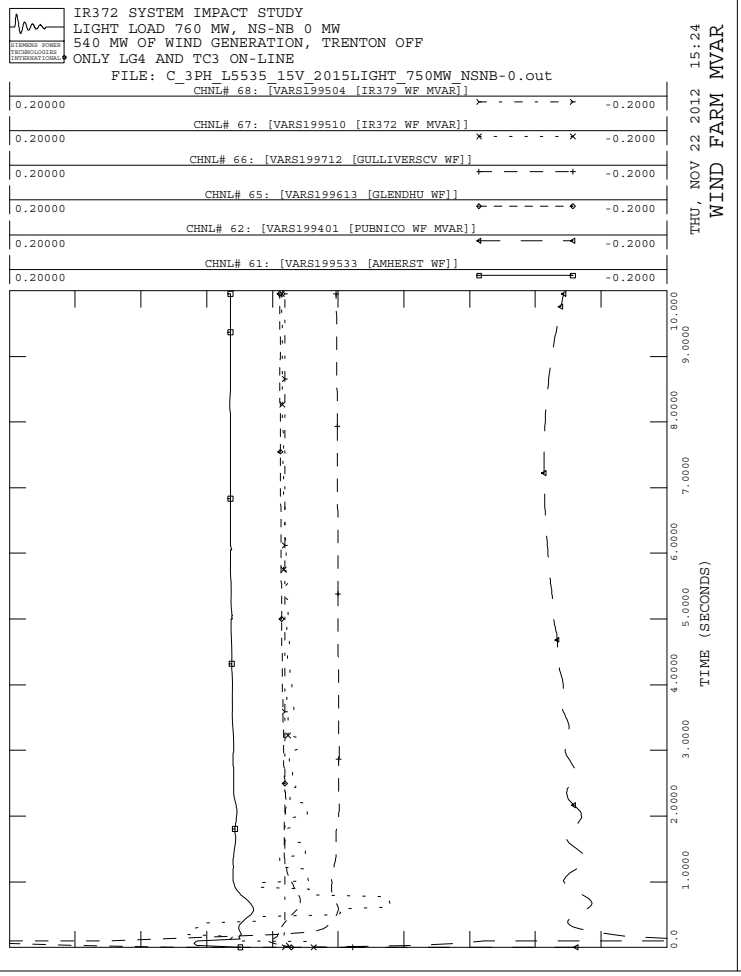


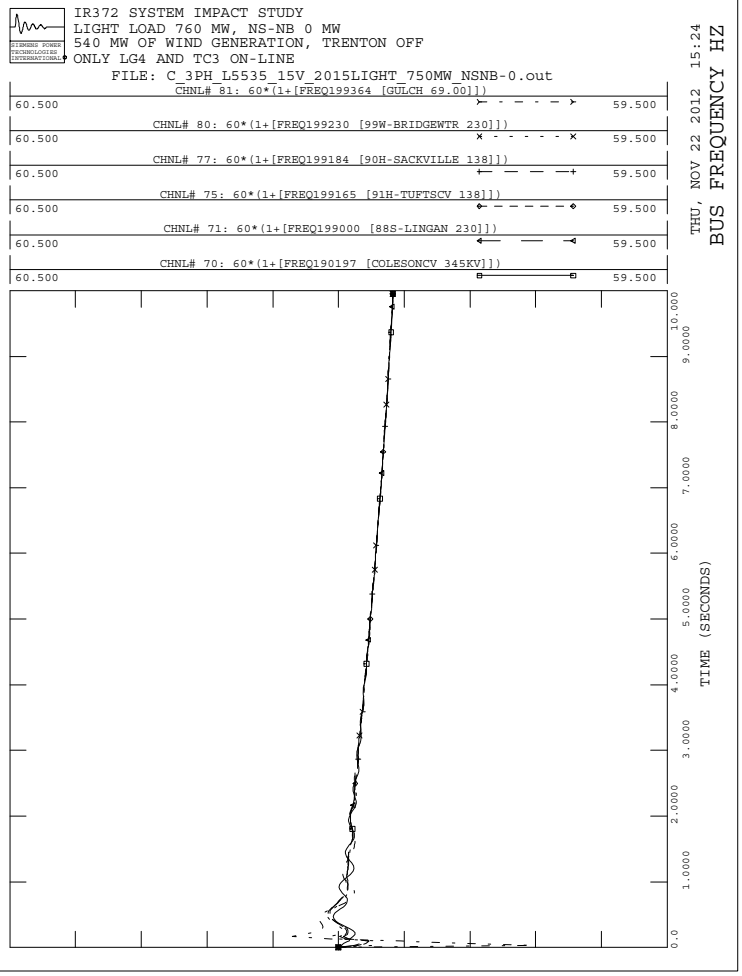
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_15V_2015LIGHT_750MW_NSNB-0.out

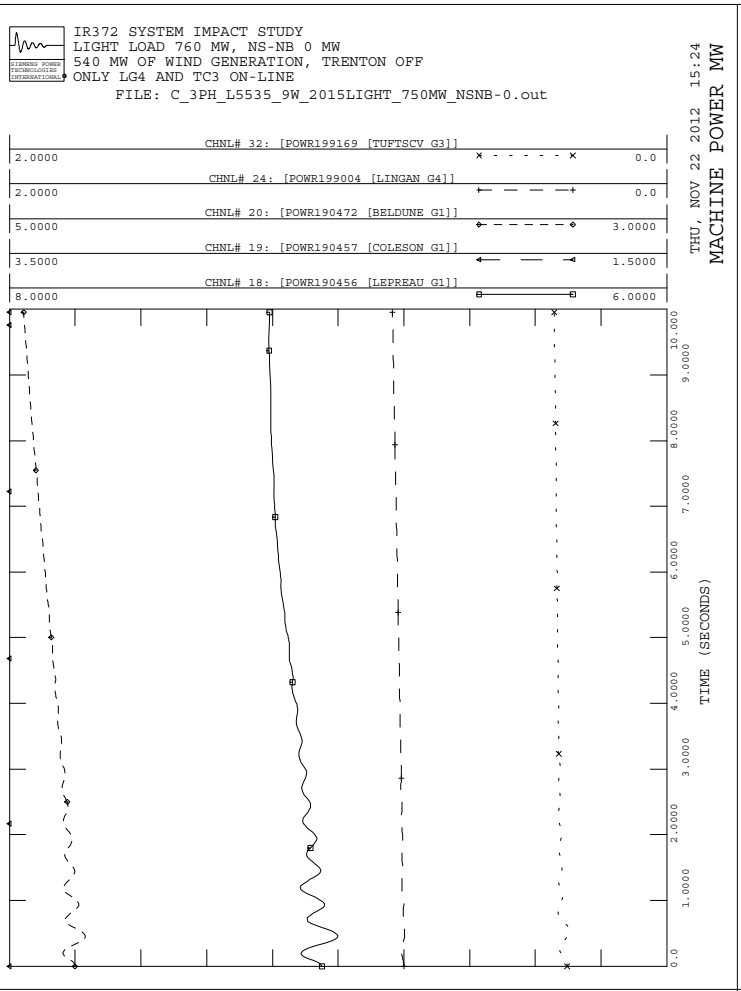


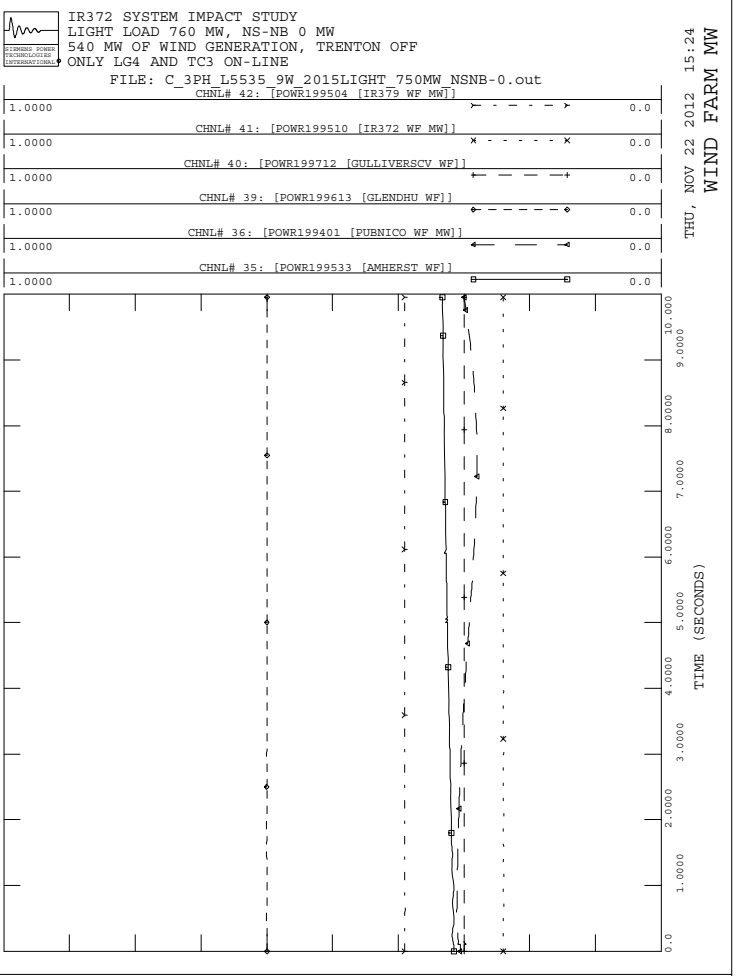

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_15V_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)

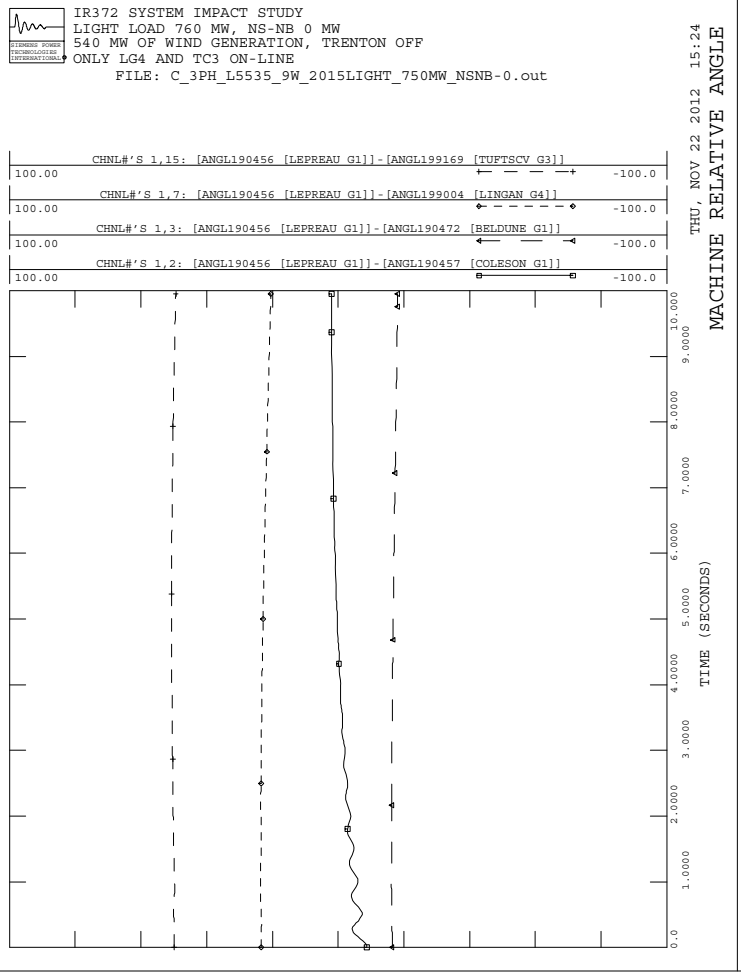

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_15V_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005_3C MW]
CHNL# 102: [L7004_3C MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)

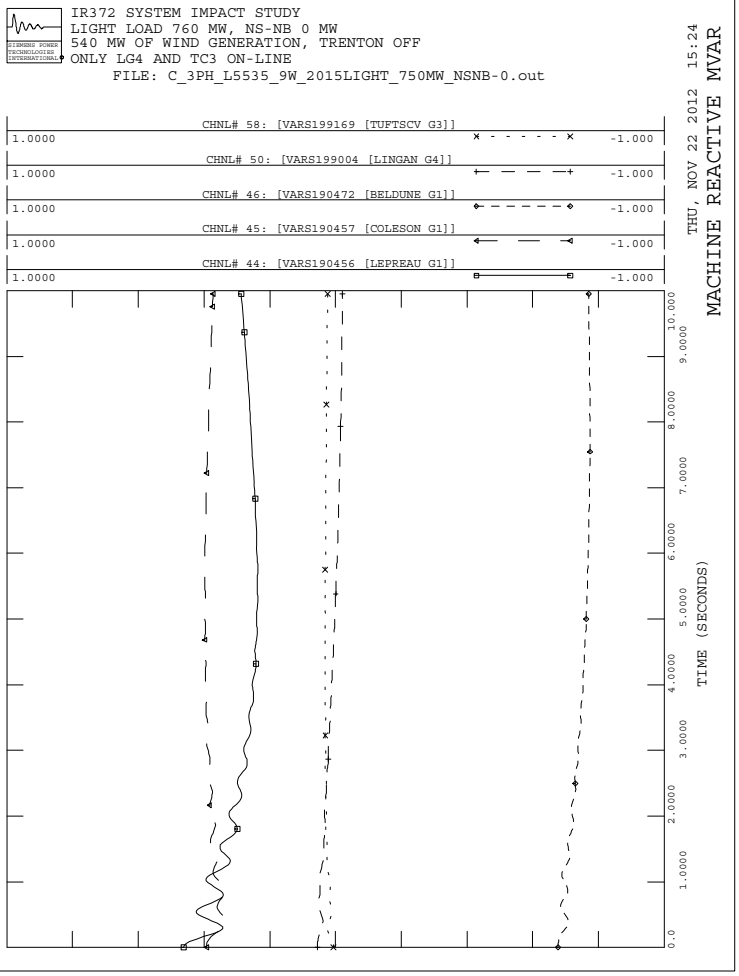

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_15V_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)

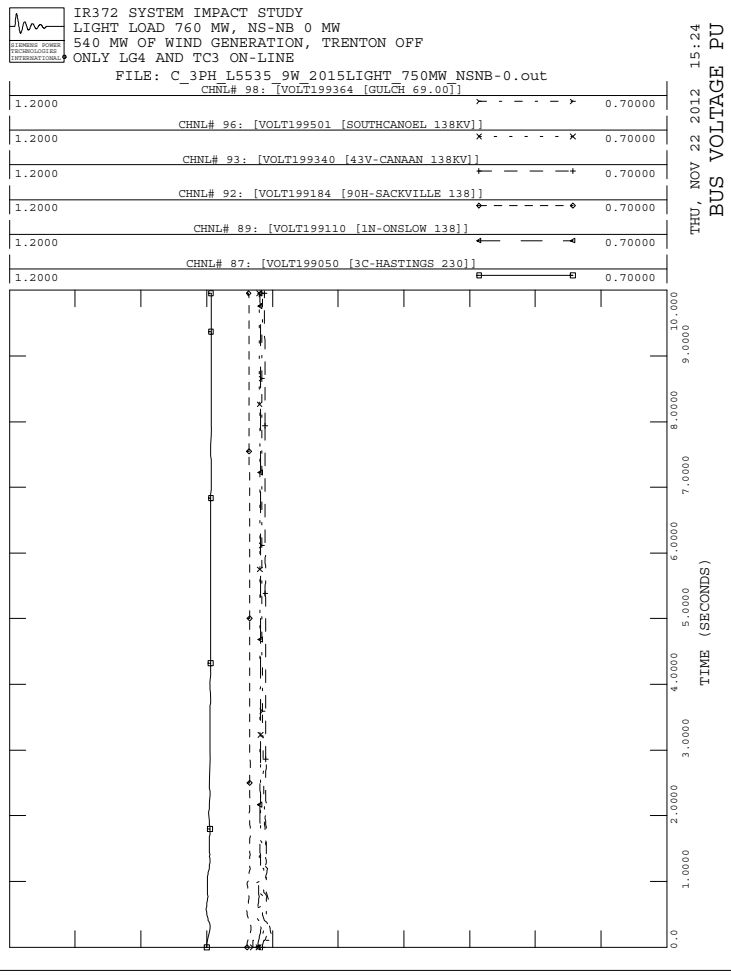

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_15V_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

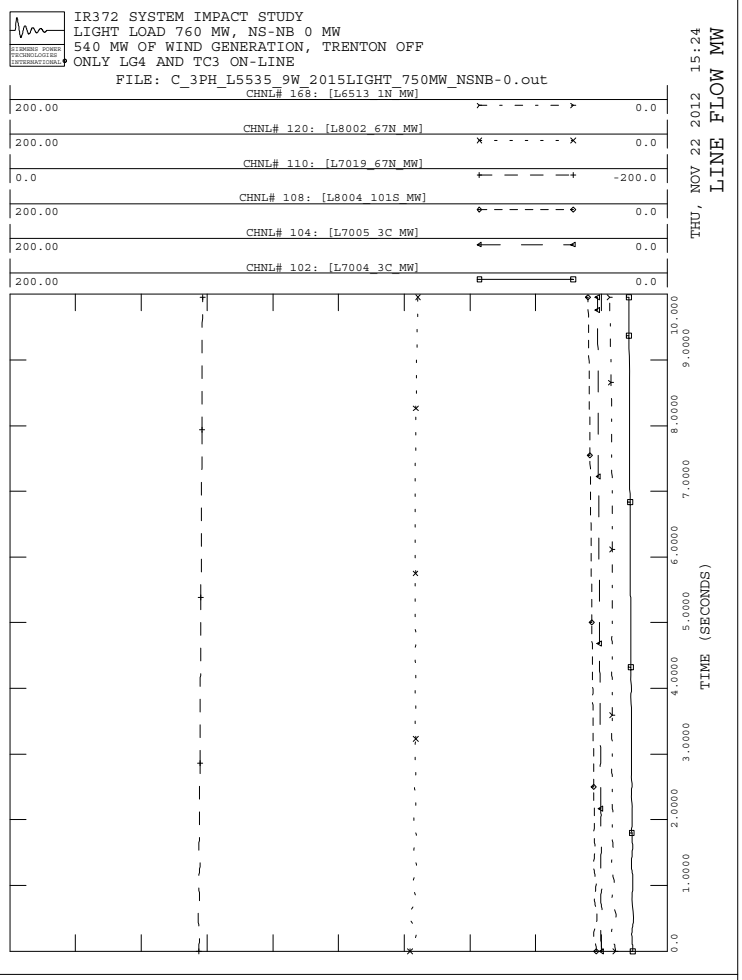

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
THU, NOV 22 2012 15:24
MACHINE POWER MW
TIME (SECONDS)

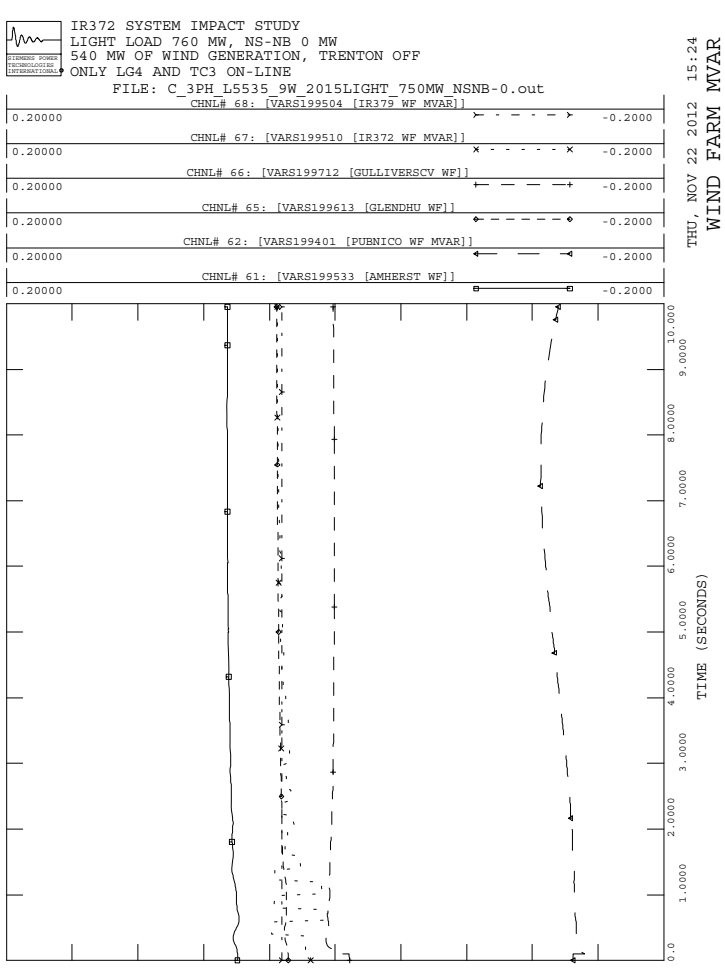

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
THU, NOV 22 2012 15:24
WIND FARM MW
TIME (SECONDS)

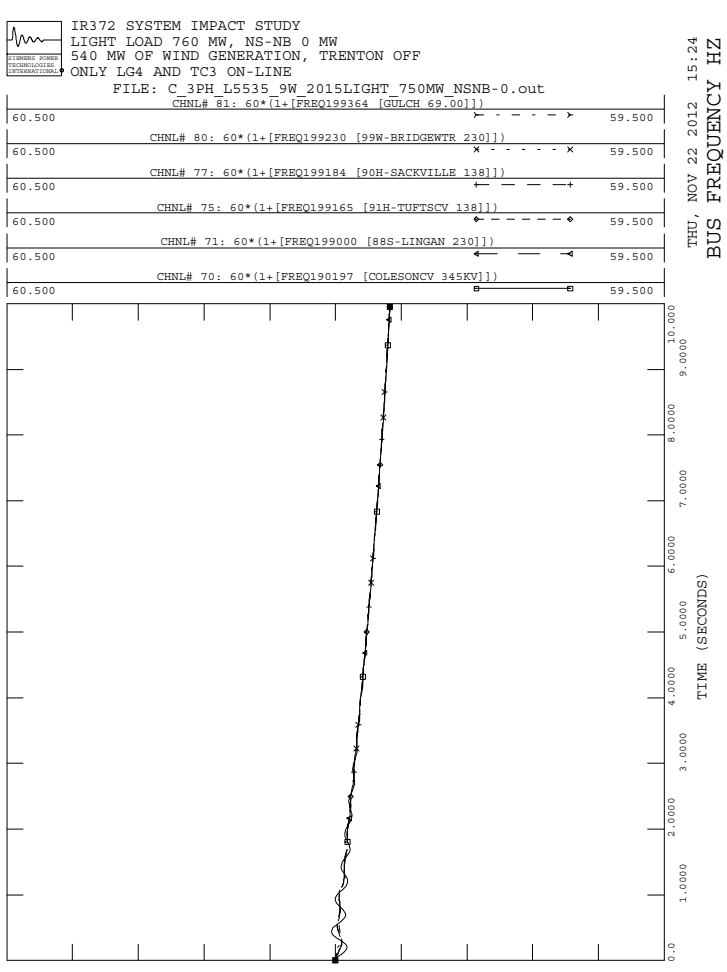

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_9W_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
THU, NOV 22 2012 15:24
MACHINE RELATIVE ANGLE
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
THU, NOV 22 2012 15:24
MACHINE REACTIVE MVAR
TIME (SECONDS)

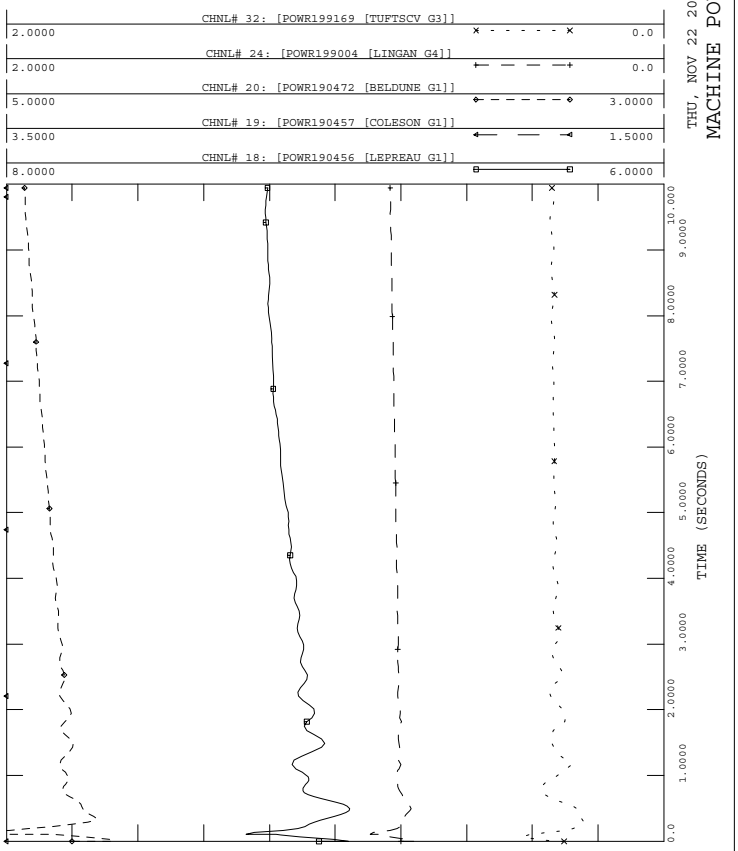

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
1.2000
0.70000
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
200.00
0.0
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
-200.0
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)

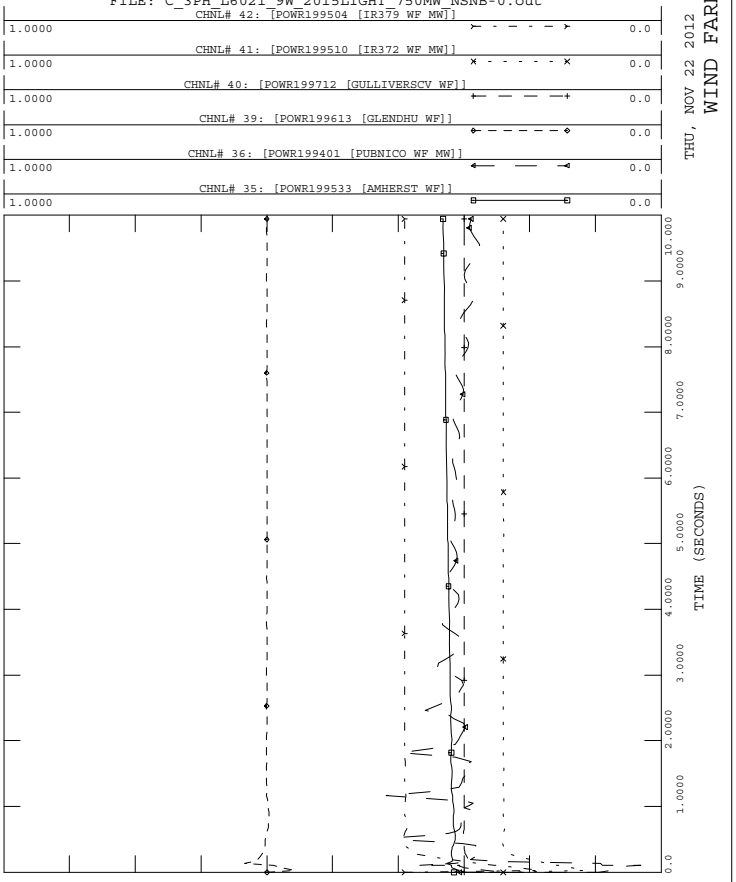

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
0.20000
-0.2000
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L5535_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
60.500
59.500
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

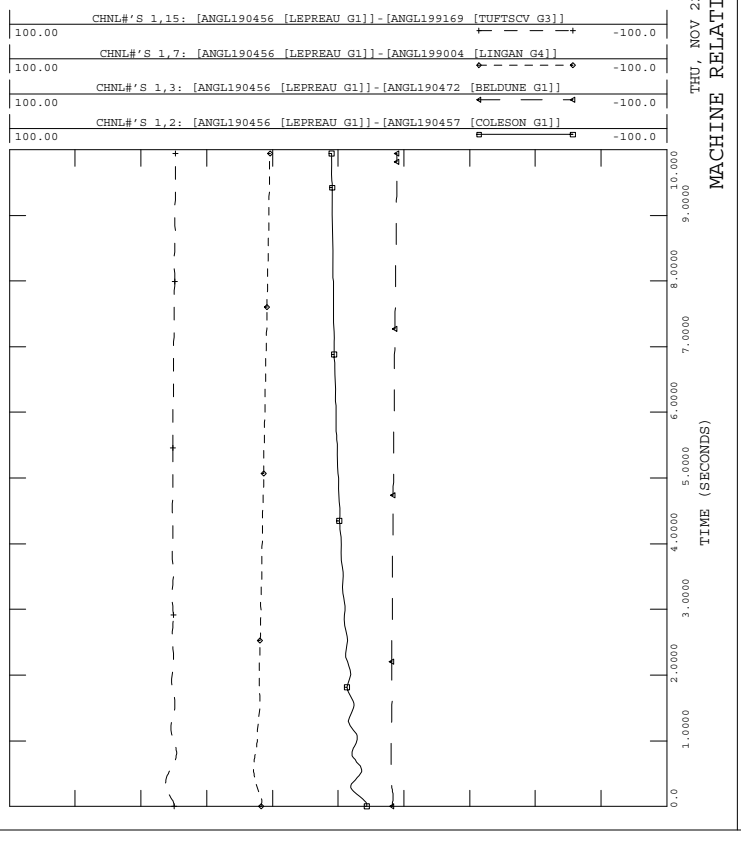
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out



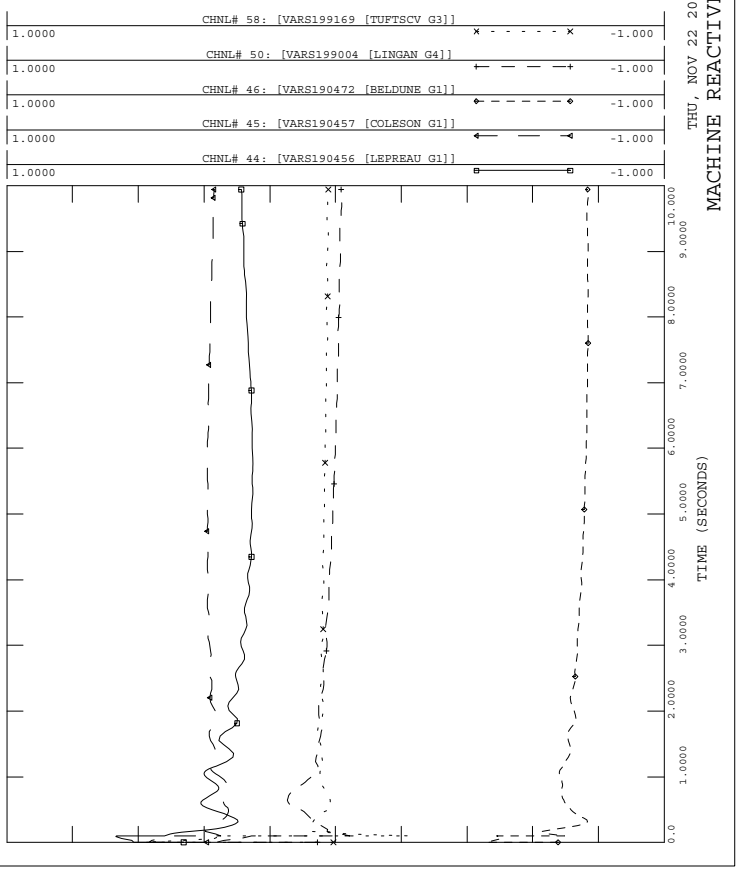
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out

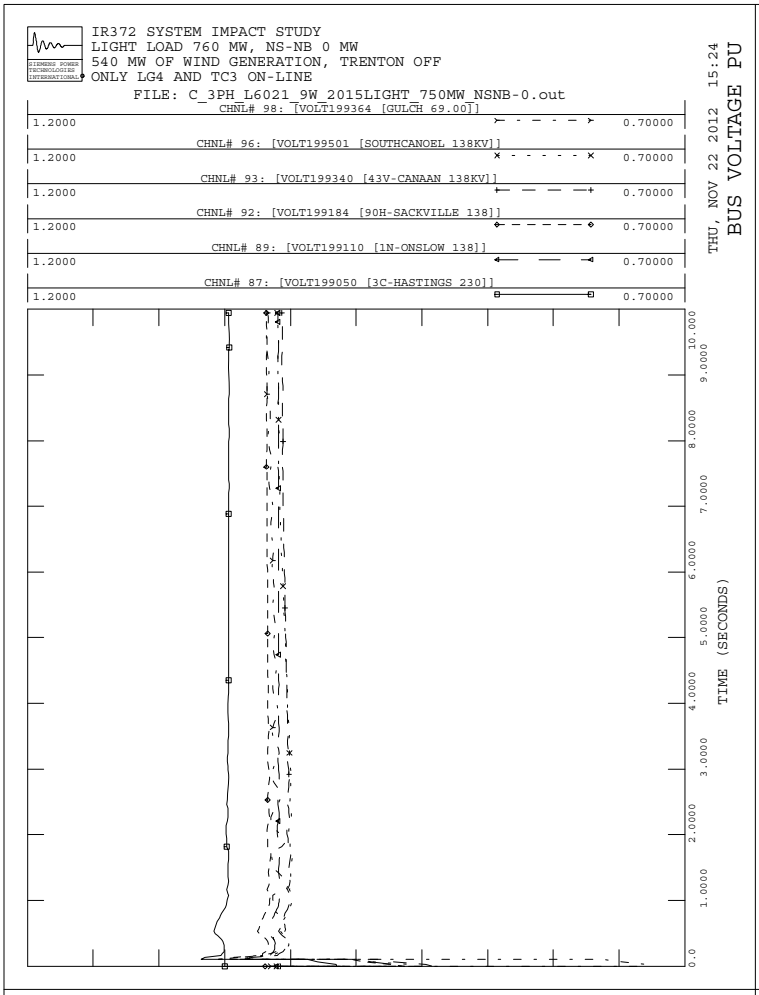


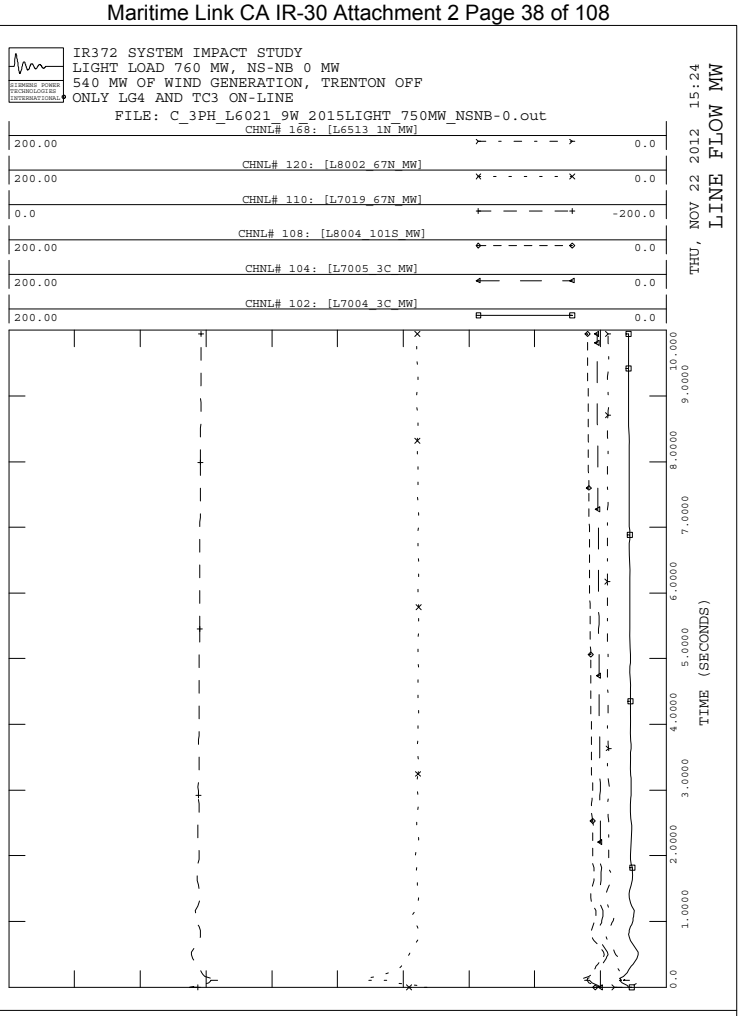
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out

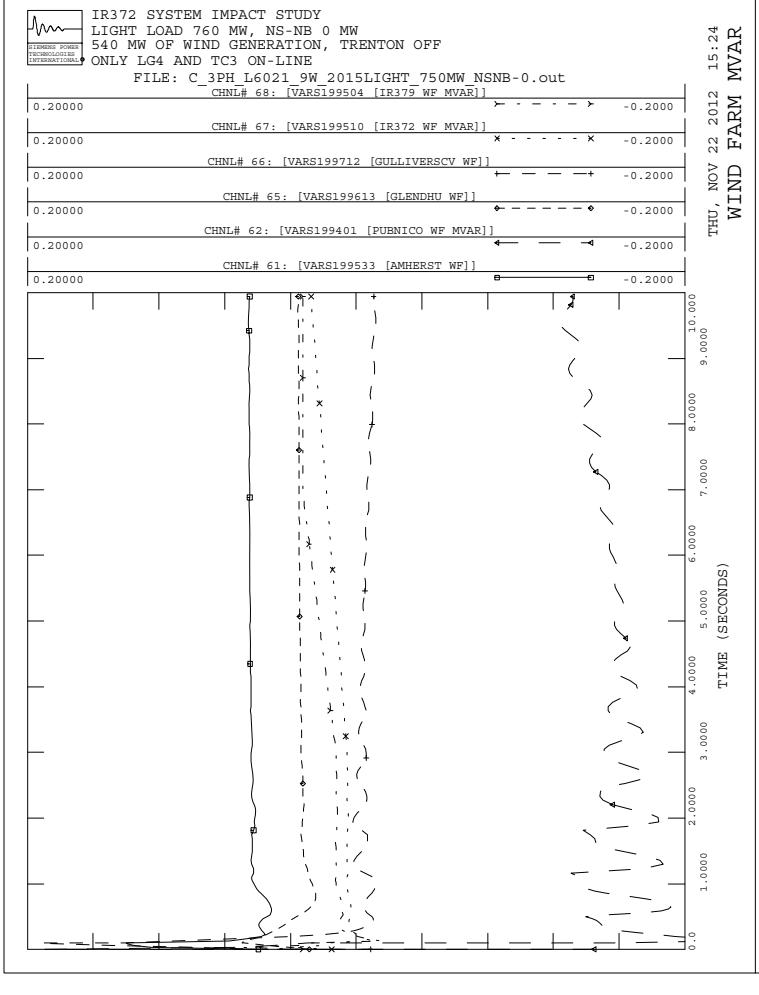


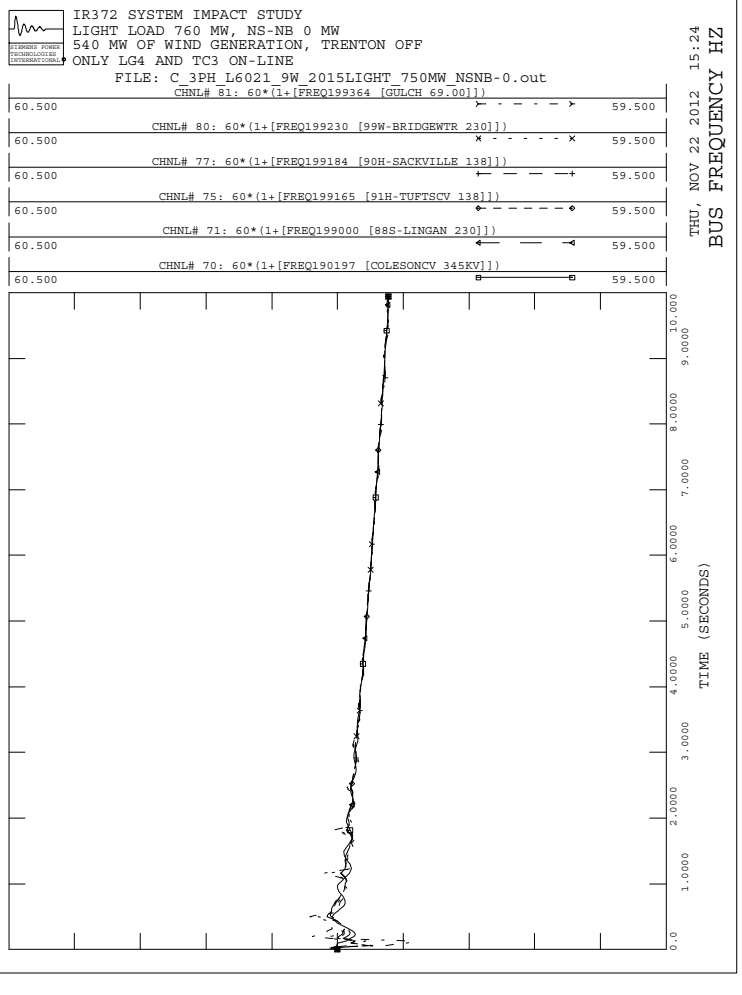
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out

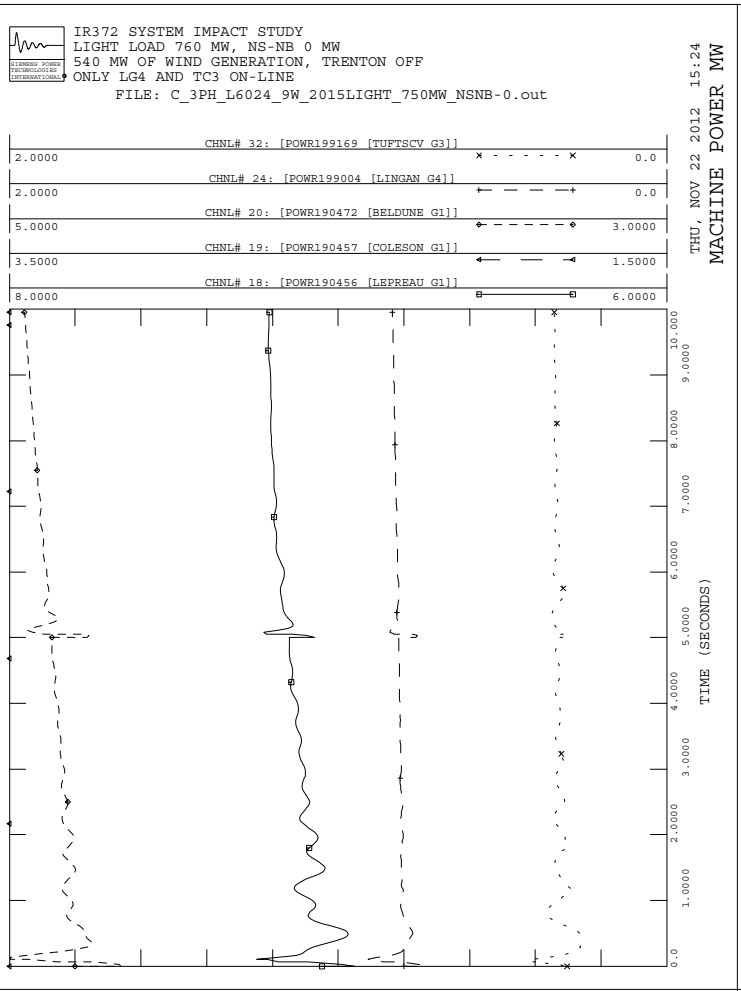


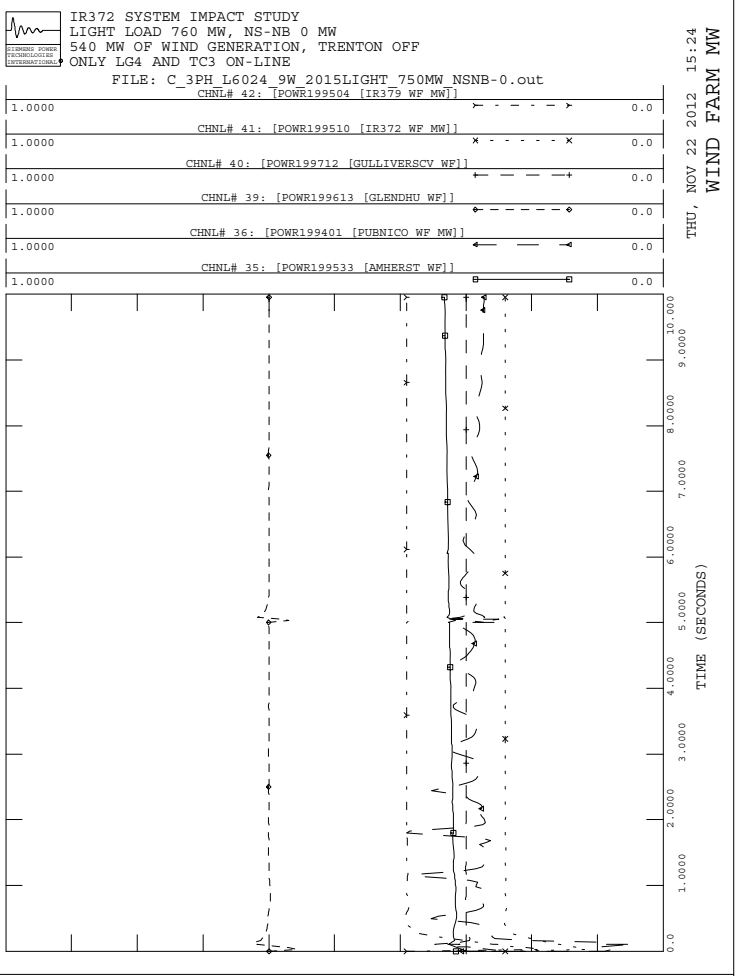

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)

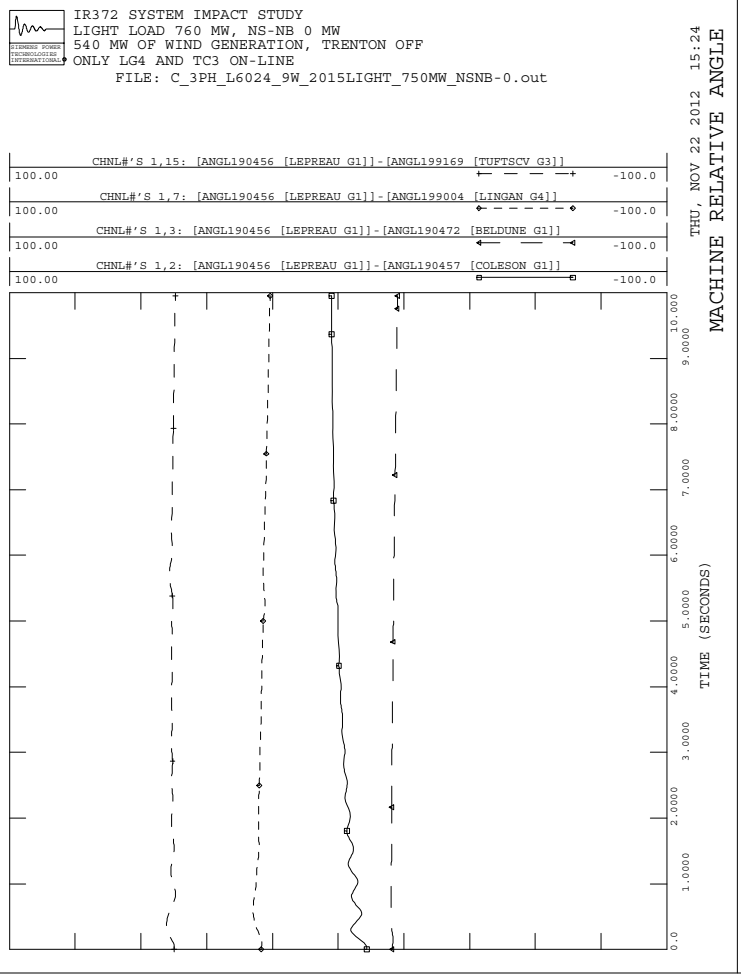

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005 3C MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)

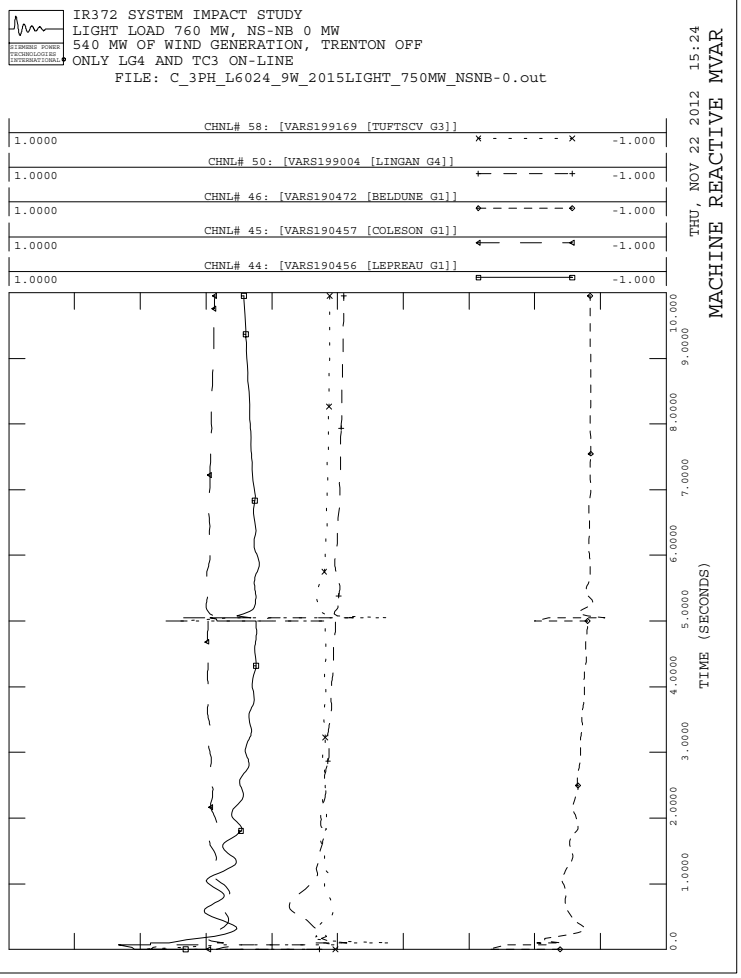

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)

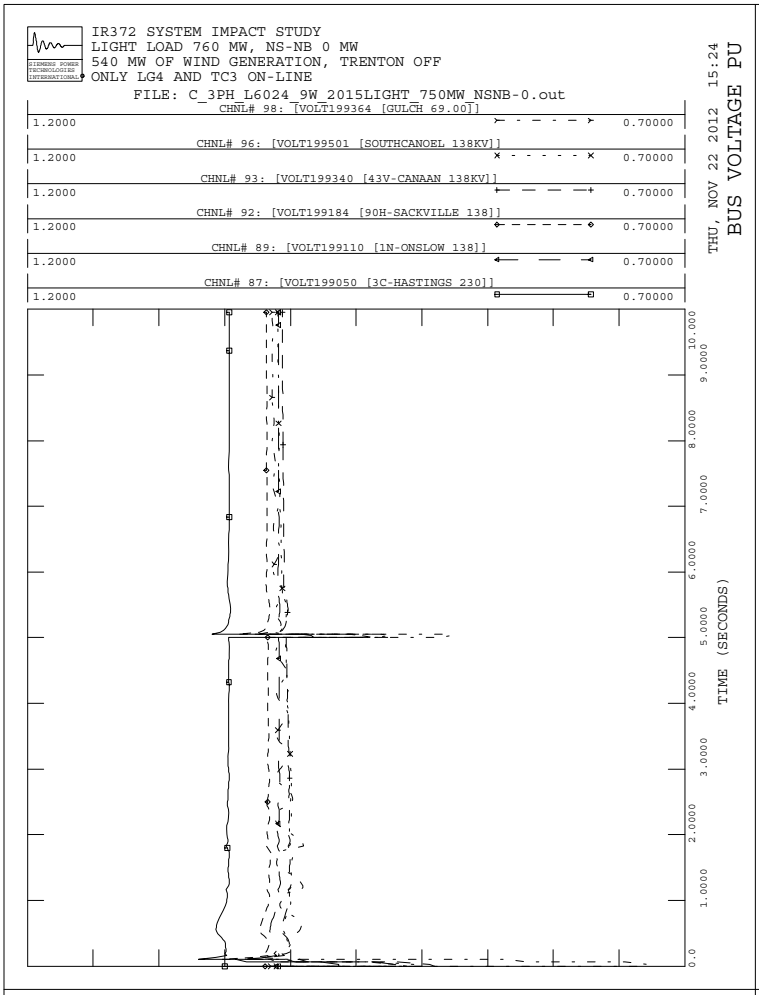

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6021_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

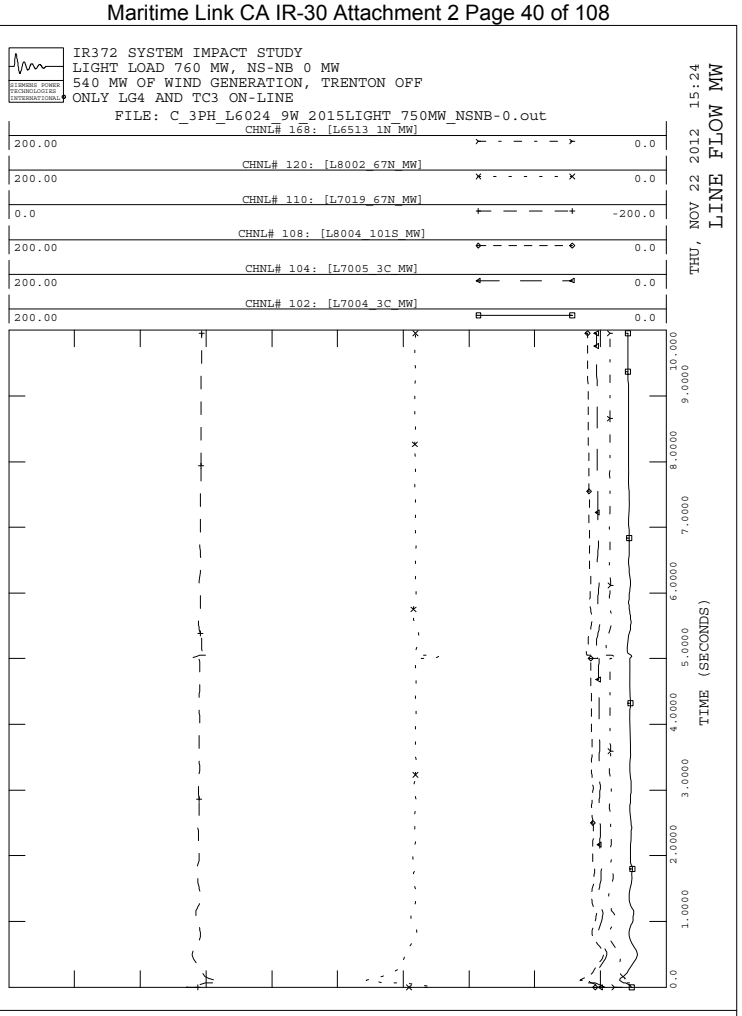

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6024_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
MACHINE POWER MW
TIME (SECONDS)
THU, NOV 22 2012 15:24

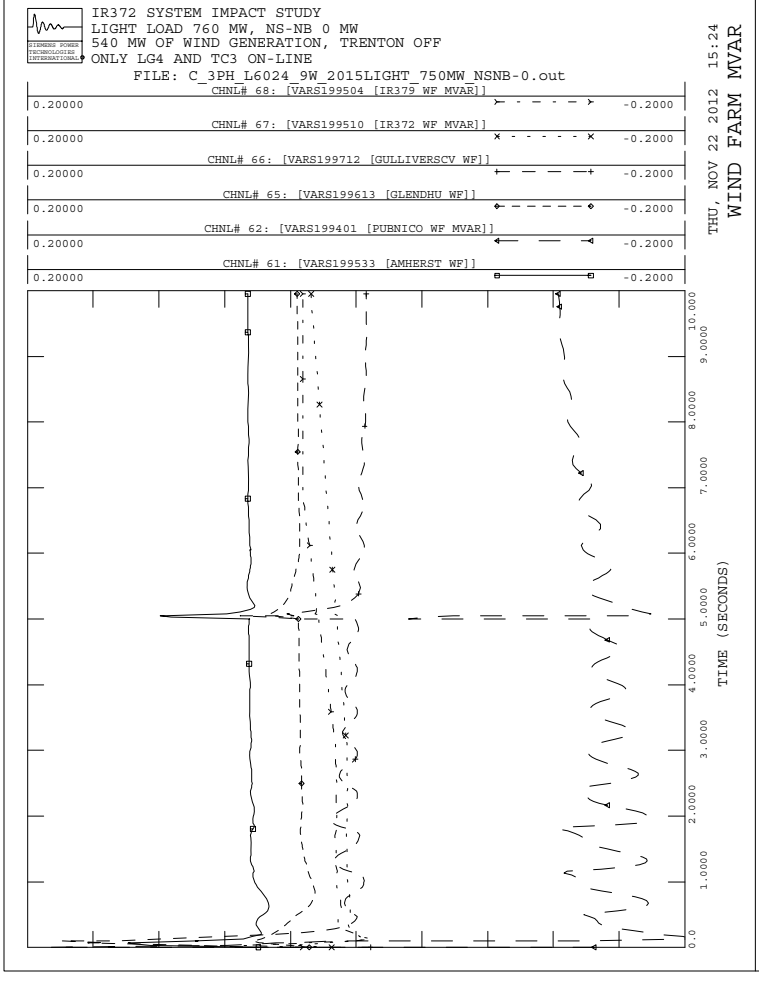

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6024_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
WIND FARM MW
TIME (SECONDS)
THU, NOV 22 2012 15:24

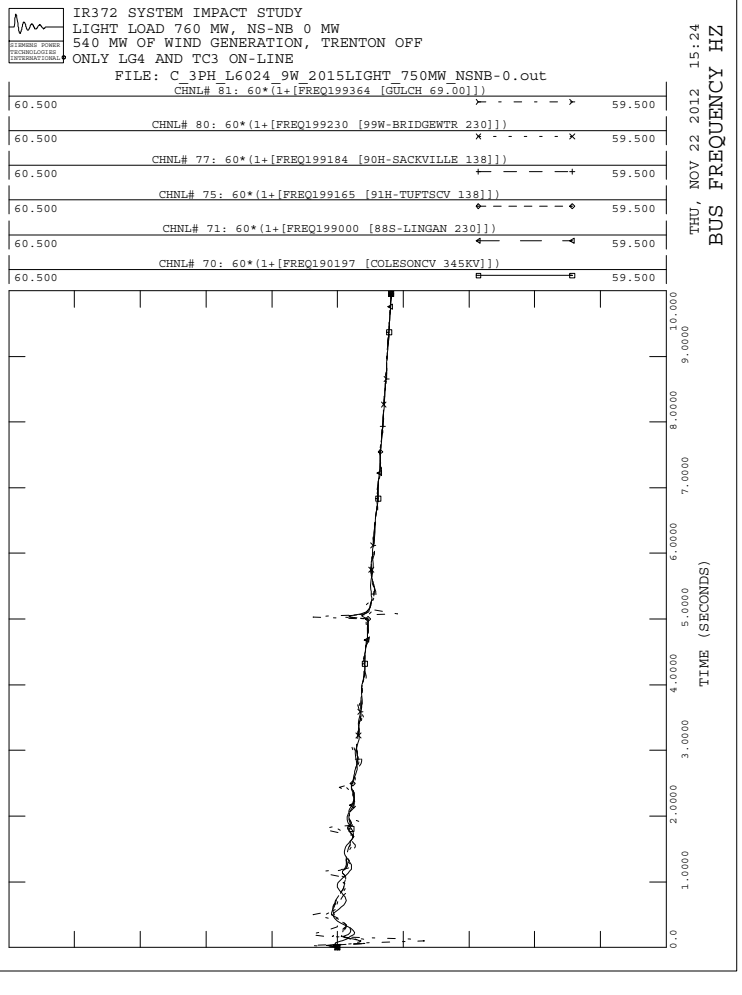

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6024_9W_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
MACHINE RELATIVE ANGLE
TIME (SECONDS)
THU, NOV 22 2012 15:24


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6024_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
MACHINE REACTIVE MVAR
TIME (SECONDS)
THU, NOV 22 2012 15:24

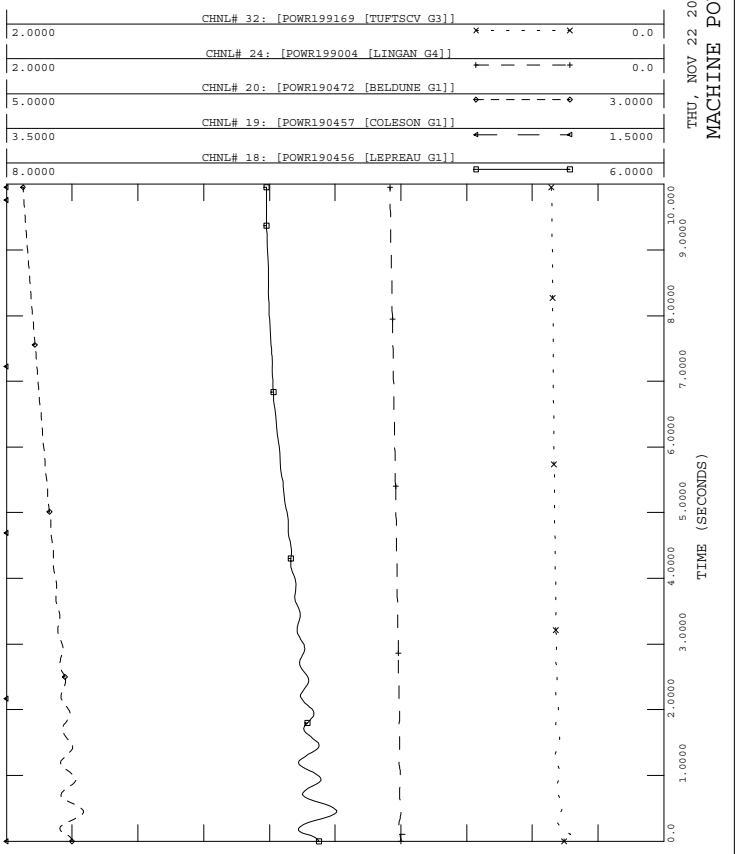

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6024_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6024_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005_3C MW]
CHNL# 102: [L7004_3C MW]
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)

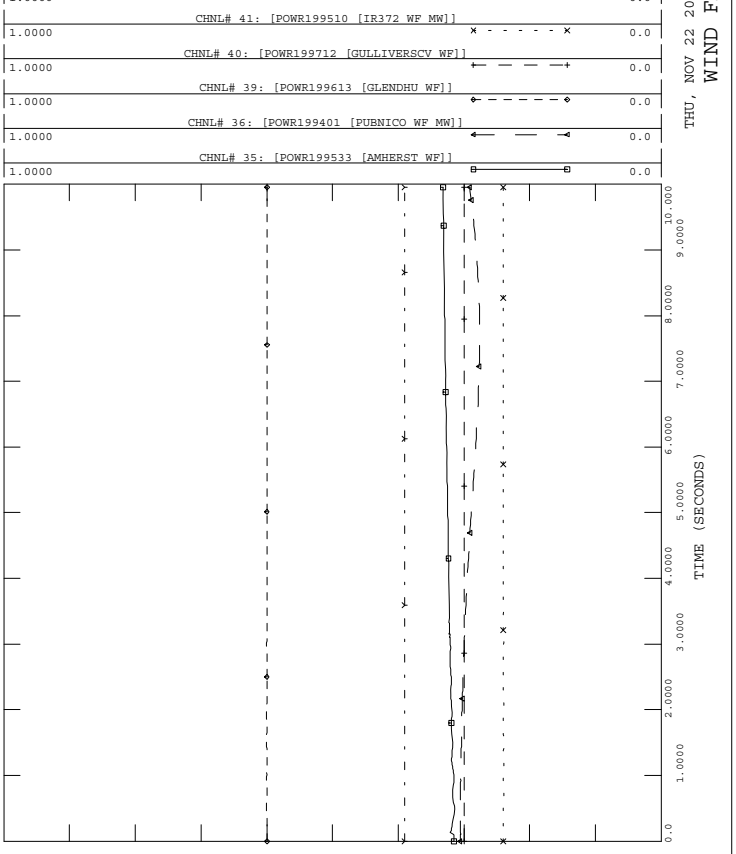

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6024_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6024_9W_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

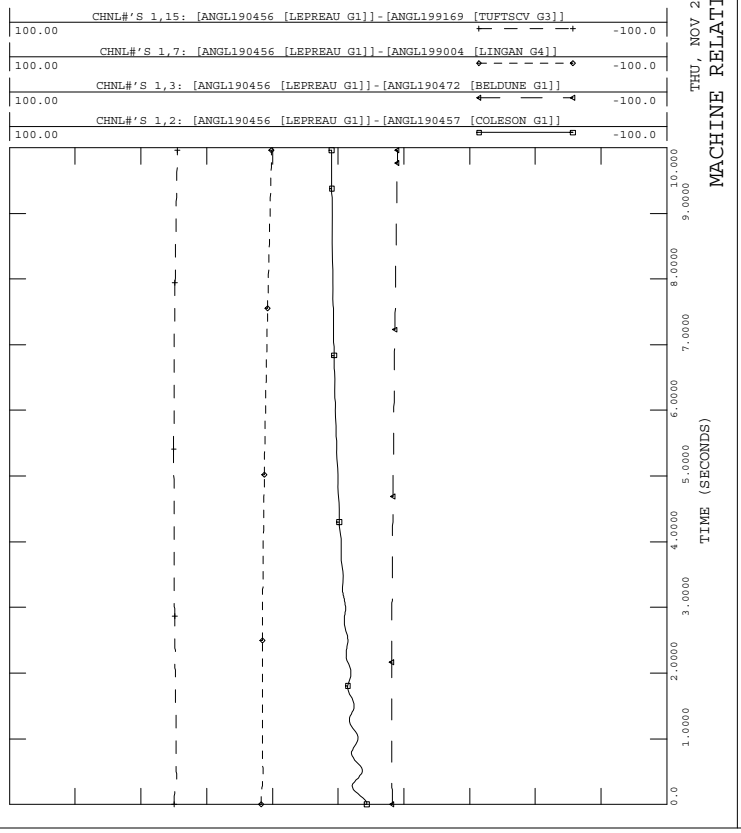
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6513_74N_2015LIGHT_750MW_NSNB-0.out



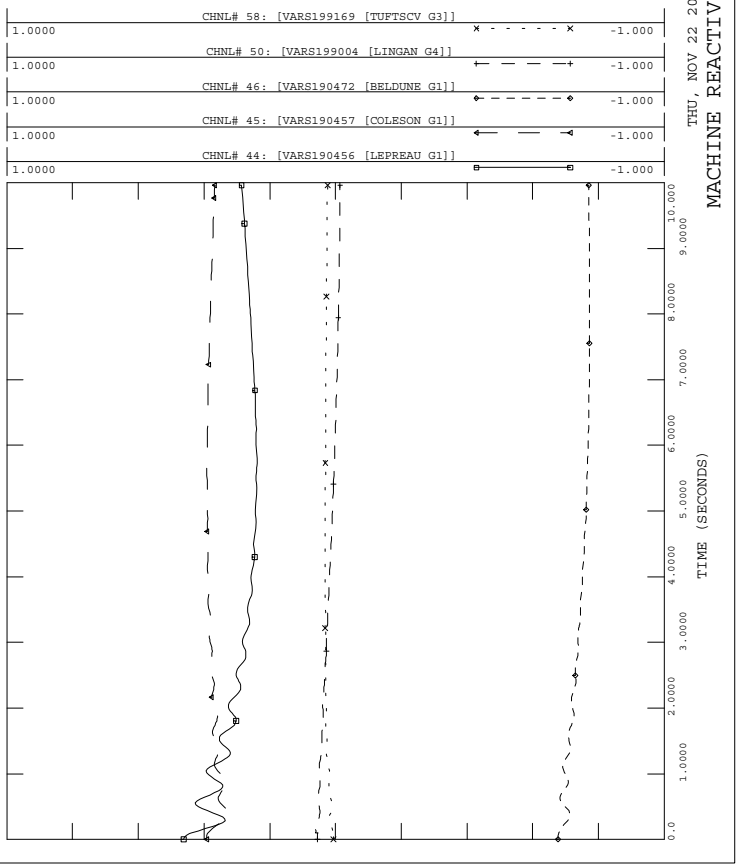
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6513_74N_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6513_74N_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6513_74N_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6513_74N_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24
BUS VOLTAGE PU

CHNL# 98: [VOLT199364 [GULCH 69.00]] 1.2000 0.70000
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]] 1.2000 0.70000
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]] 1.2000 0.70000
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]] 1.2000 0.70000
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]] 1.2000 0.70000
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]] 1.2000 0.70000

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6513_74N_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24
LINE FLOW MW

CHNL# 168: [L6513_1N_MW] 200.00 0.0
CHNL# 120: [L8002_67N_MW] 200.00 0.0
CHNL# 110: [L7019_67N_MW] 0.0 -200.0
CHNL# 108: [L8004_101S_MW] 200.00 0.0
CHNL# 104: [L7005_3C_MW] 200.00 0.0
CHNL# 102: [L7004_3C_MW] 200.00 0.0

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6513_74N_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24
WIND FARM MVAR

CHNL# 68: [VARS199504 [IR379 WF MVAR]] 0.20000 -0.2000
CHNL# 67: [VARS199510 [IR372 WF MVAR]] 0.20000 -0.2000
CHNL# 66: [VARS199712 [GULLIVERSCV WF]] 0.20000 -0.2000
CHNL# 65: [VARS199613 [GLENDHU WF]] 0.20000 -0.2000
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]] 0.20000 -0.2000
CHNL# 61: [VARS199533 [AMHERST WF]] 0.20000 -0.2000

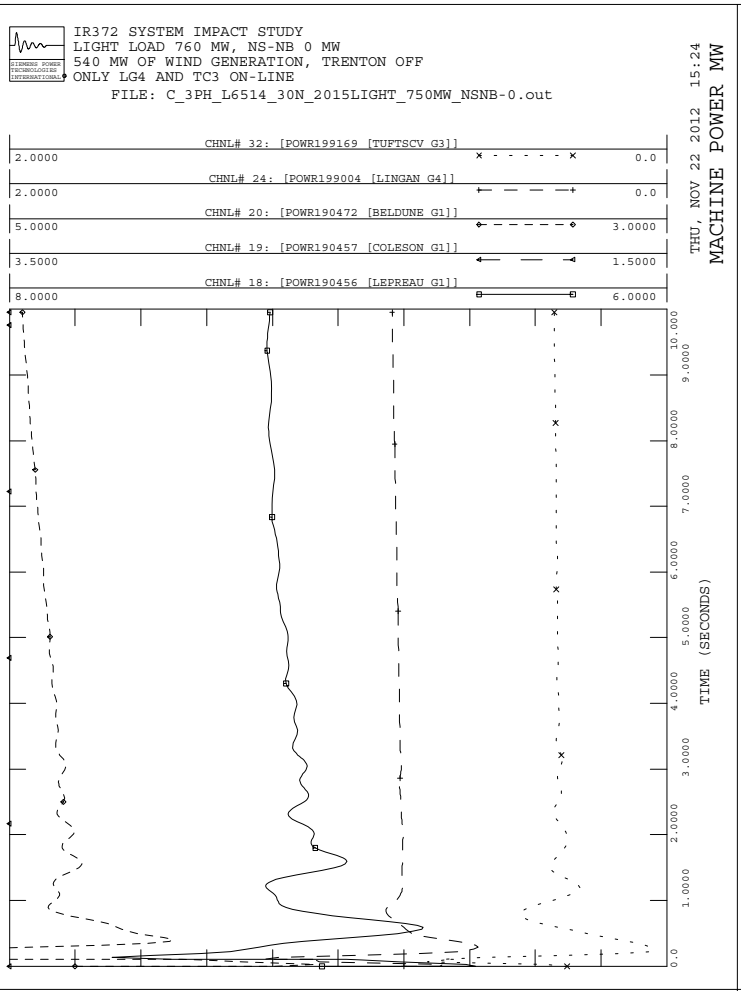
TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

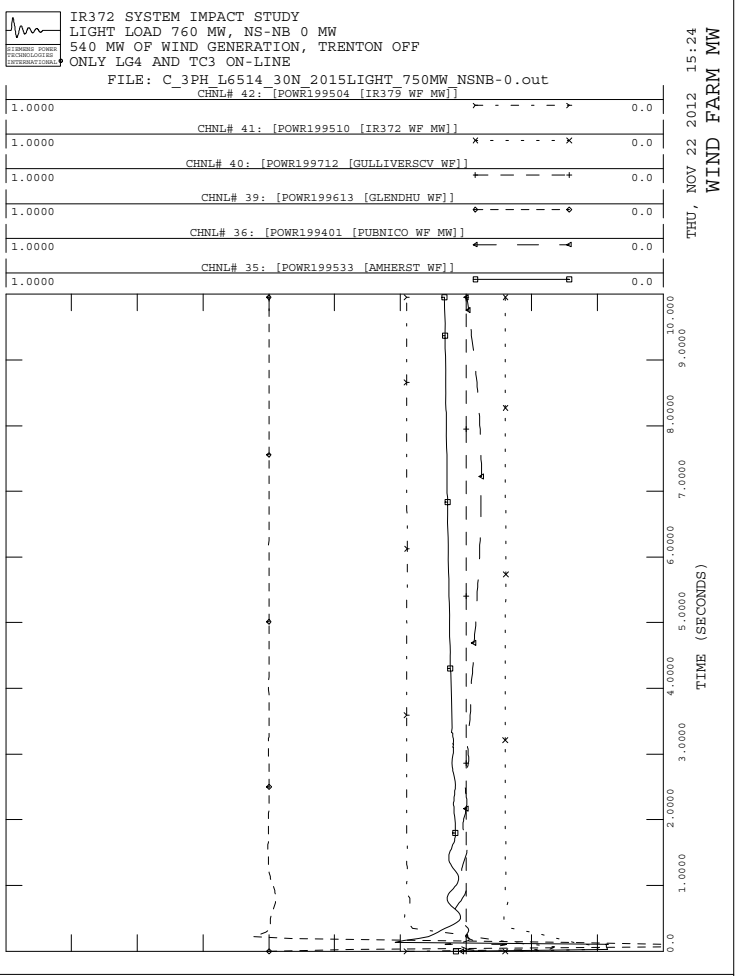
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6513_74N_2015LIGHT_750MW_NSNB-0.out

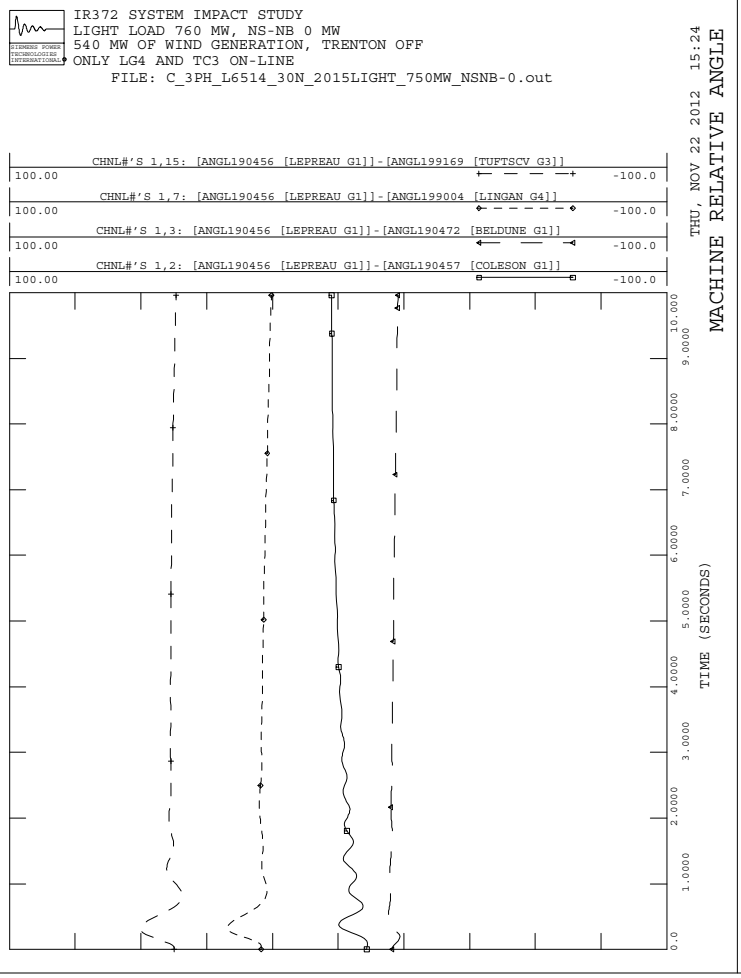
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ

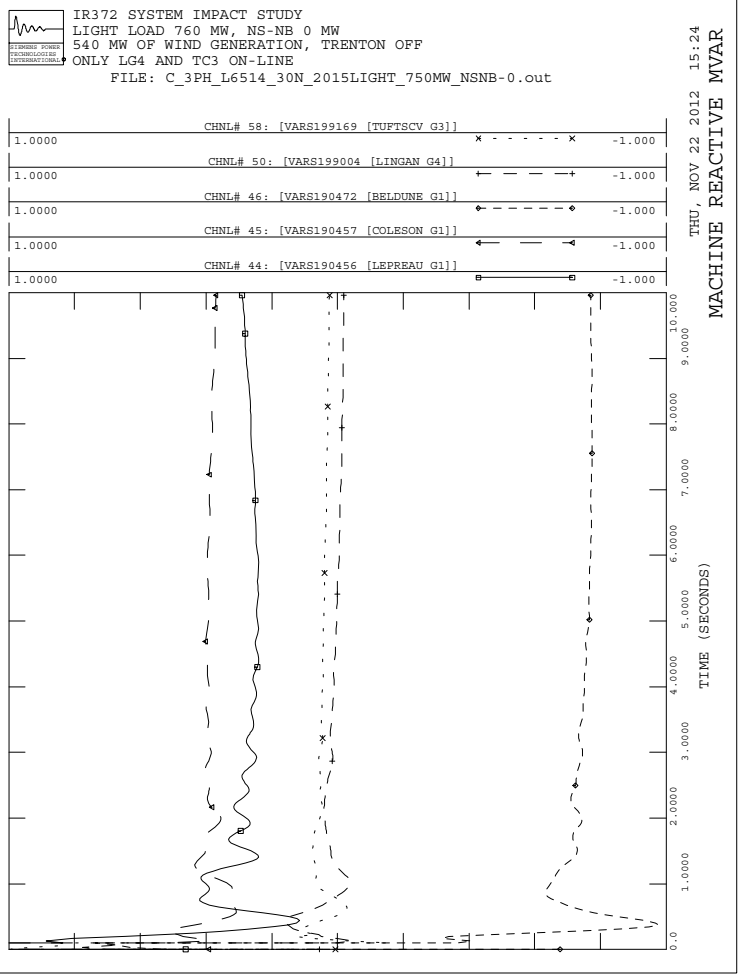
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]]) 60.500 59.500
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]]) 60.500 59.500
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]]) 60.500 59.500
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]]) 60.500 59.500
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]]) 60.500 59.500
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]]) 60.500 59.500

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6514_30N_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
THU, NOV 22 2012 15:24
MACHINE POWER MW
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6514_30N_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
THU, NOV 22 2012 15:24
WIND FARM MW
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6514_30N_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
THU, NOV 22 2012 15:24
MACHINE RELATIVE ANGLE
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6514_30N_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
THU, NOV 22 2012 15:24
MACHINE REACTIVE MVAR
TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6514_30N_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24
BUS VOLTAGE PU

CHNL# 98: [VOLT199364 [GULCH 69.00]] 1.2000 0.70000
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]] 1.2000 0.70000
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]] 1.2000 0.70000
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]] 1.2000 0.70000
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]] 1.2000 0.70000
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]] 1.2000 0.70000

TIME (SECONDS)
0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6514_30N_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24
LINE FLOW MW

CHNL# 168: [L6513_1N_MW] 200.00 0.0
CHNL# 120: [L8002_67N_MW] 200.00 0.0
CHNL# 110: [L7019_67N_MW] 0.0 -200.0
CHNL# 108: [L8004_101S_MW] 200.00 0.0
CHNL# 104: [L7005_3C_MW] 200.00 0.0
CHNL# 102: [L7004_3C_MW] 200.00 0.0

TIME (SECONDS)
0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6514_30N_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24
WIND FARM MVAR

CHNL# 68: [VARS199504 [IR379 WF MVAR]] 0.20000 -0.2000
CHNL# 67: [VARS199510 [IR372 WF MVAR]] 0.20000 -0.2000
CHNL# 66: [VARS199712 [GULLIVERSCV WF]] 0.20000 -0.2000
CHNL# 65: [VARS199613 [GLENDHU WF]] 0.20000 -0.2000
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]] 0.20000 -0.2000
CHNL# 61: [VARS199533 [AMHERST WF]] 0.20000 -0.2000

TIME (SECONDS)
0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

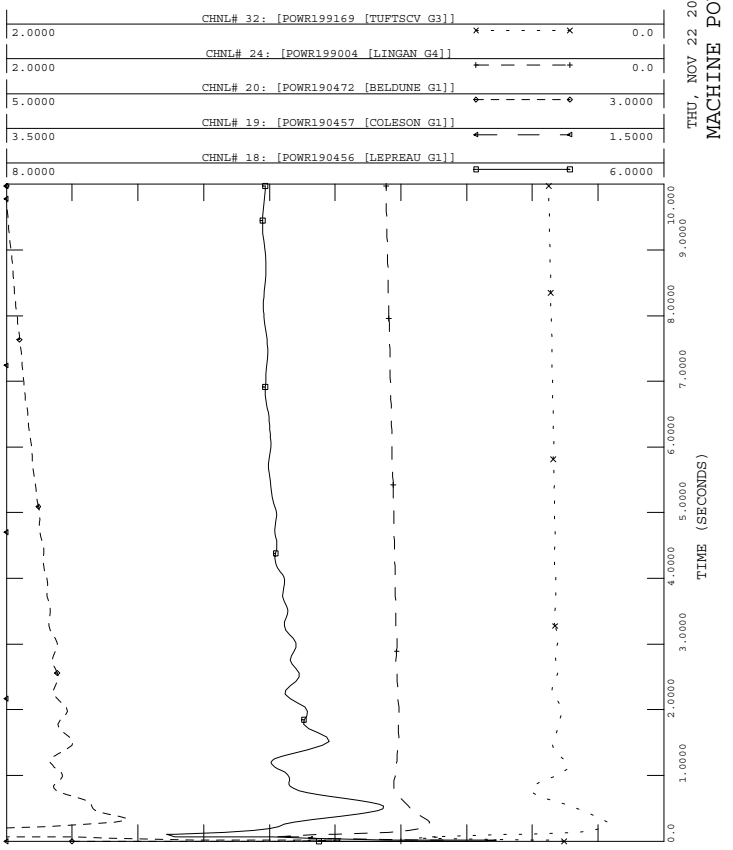
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6514_30N_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24
BUS FREQUENCY HZ

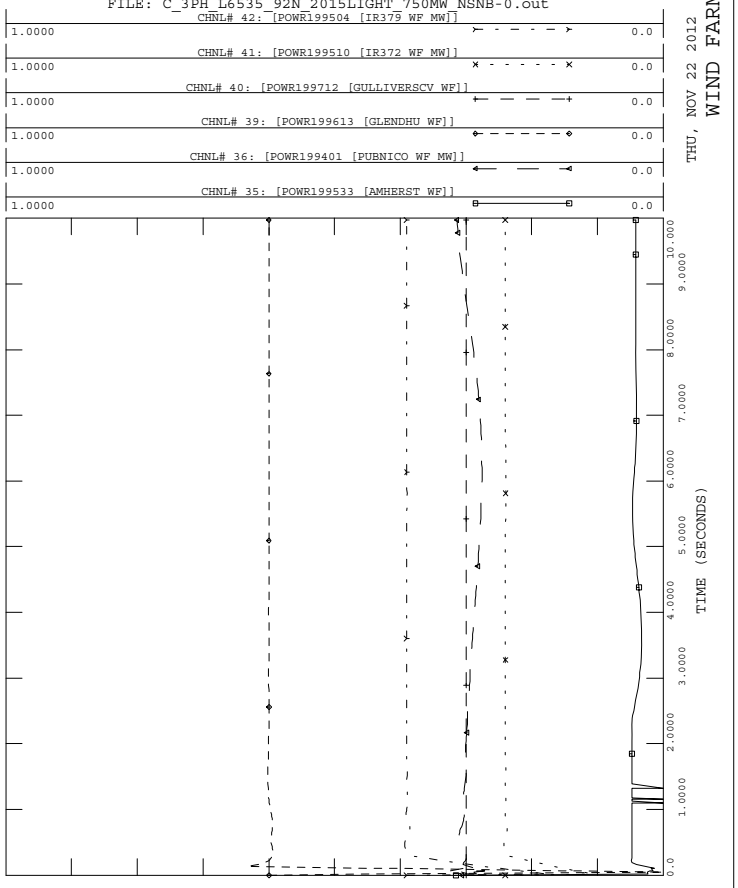
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]]) 60.500 59.500
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]]) 60.500 59.500
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]]) 60.500 59.500
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]]) 60.500 59.500
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]]) 60.500 59.500
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]]) 60.500 59.500

TIME (SECONDS)
0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

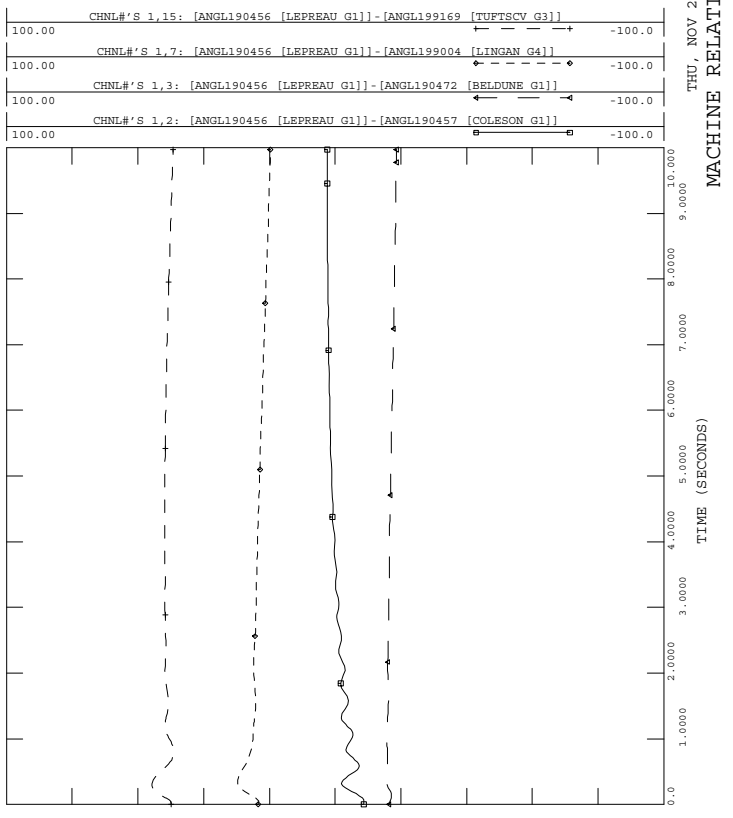
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6535_92N_2015LIGHT_750MW_NSNB-0.out



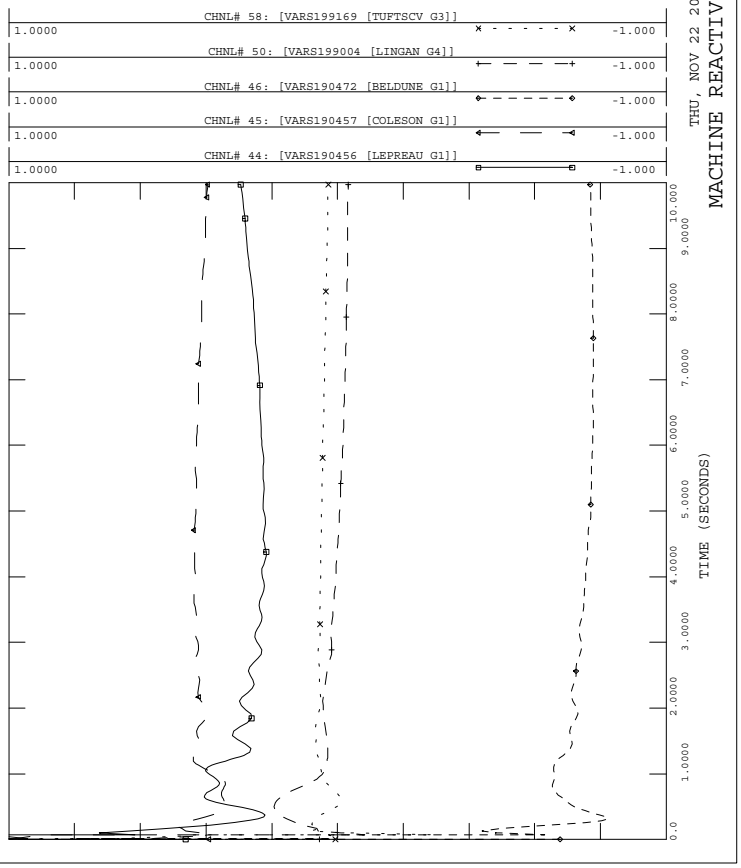
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6535_92N_2015LIGHT_750MW_NSNB-0.out

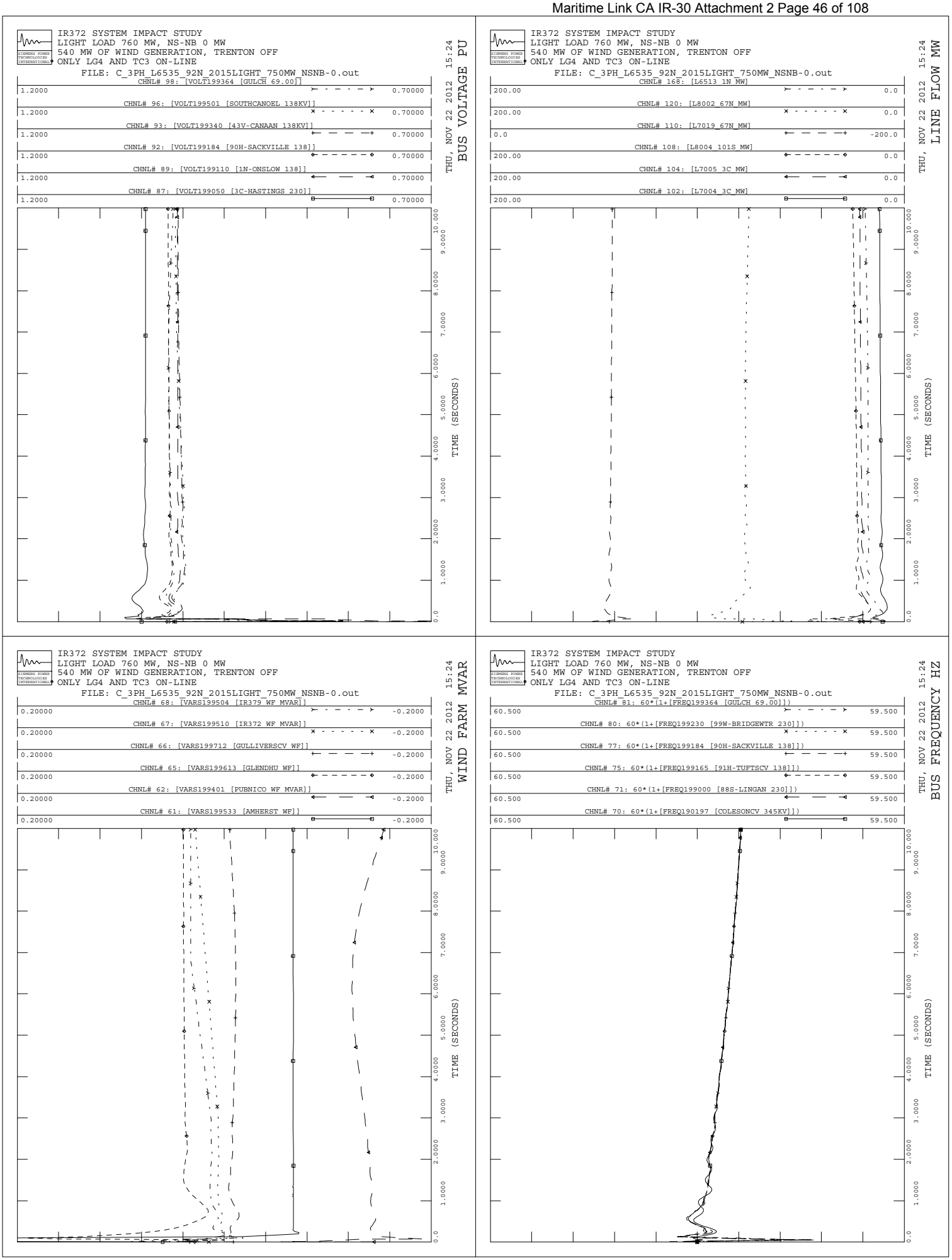


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6535_92N_2015LIGHT_750MW_NSNB-0.out

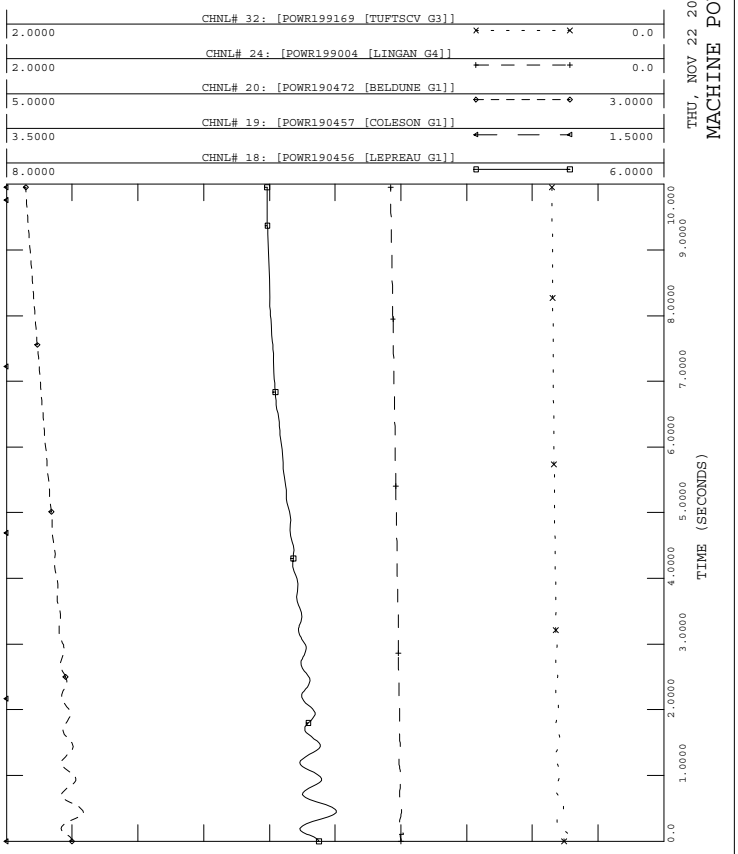


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6535_92N_2015LIGHT_750MW_NSNB-0.out

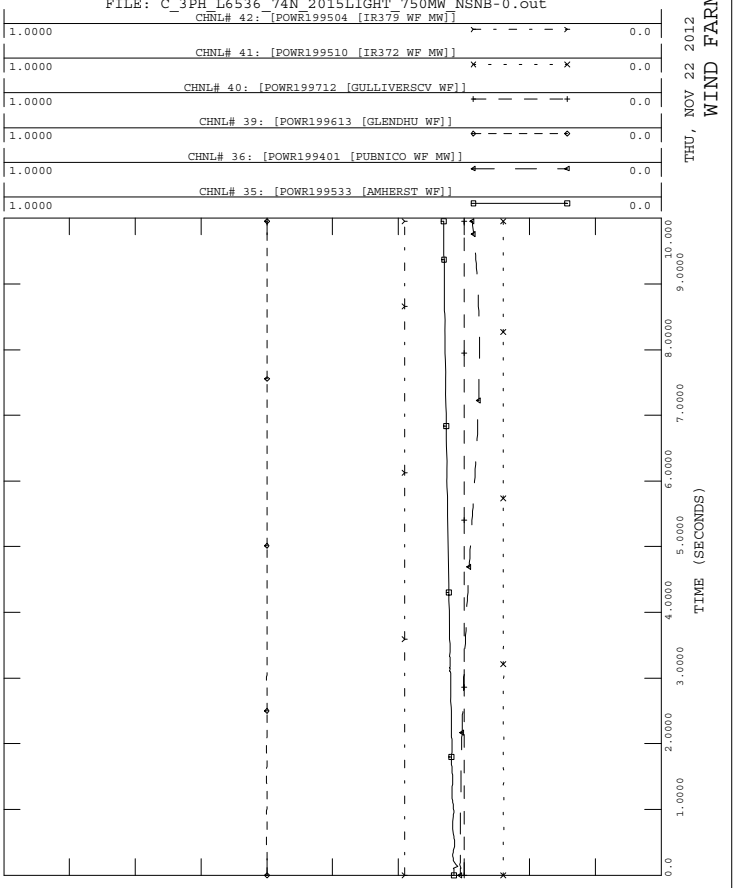



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6535_92N_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6535_92N_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513_1N_MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6535_92N_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6535_92N_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

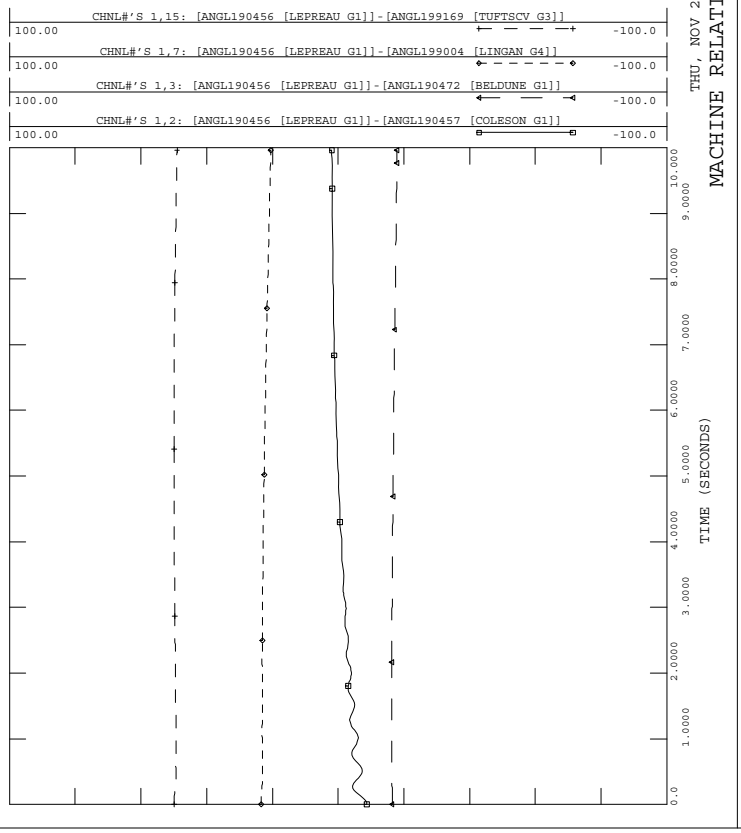
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6536_74N_2015LIGHT_750MW_NSNB-0.out



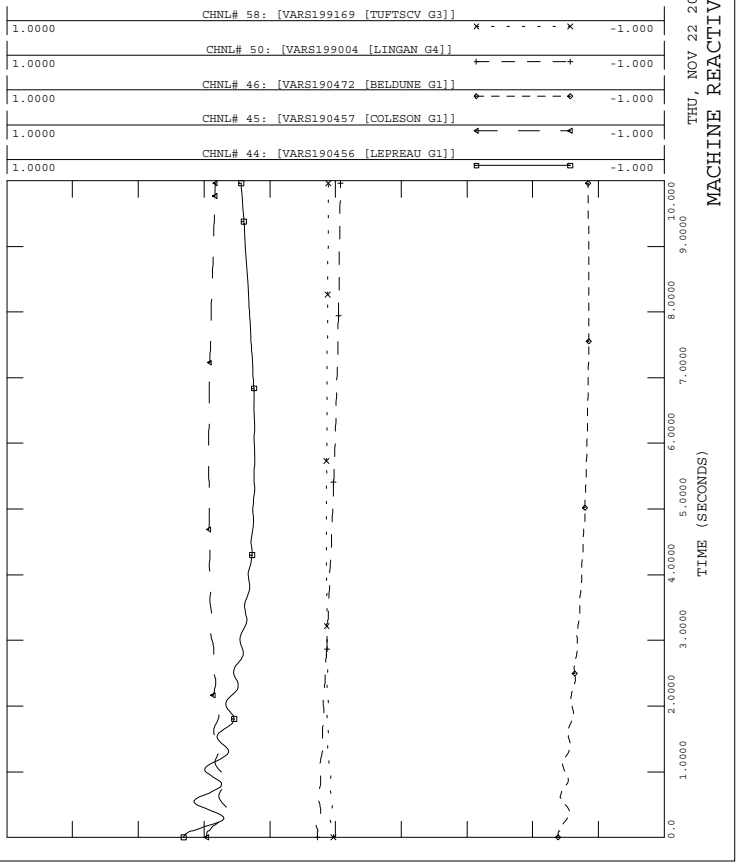
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6536_74N_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6536_74N_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6536_74N_2015LIGHT_750MW_NSNB-0.out



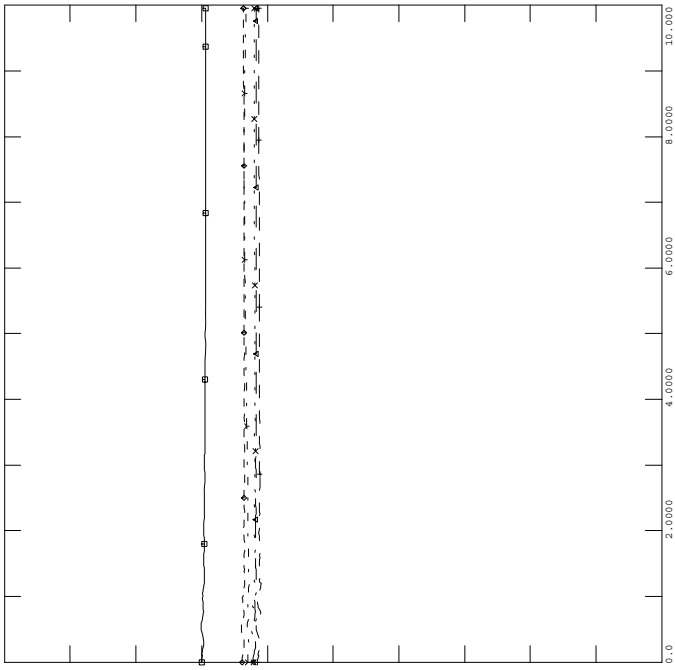
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6536_74N_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24

BUS VOLTAGE PU

CHNL# 98: [VOLT199364 [GULCH 69.00]] 1.2000 0.70000
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]] 1.2000 0.70000
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]] 1.2000 0.70000
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]] 1.2000 0.70000
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]] 1.2000 0.70000
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]] 1.2000 0.70000

TIME (SECONDS)



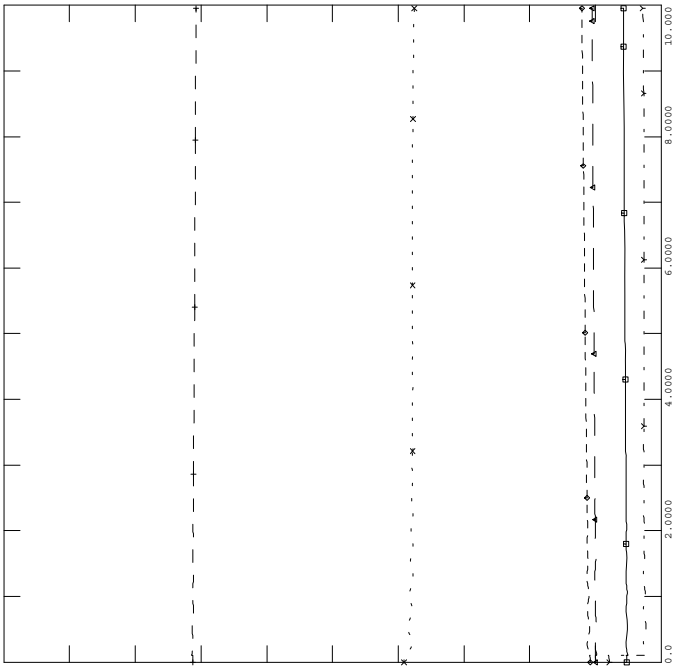
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6536_74N_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24

LINE FLOW MW

CHNL# 168: [L6513_1N_MW] 200.00 0.0
CHNL# 120: [L8002_67N_MW] 200.00 0.0
CHNL# 110: [L7019_67N_MW] 0.0 -200.0
CHNL# 108: [L8004_101S_MW] 200.00 0.0
CHNL# 104: [L7005_3C_MW] 200.00 0.0
CHNL# 102: [L7004_3C_MW] 200.00 0.0

TIME (SECONDS)



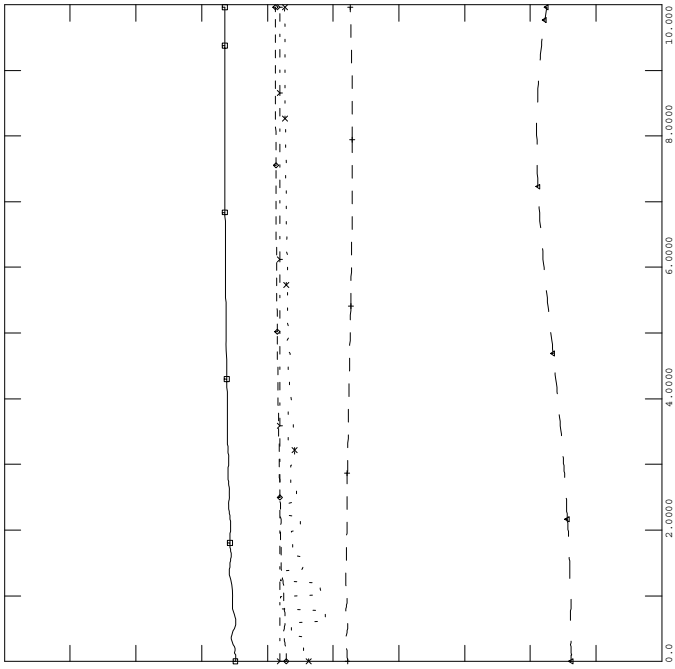
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6536_74N_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:24

WIND FARM MVAR

CHNL# 68: [VARS199504 [IR379 WF MVAR]] 0.20000 -0.2000
CHNL# 67: [VARS199510 [IR372 WF MVAR]] 0.20000 -0.2000
CHNL# 66: [VARS199712 [GULLIVERSCV WF]] 0.20000 -0.2000
CHNL# 65: [VARS199613 [GLENDHU WF]] 0.20000 -0.2000
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]] 0.20000 -0.2000
CHNL# 61: [VARS199533 [AMHERST WF]] 0.20000 -0.2000

TIME (SECONDS)



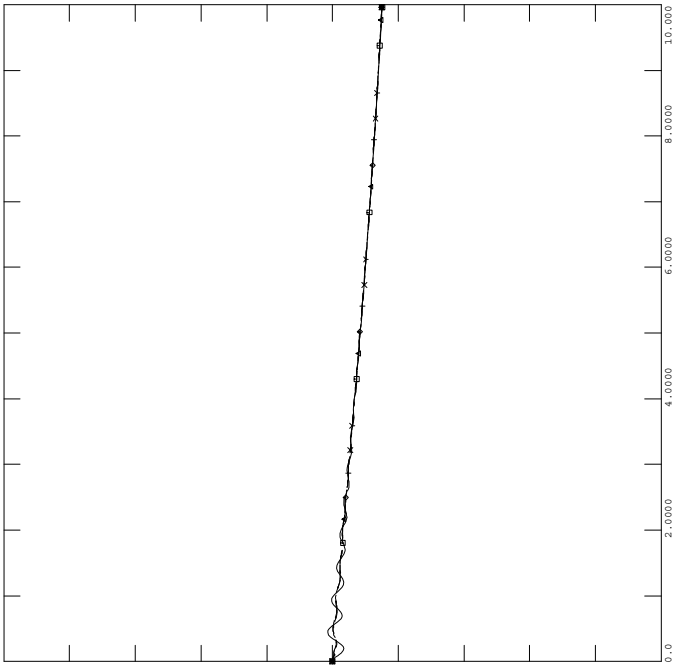
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6536_74N_2015LIGHT_750MW_NSNB-0.out

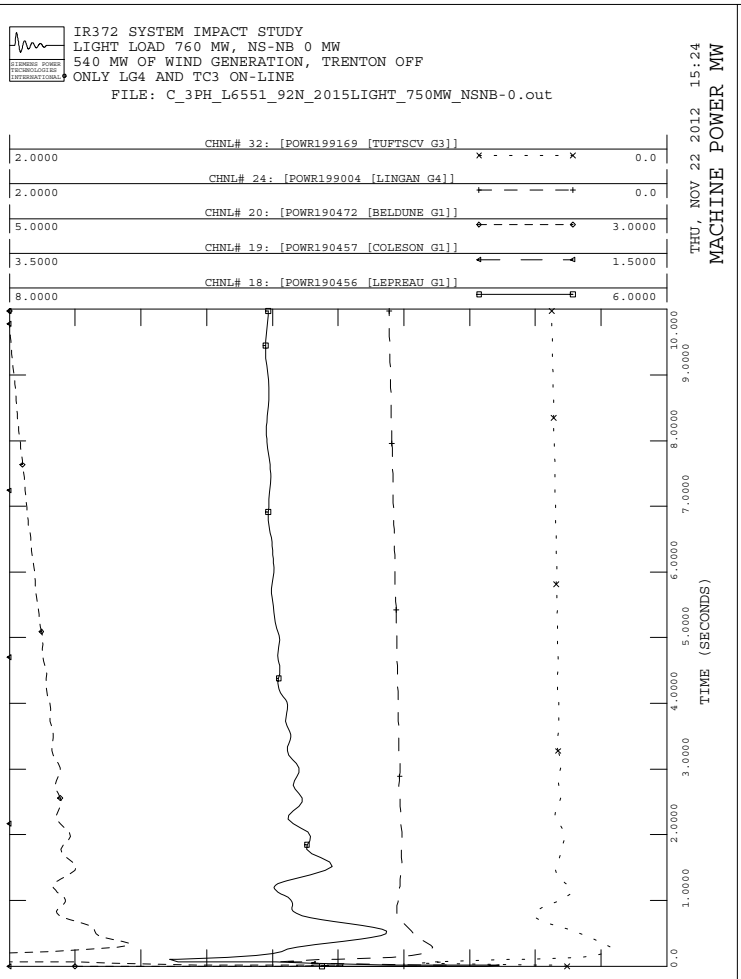
THU, NOV 22 2012 15:24

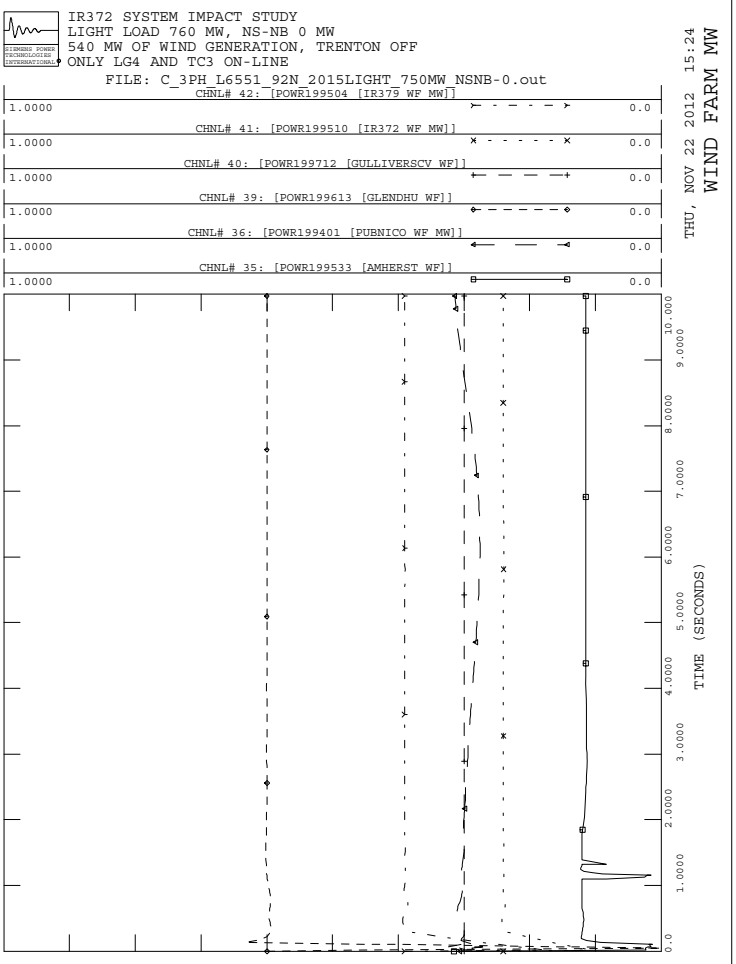
BUS FREQUENCY HZ

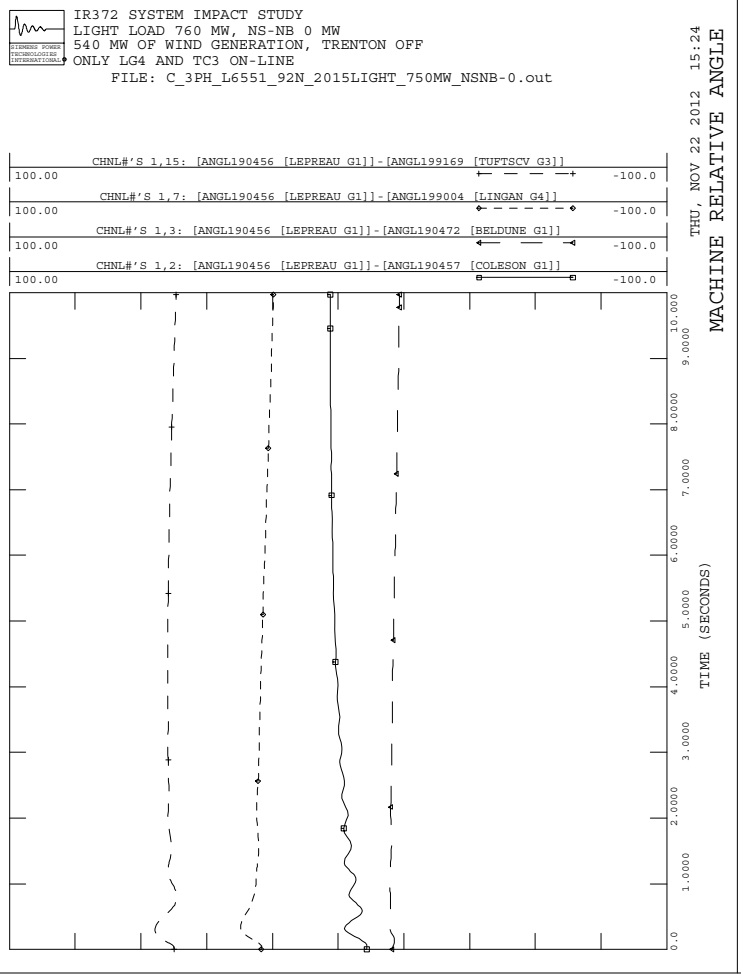
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]]) 60.500 59.500
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]]) 60.500 59.500
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]]) 60.500 59.500
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]]) 60.500 59.500
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]]) 60.500 59.500
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]]) 60.500 59.500

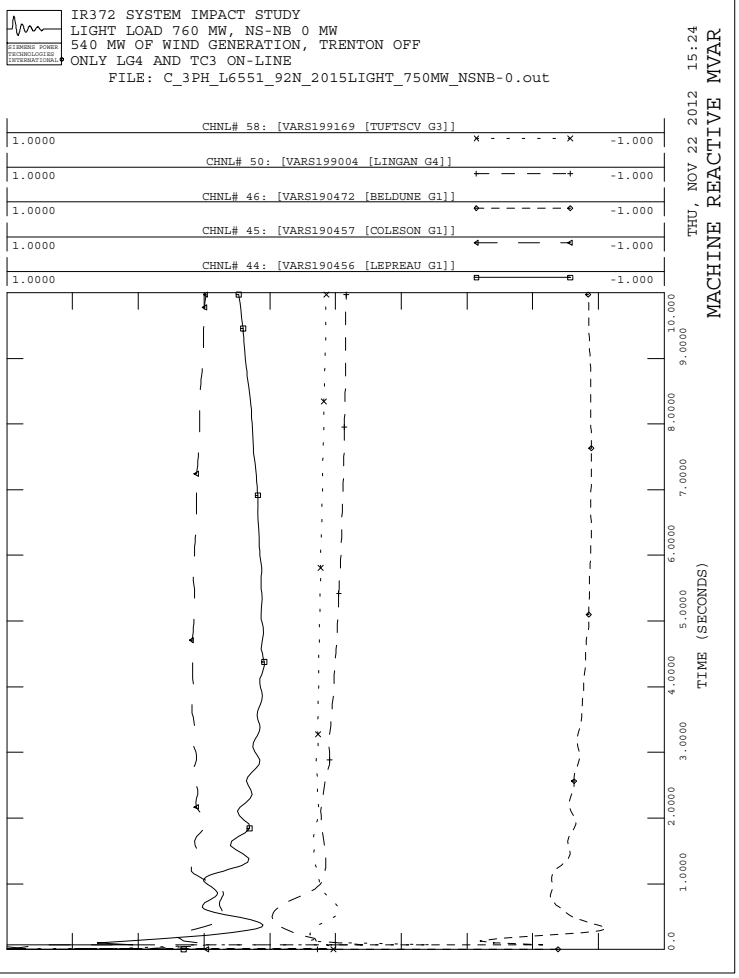
TIME (SECONDS)

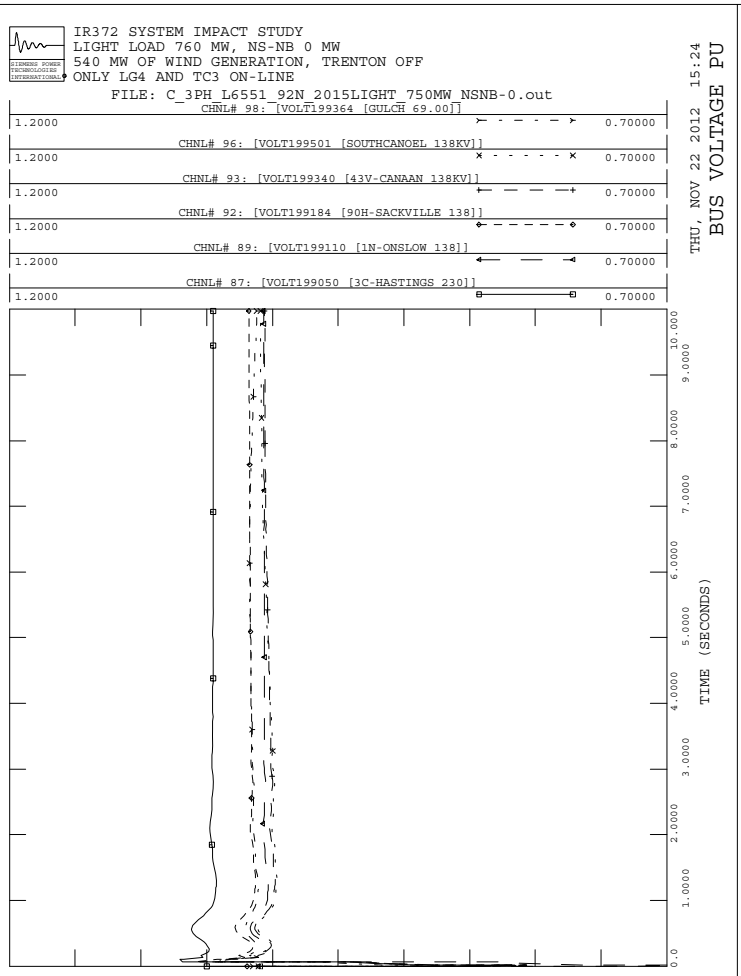


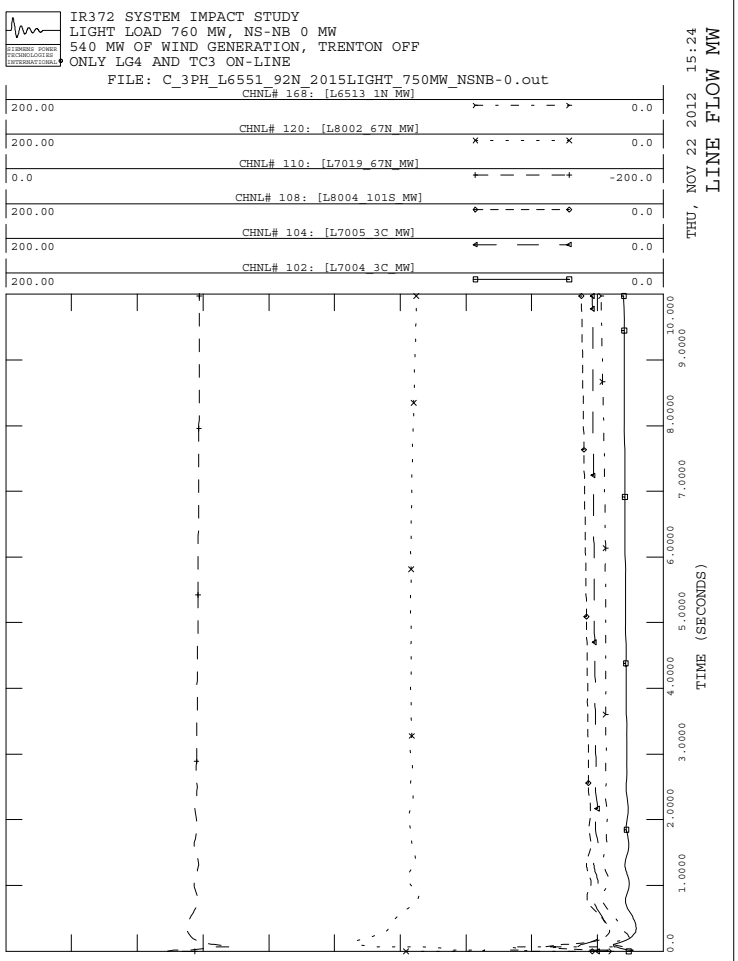

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6551_92N_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
THU, NOV 22 2012 15:24
MACHINE POWER MW
TIME (SECONDS)

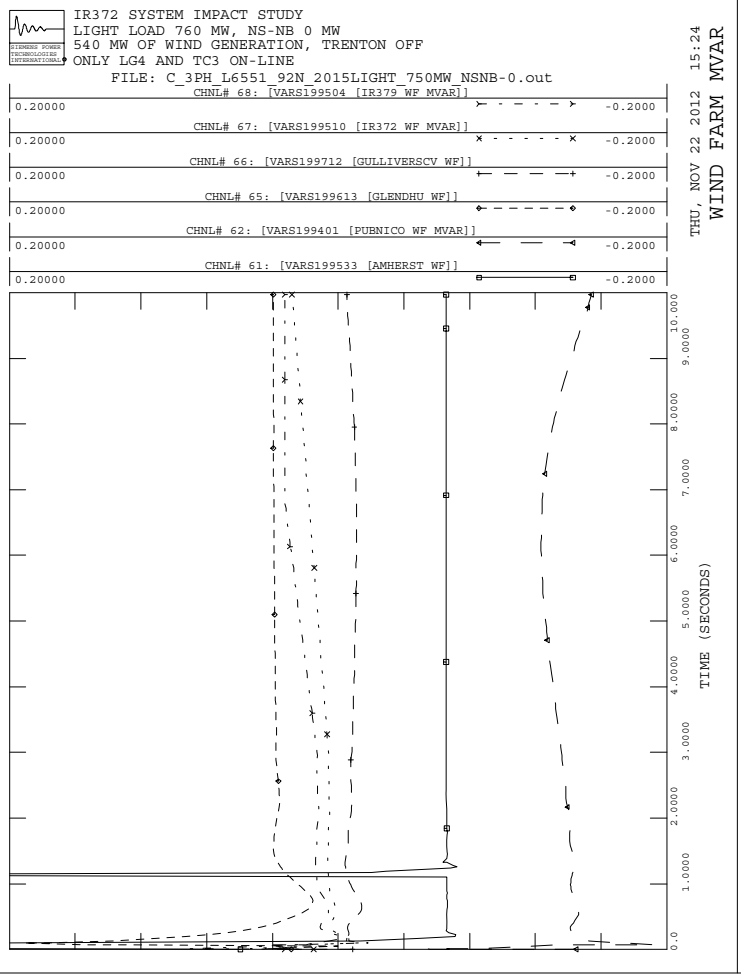

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6551_92N_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
THU, NOV 22 2012 15:24
WIND FARM MW
TIME (SECONDS)

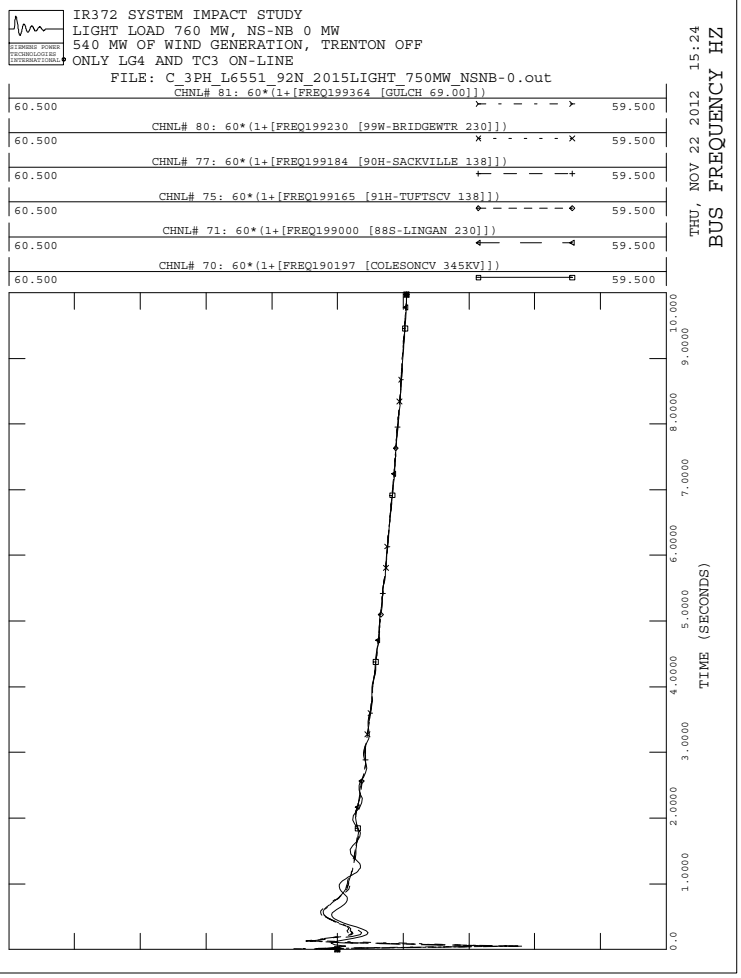

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6551_92N_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
THU, NOV 22 2012 15:24
MACHINE RELATIVE ANGLE
TIME (SECONDS)

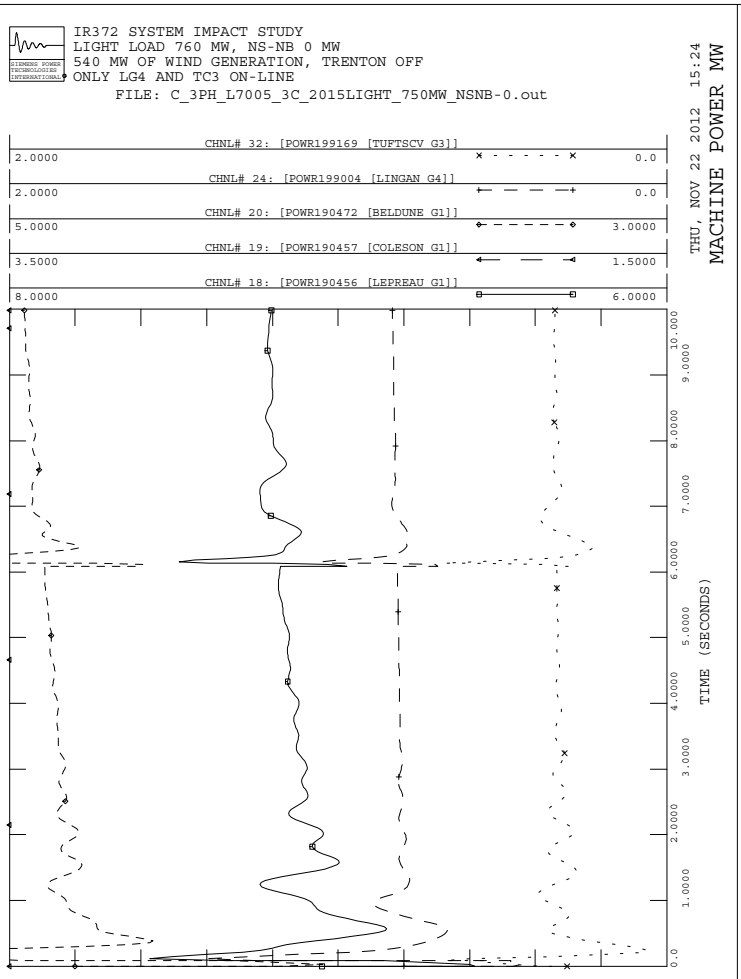

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6551_92N_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
THU, NOV 22 2012 15:24
MACHINE REACTIVE MVAR
TIME (SECONDS)

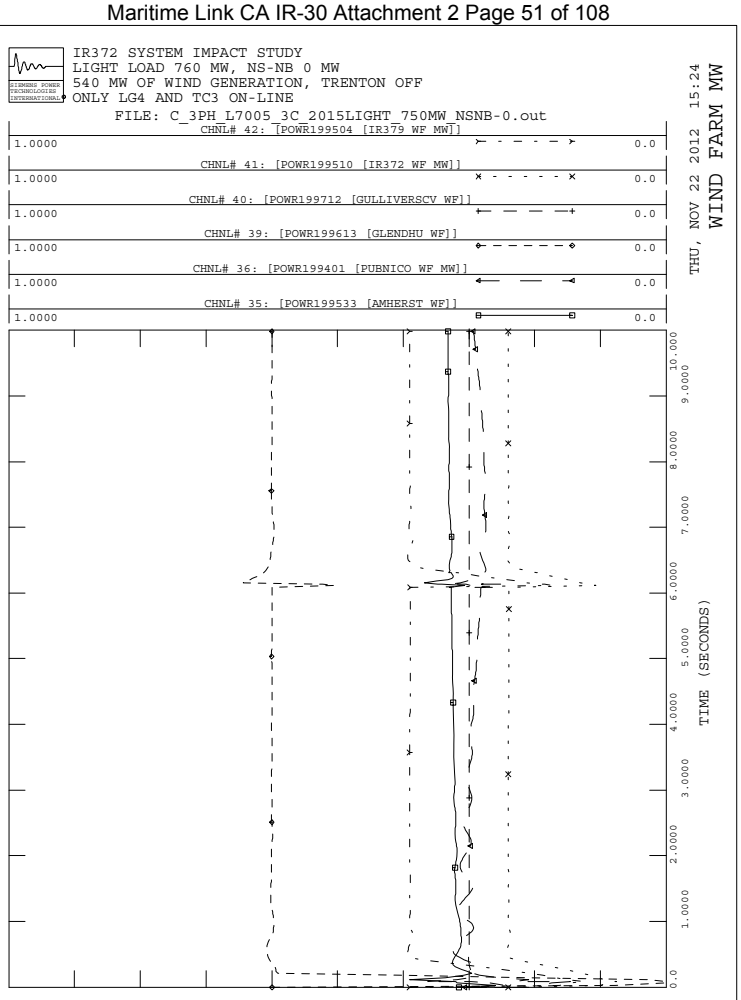

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6551_92N_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)

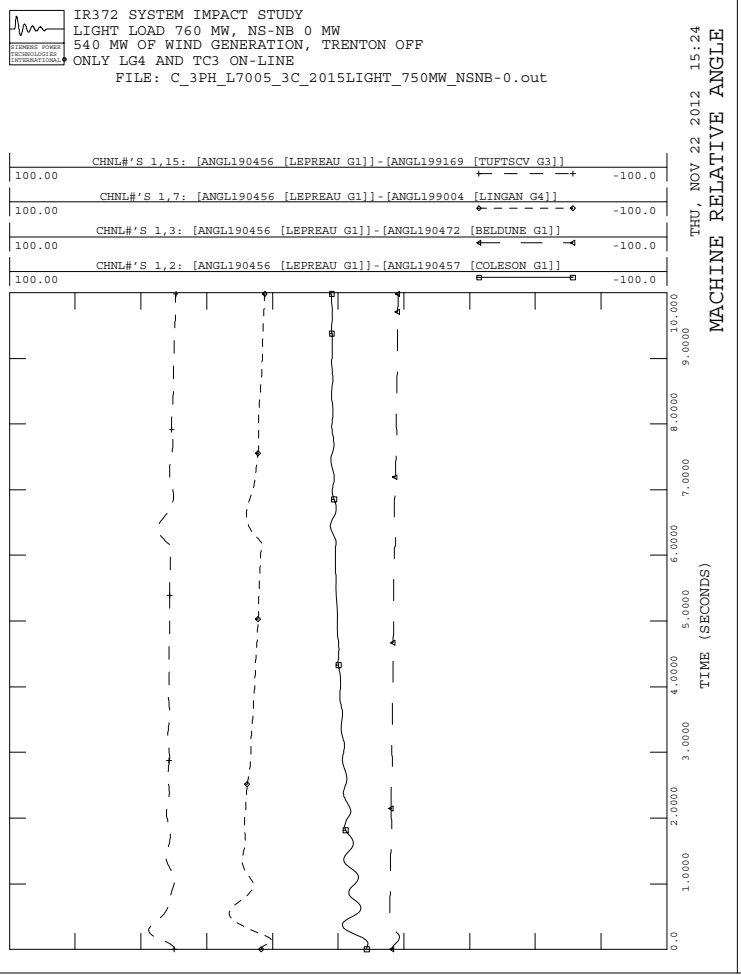

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6551_92N_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513_1N_MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)

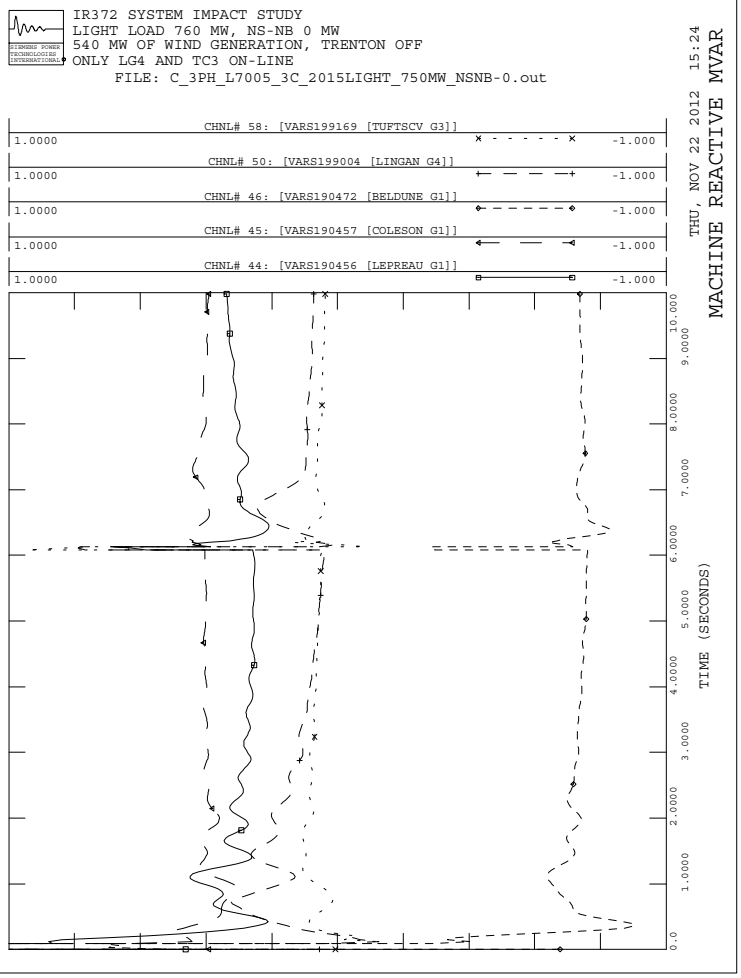

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6551_92N_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)

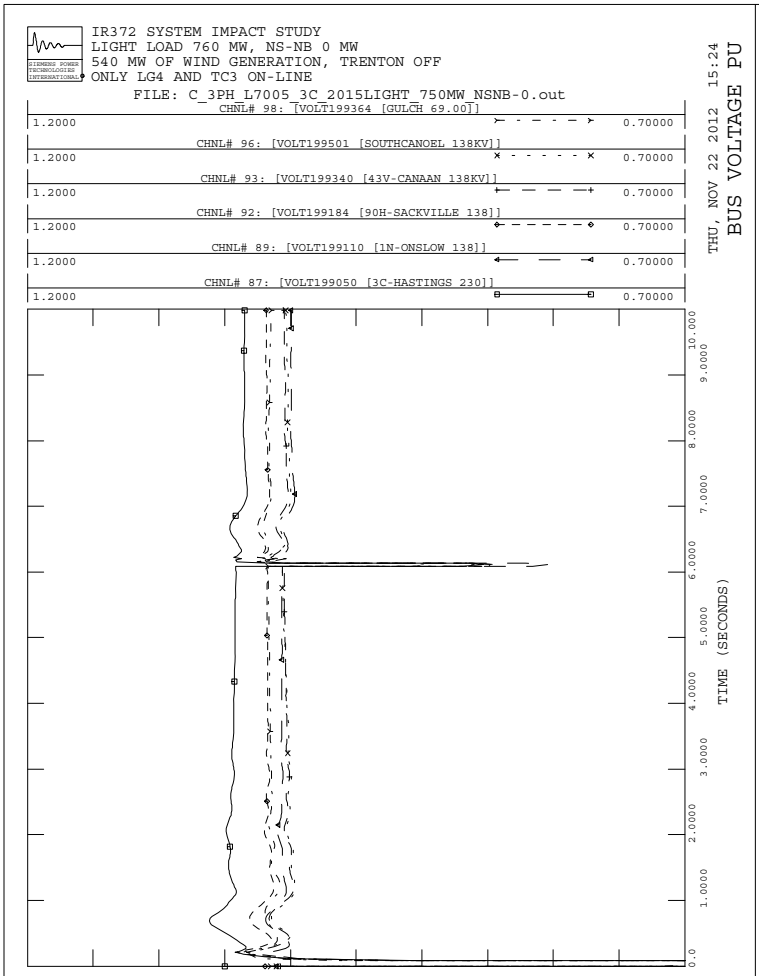

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L6551_92N_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

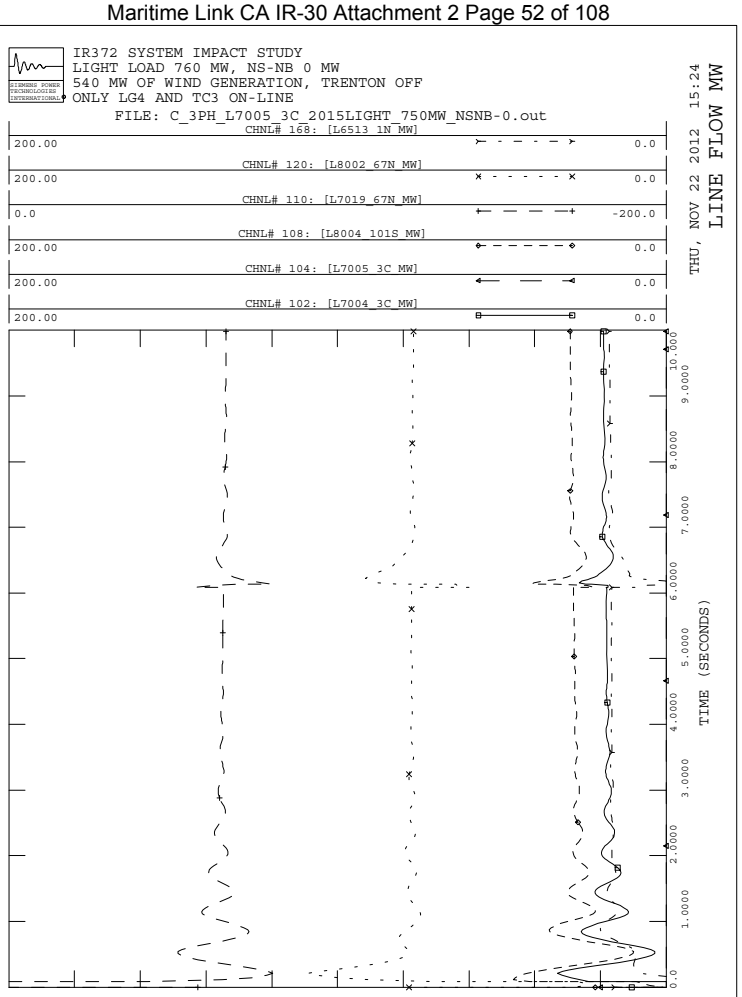

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_3C_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
MACHINE POWER MW
THU, NOV 22 2012 15:24
TIME (SECONDS)

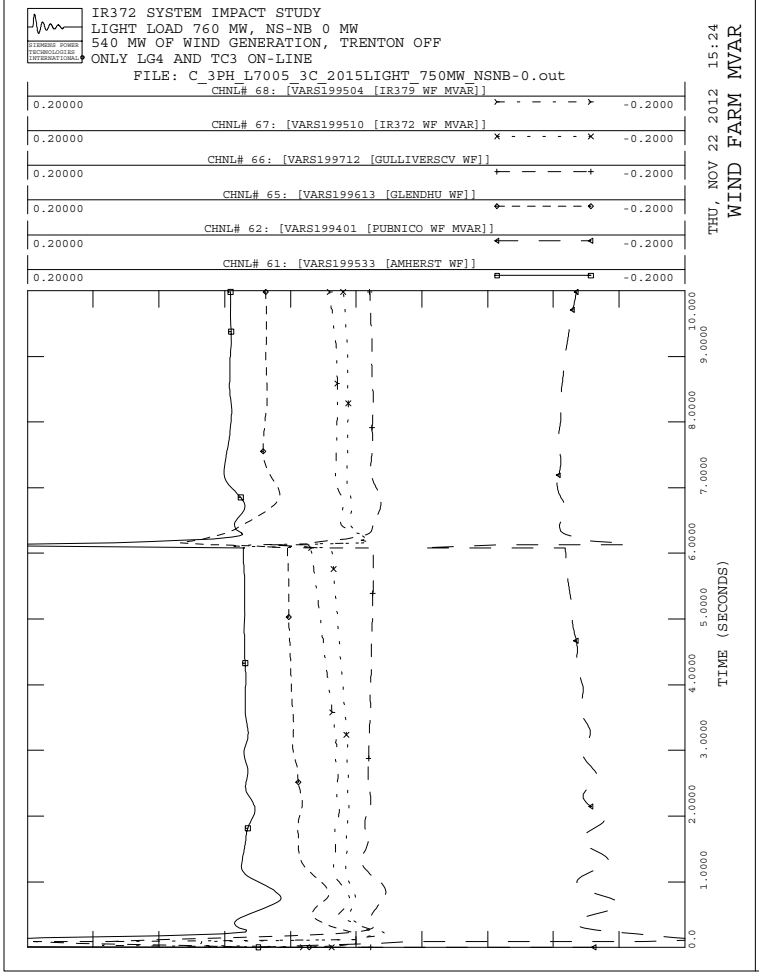

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_3C_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
WIND FARM MW
THU, NOV 22 2012 15:24
TIME (SECONDS)

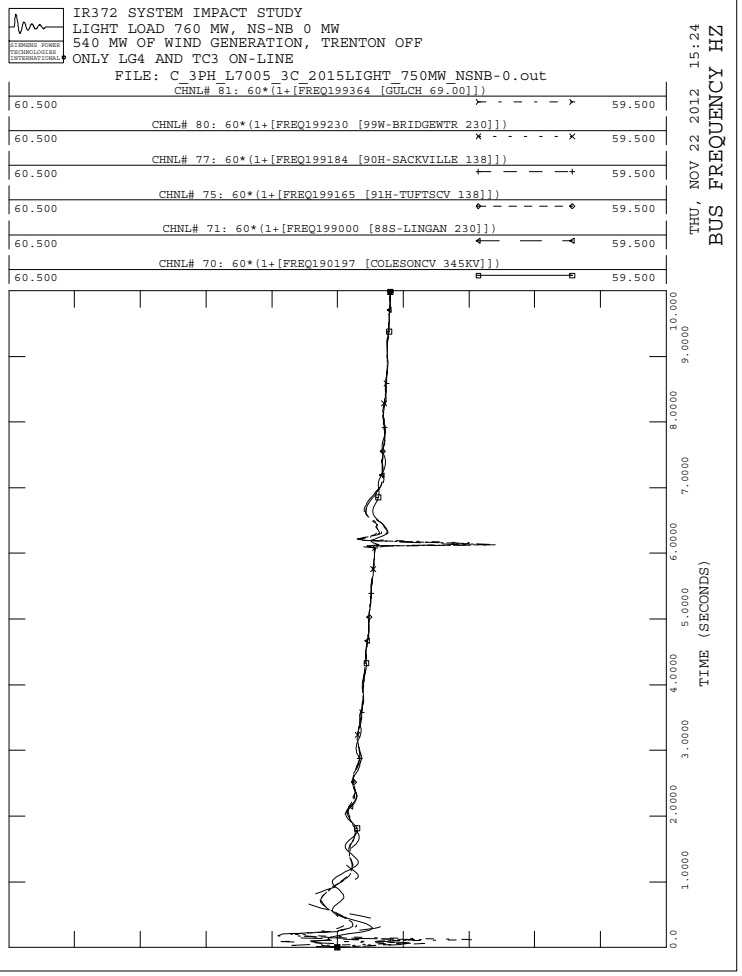

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_3C_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
MACHINE RELATIVE ANGLE
THU, NOV 22 2012 15:24
TIME (SECONDS)

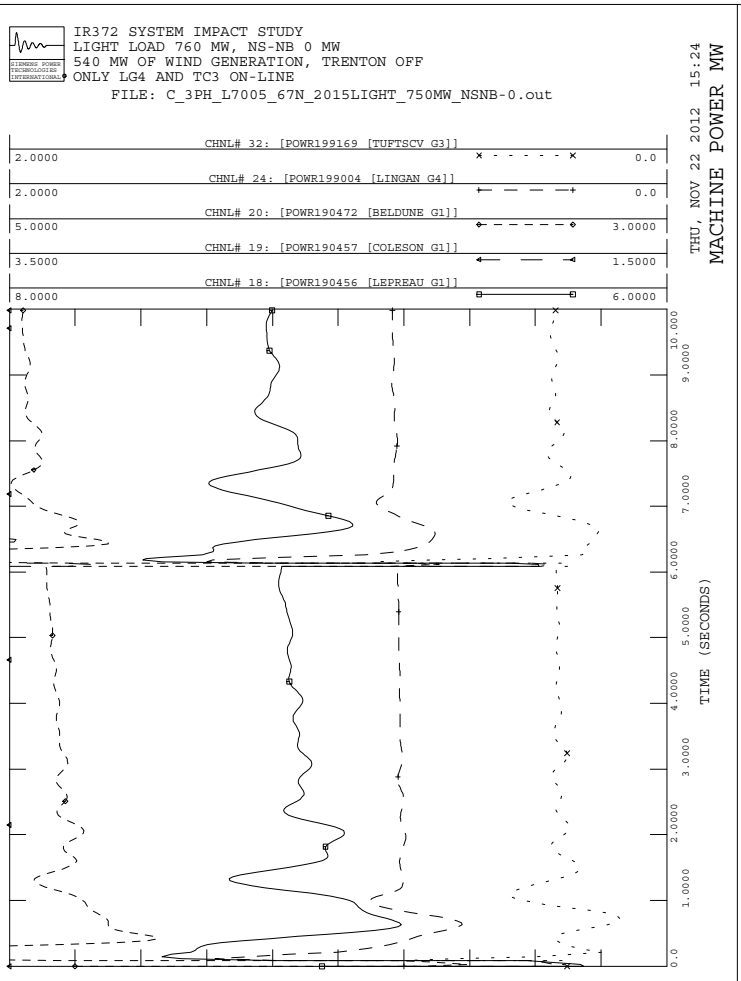

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_3C_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
MACHINE REACTIVE MVAR
THU, NOV 22 2012 15:24
TIME (SECONDS)

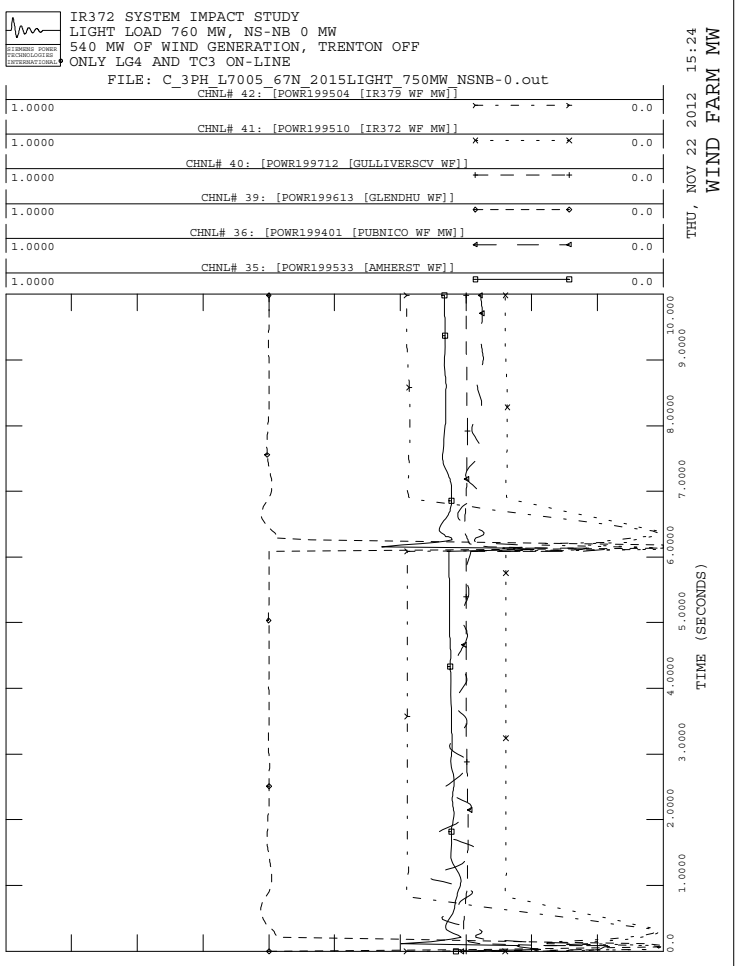

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_3C_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)

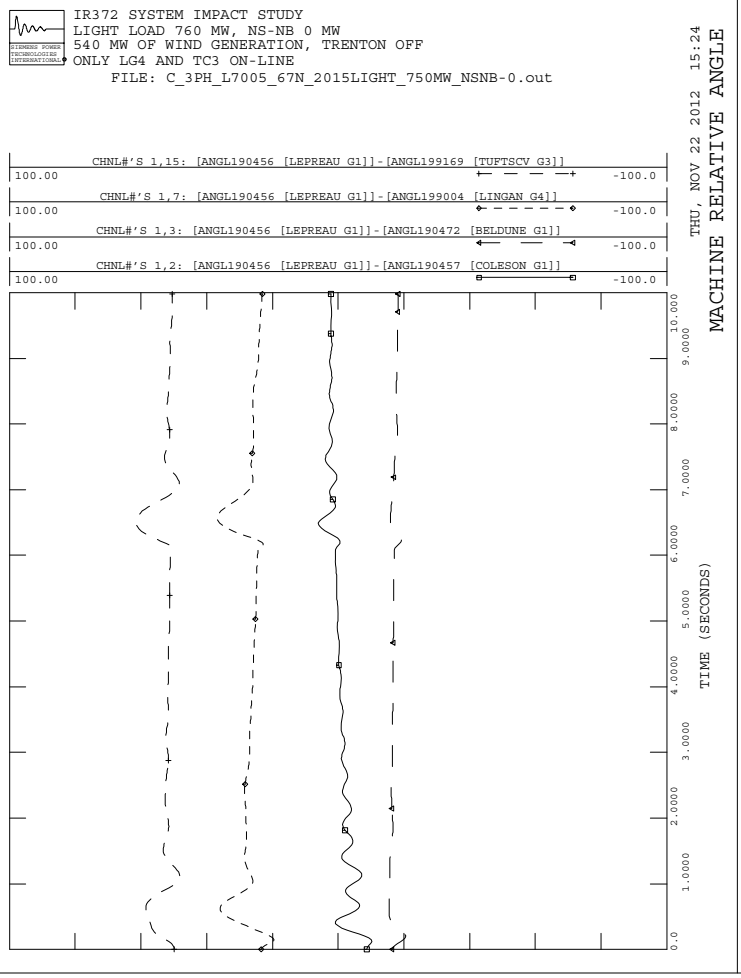

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_3C_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005_3C MW]
CHNL# 102: [L7004_3C MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)

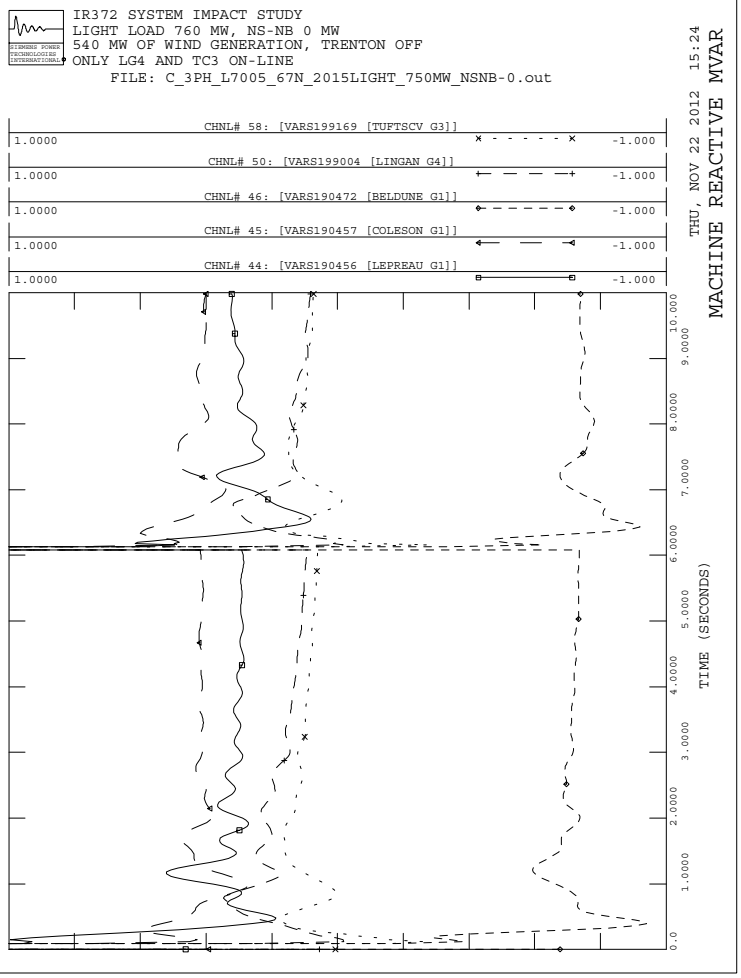

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_3C_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)

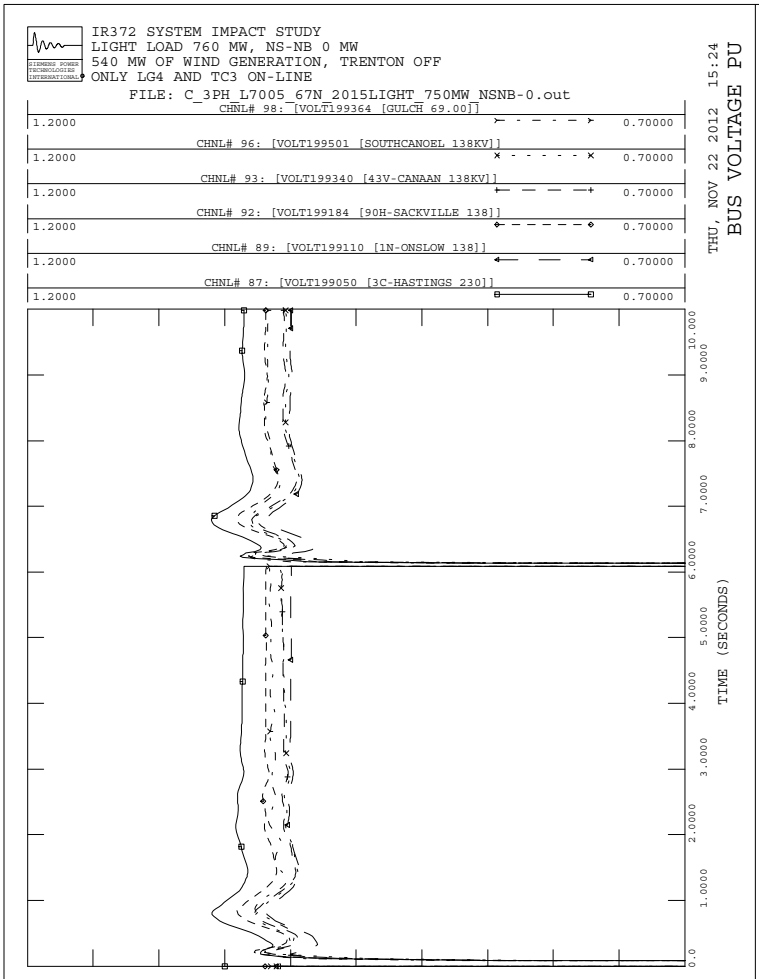

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_3C_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

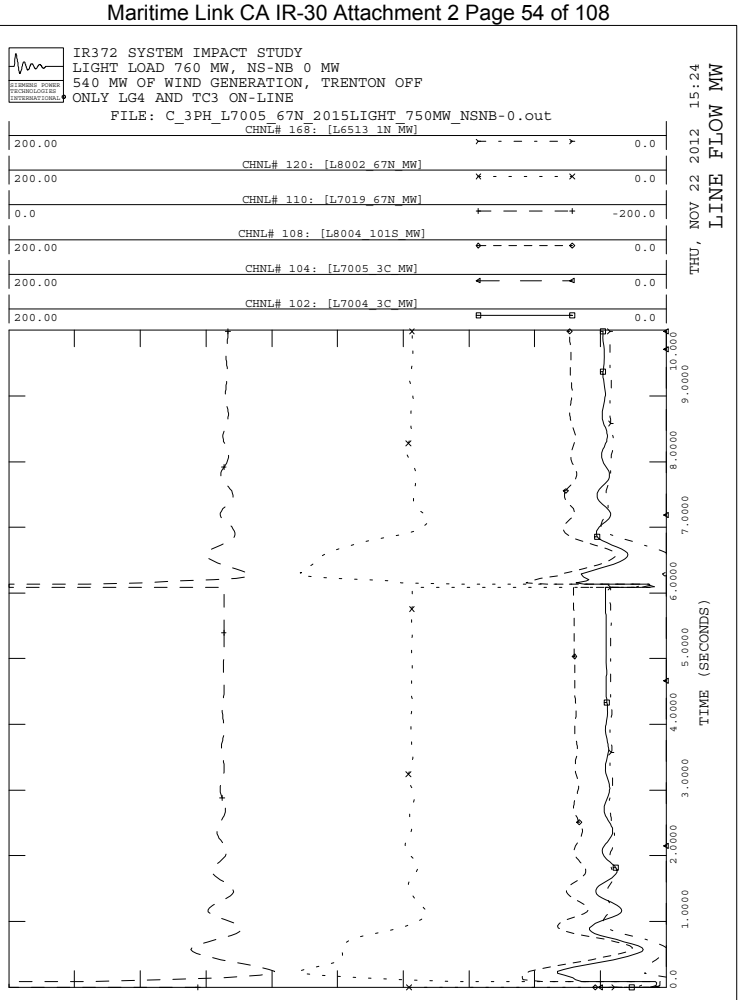

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
THU, NOV 22 2012 15:24
MACHINE POWER MW
TIME (SECONDS)

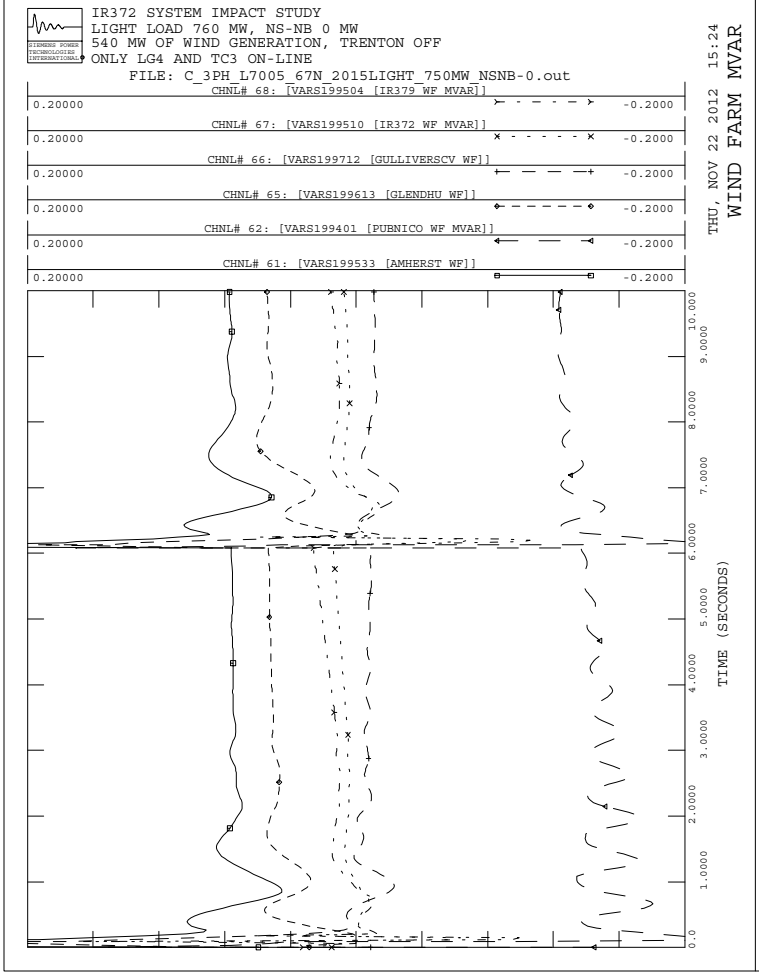

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
THU, NOV 22 2012 15:24
WIND FARM MW
TIME (SECONDS)

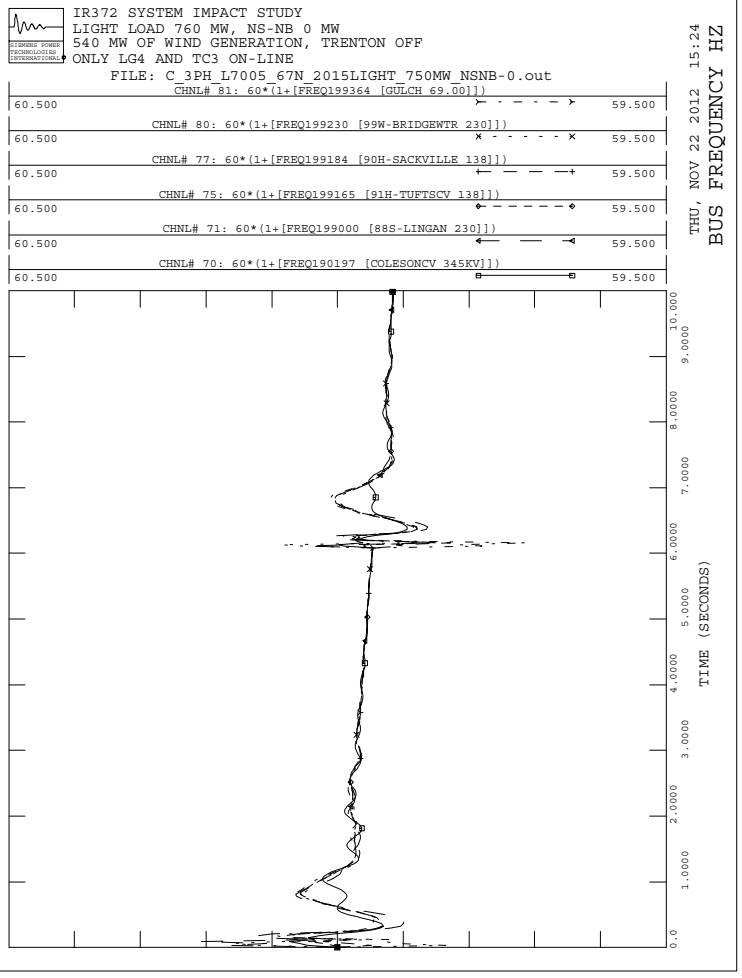

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_67N_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
THU, NOV 22 2012 15:24
MACHINE RELATIVE ANGLE
TIME (SECONDS)

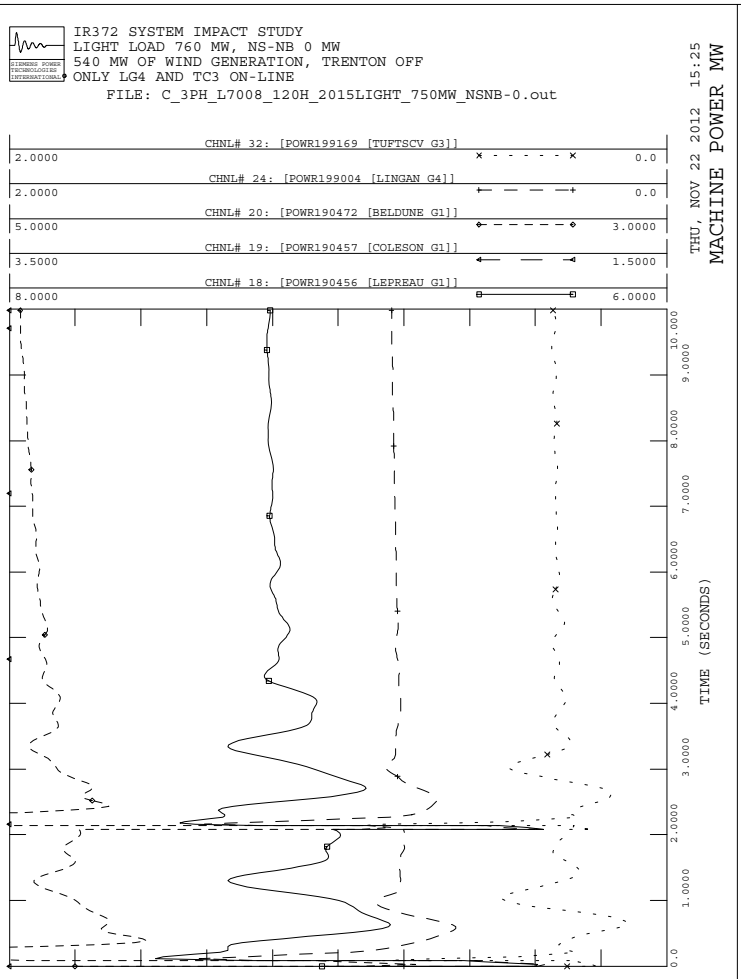

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
THU, NOV 22 2012 15:24
MACHINE REACTIVE MVAR
TIME (SECONDS)

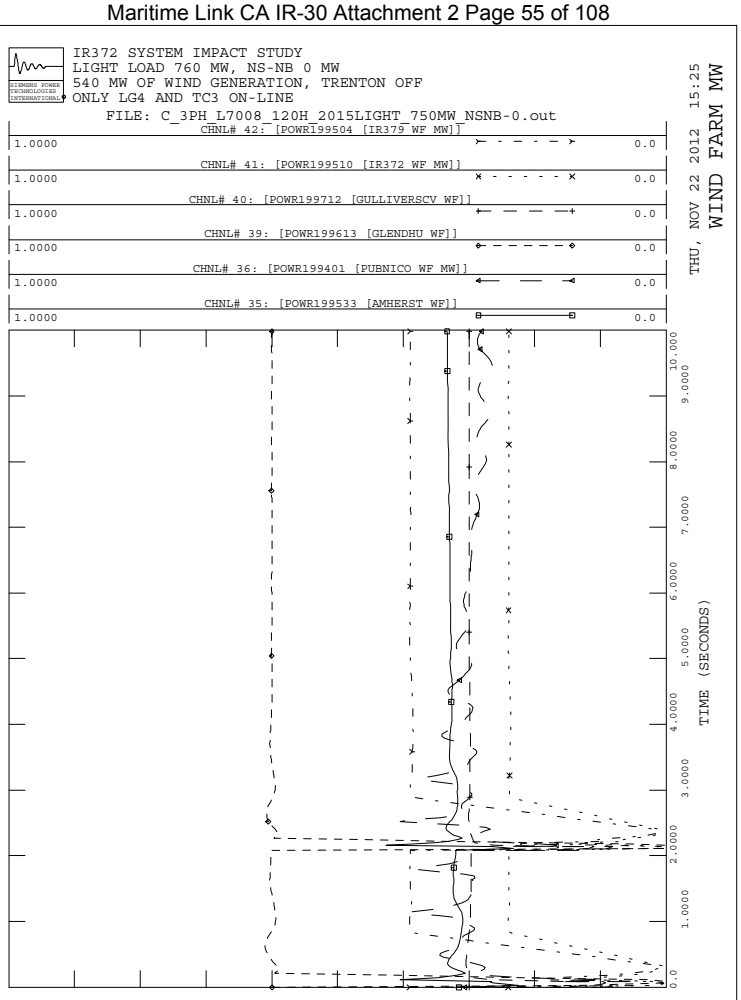

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:24
BUS VOLTAGE PU
TIME (SECONDS)

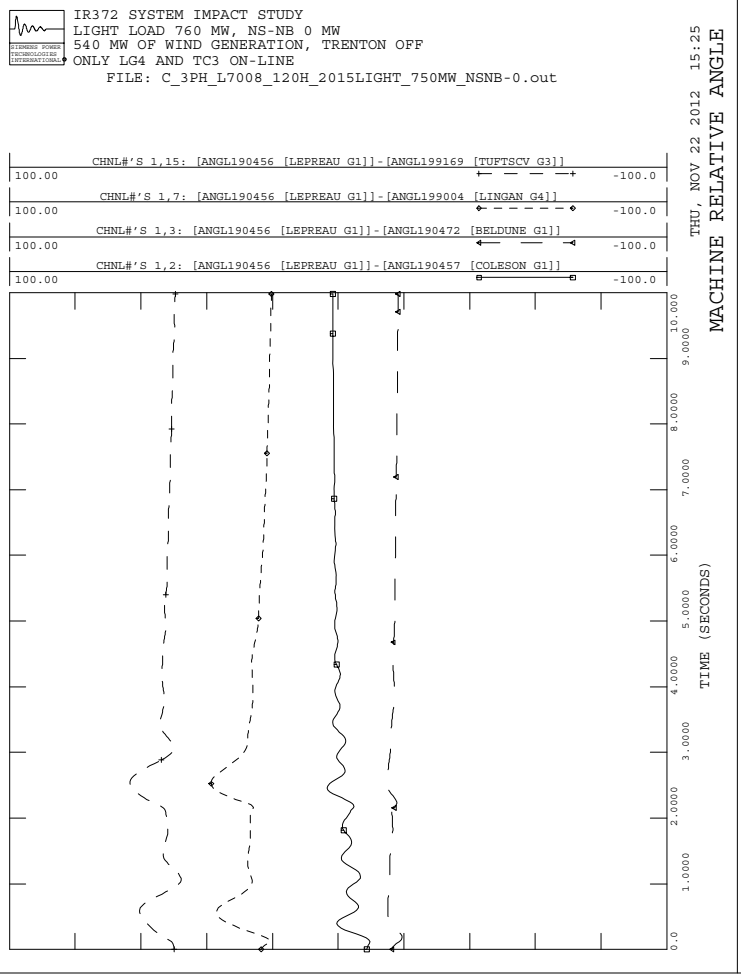

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513_1N_MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:24
LINE FLOW MW
TIME (SECONDS)

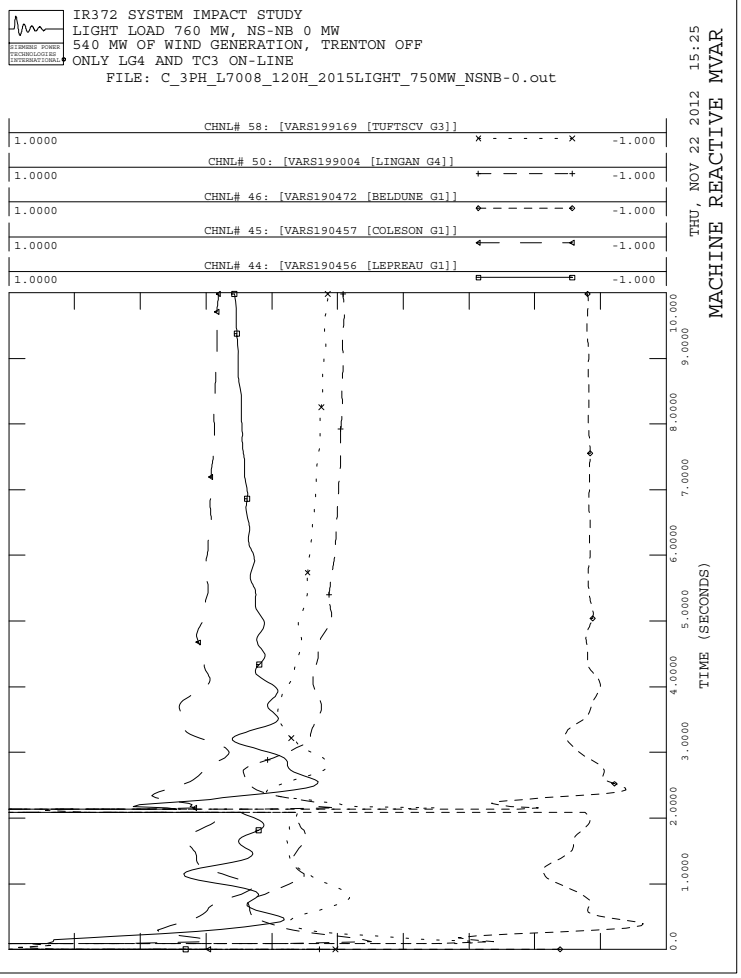

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:24
WIND FARM MVAR
TIME (SECONDS)

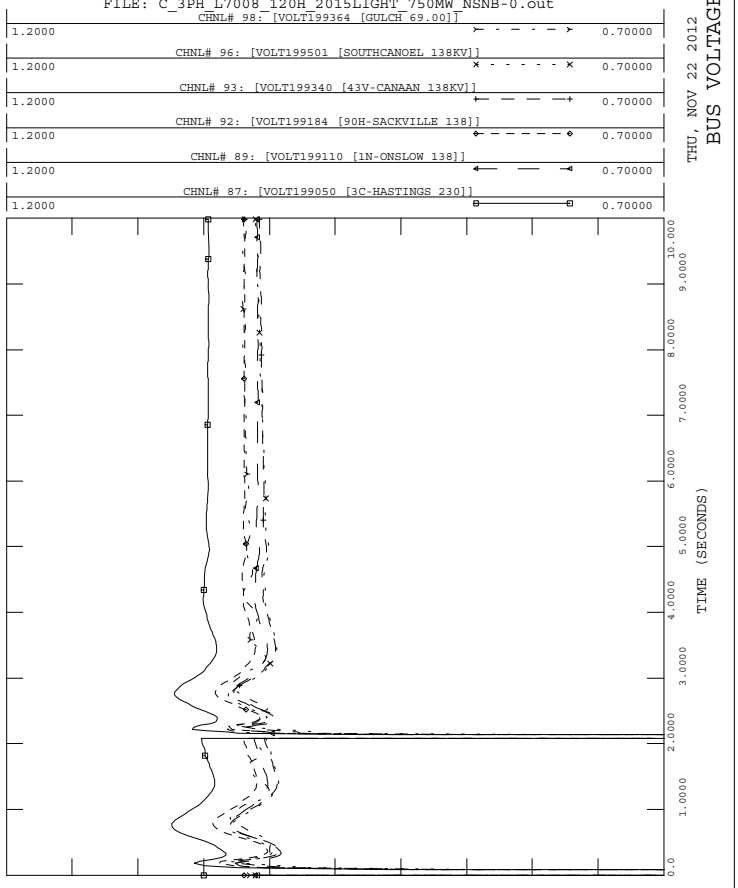

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7005_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:24
BUS FREQUENCY HZ
TIME (SECONDS)

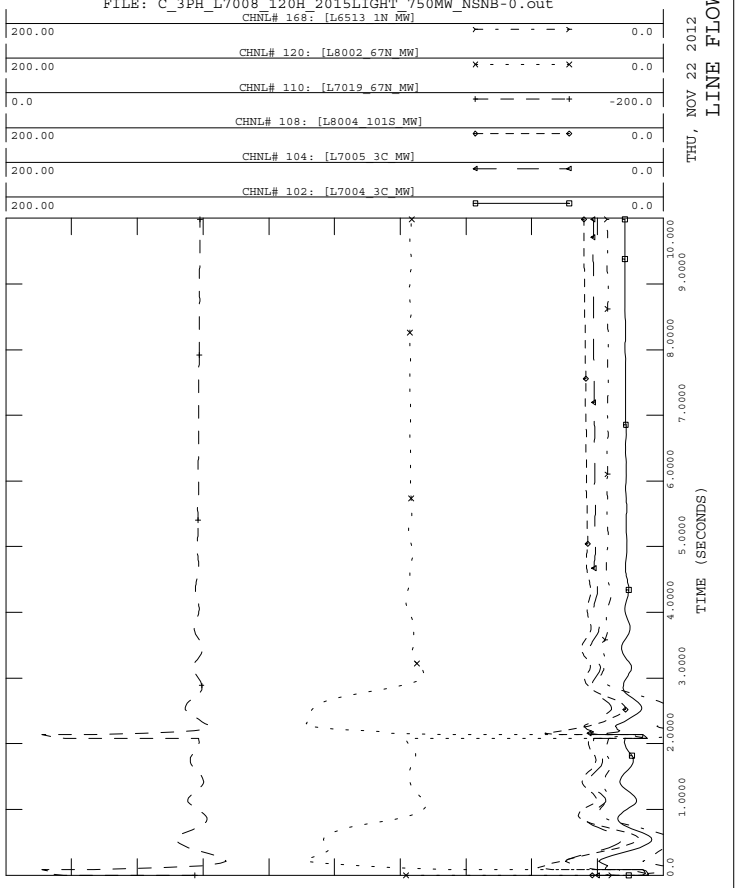

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7008_120H_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
THU, NOV 22 2012 15:25
MACHINE POWER MW
TIME (SECONDS)

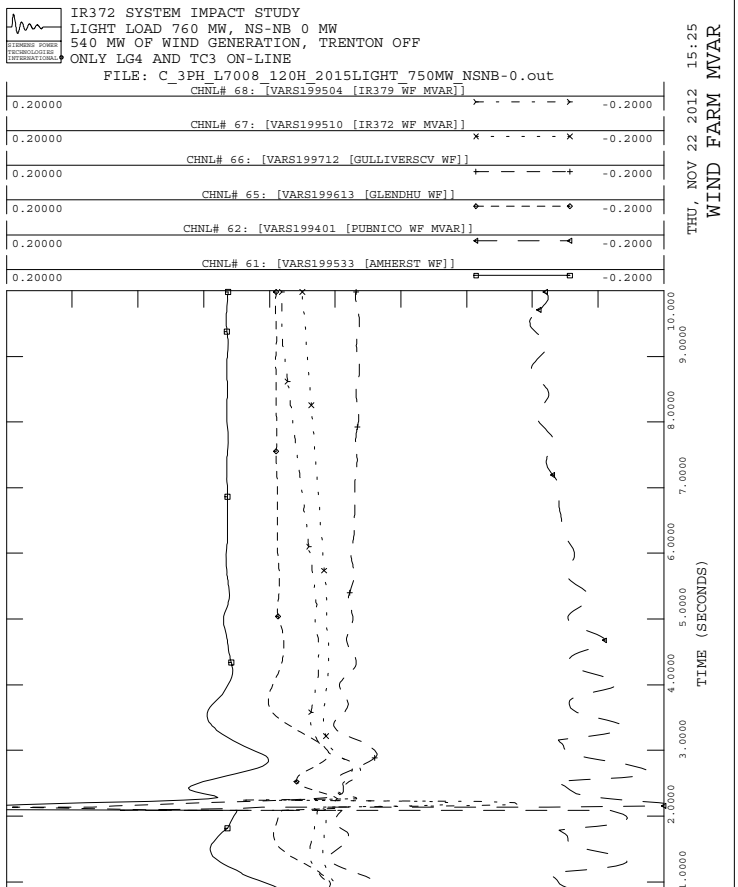

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7008_120H_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
THU, NOV 22 2012 15:25
WIND FARM MW
TIME (SECONDS)

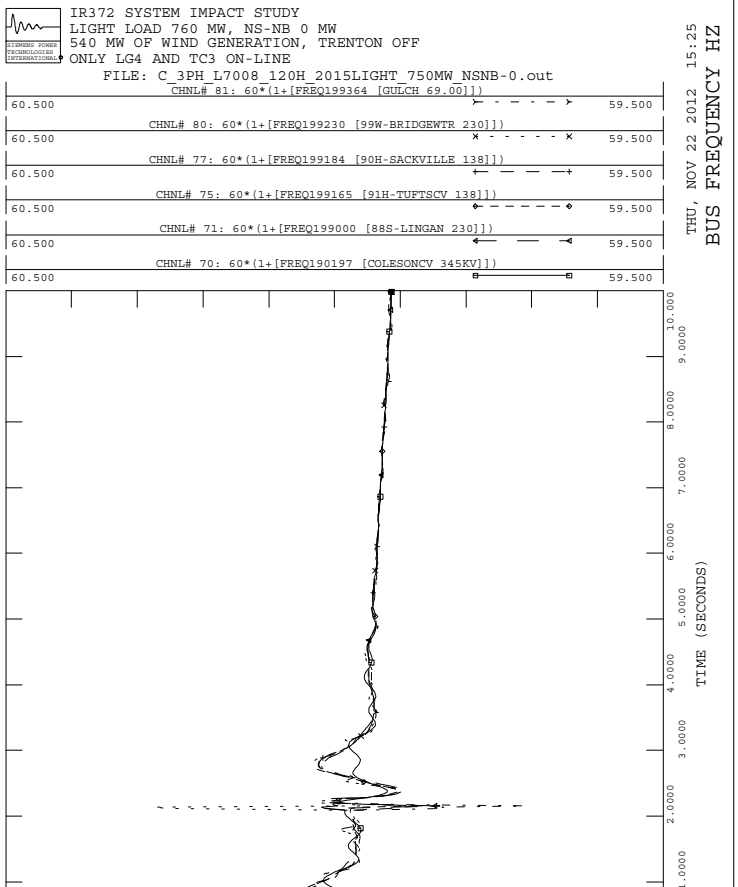

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7008_120H_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
THU, NOV 22 2012 15:25
MACHINE RELATIVE ANGLE
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7008_120H_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
THU, NOV 22 2012 15:25
MACHINE REACTIVE MVAR
TIME (SECONDS)

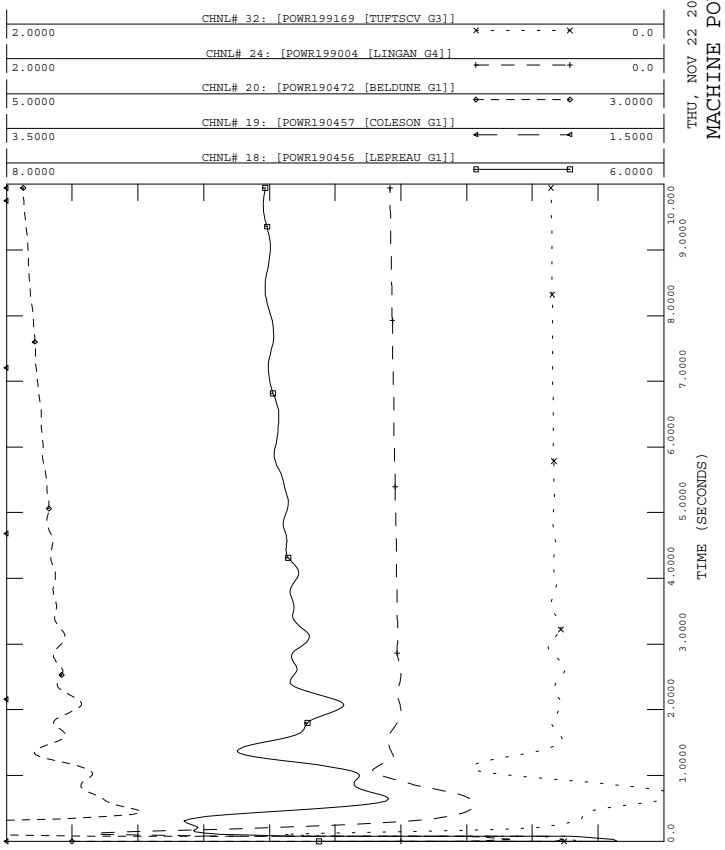

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7008_120H_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7008_120H_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)

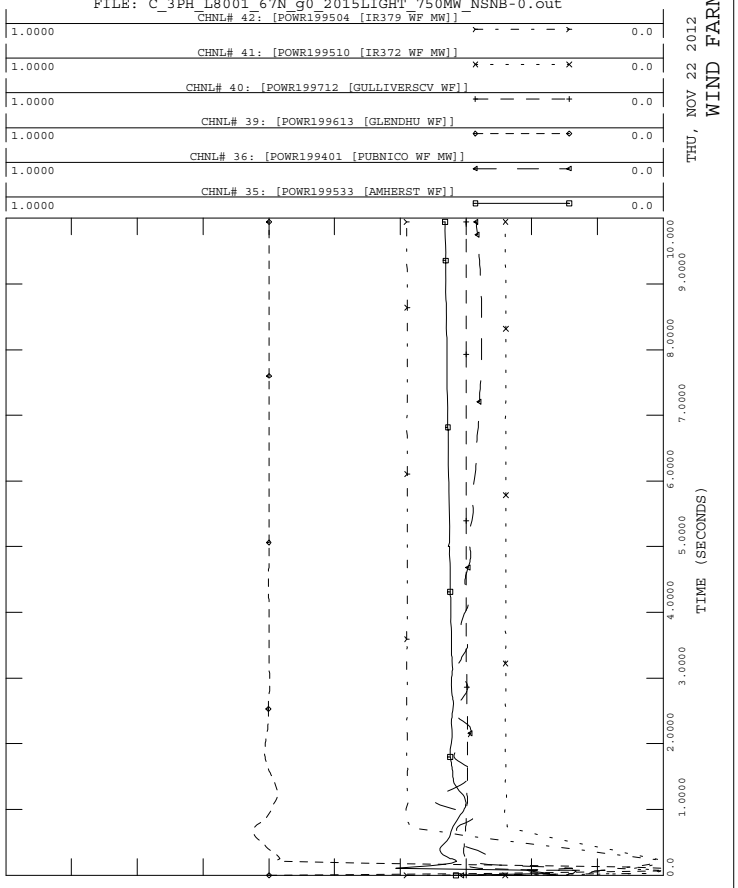

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7008_120H_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L7008_120H_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)

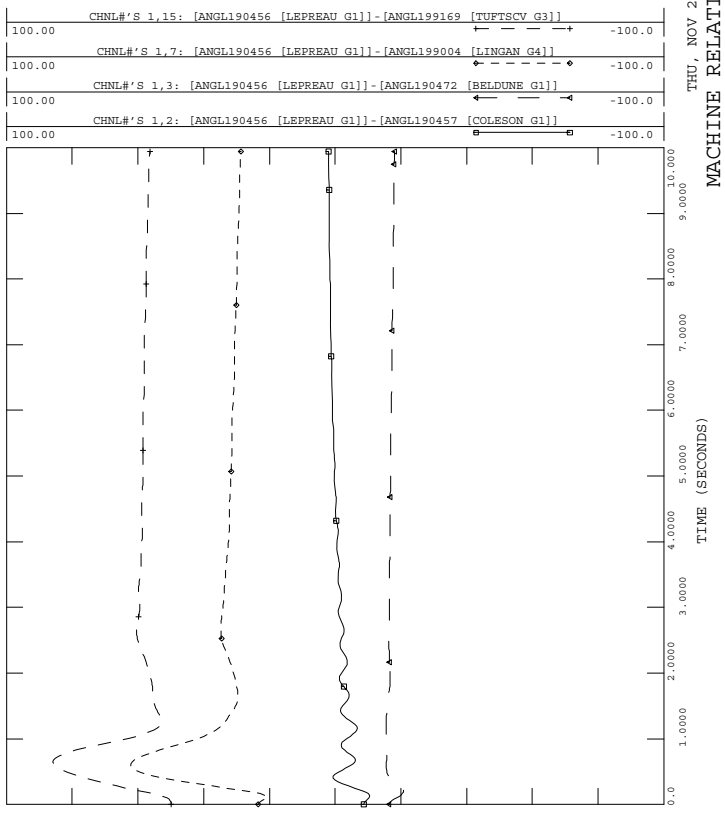
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8001_67N_g0_2015LIGHT_750MW_NSNB-0.out



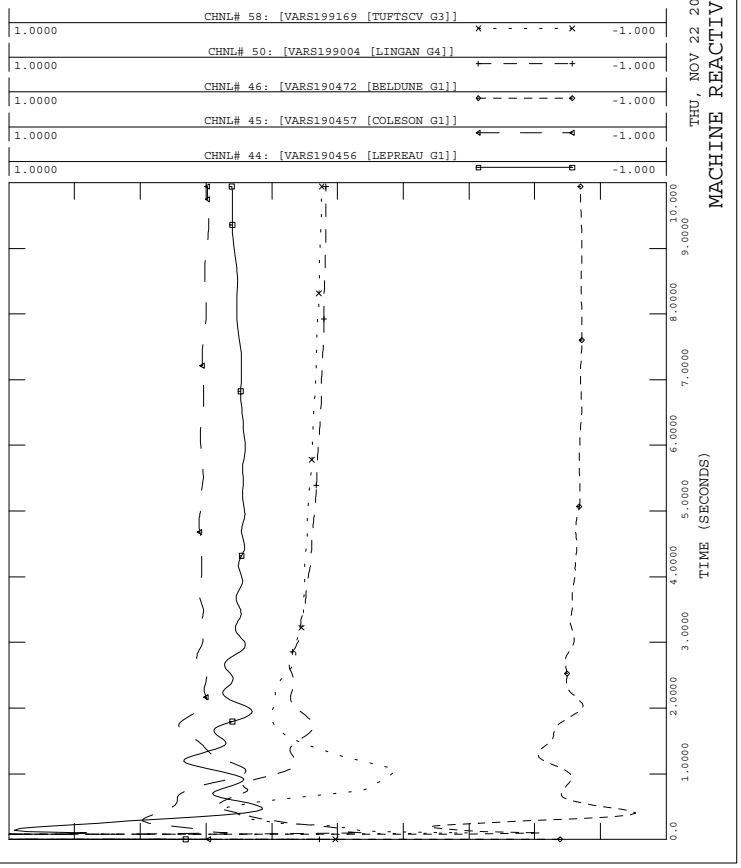
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8001_67N_g0_2015LIGHT_750MW_NSNB-0.out

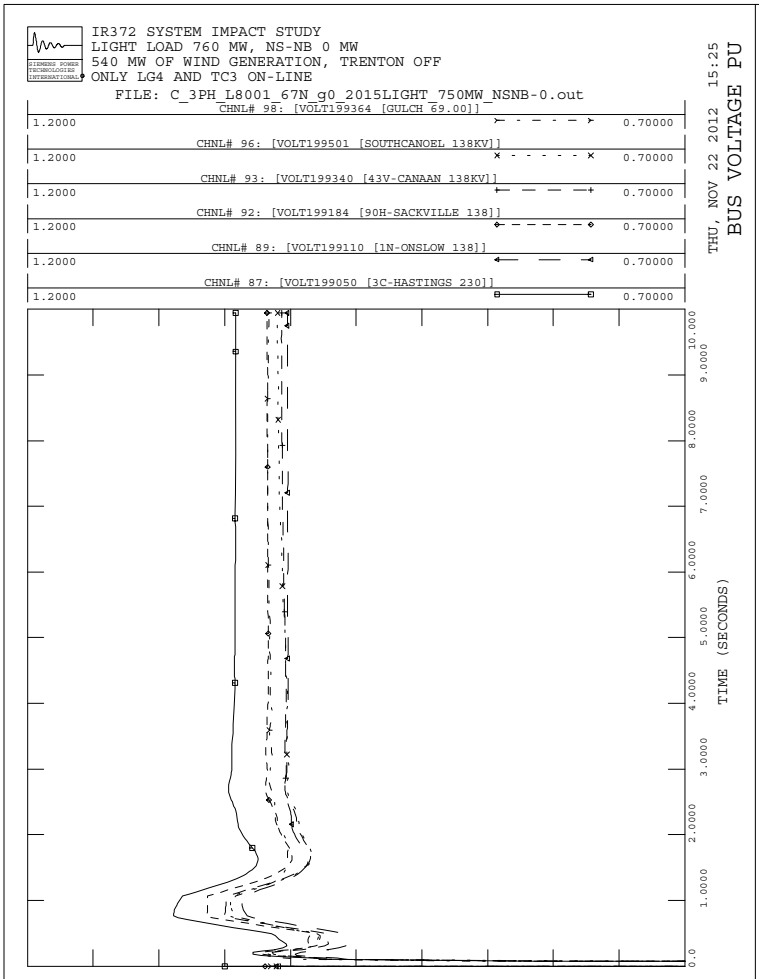


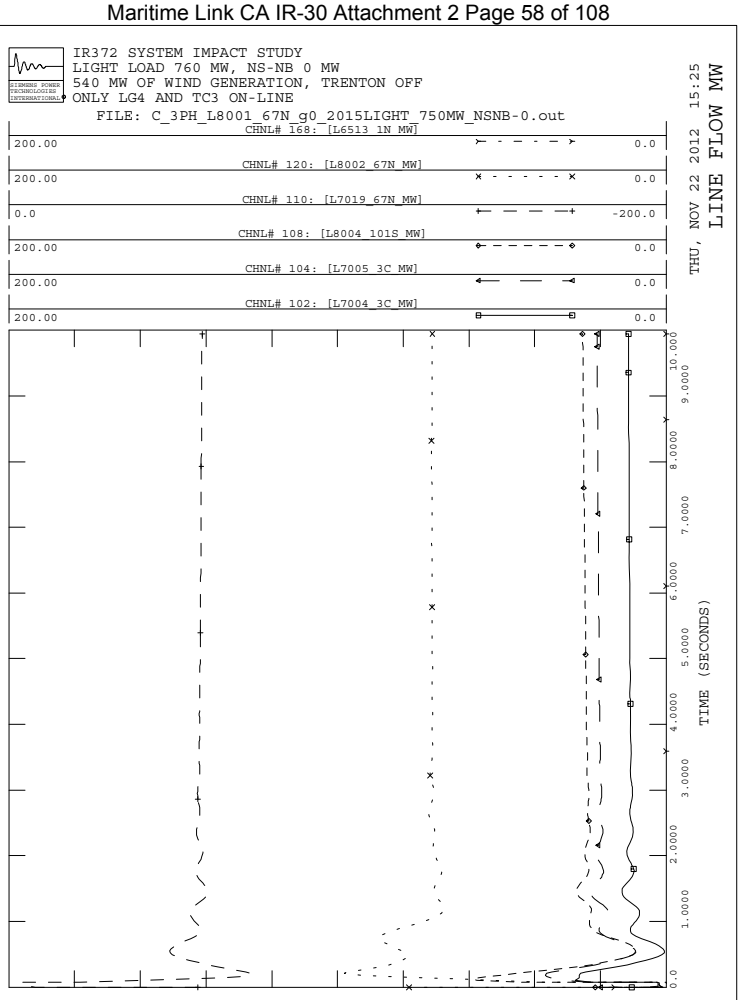
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8001_67N_g0_2015LIGHT_750MW_NSNB-0.out

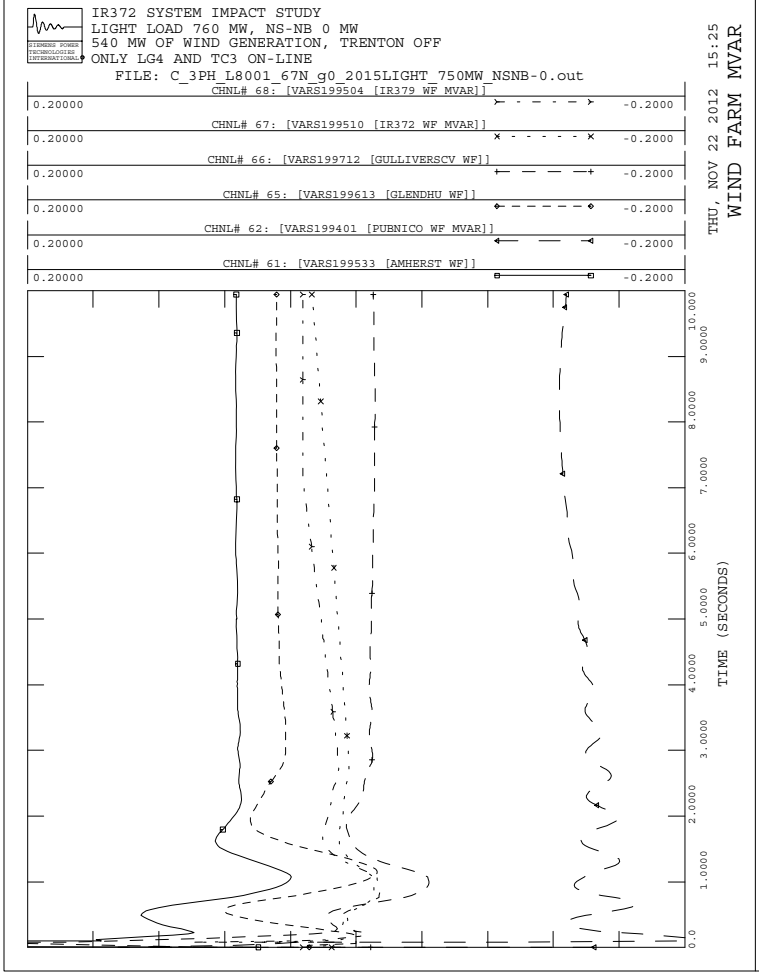


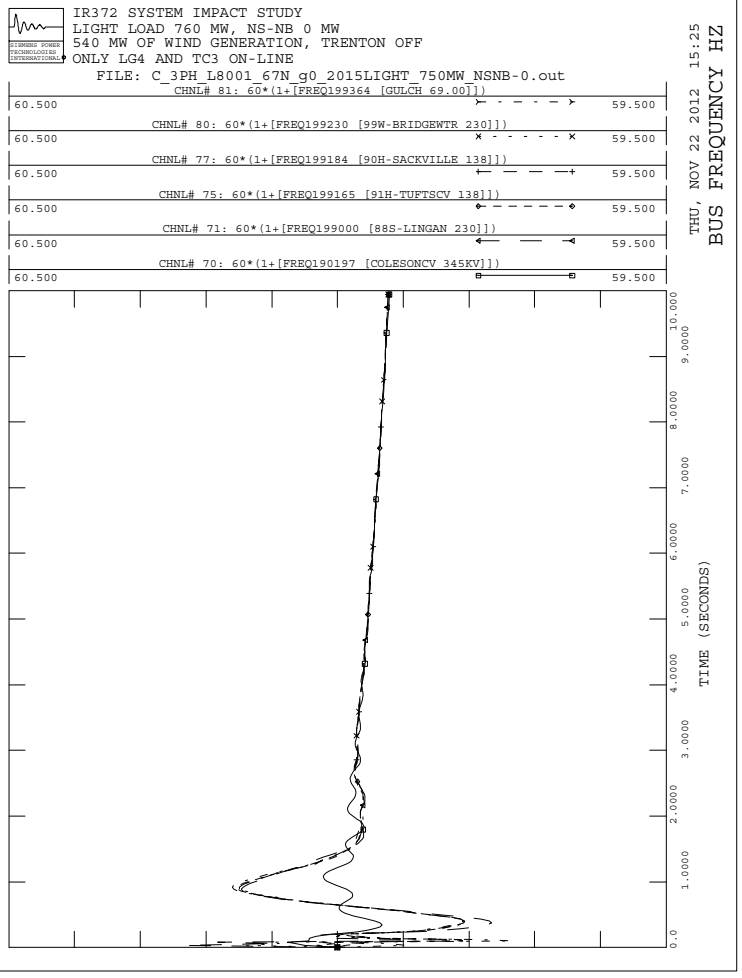
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8001_67N_g0_2015LIGHT_750MW_NSNB-0.out



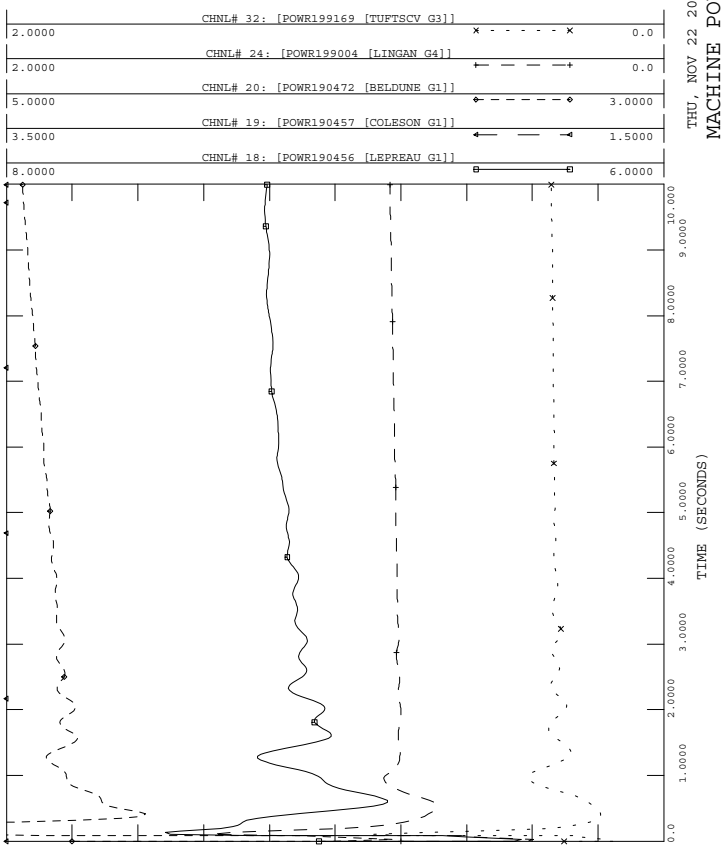

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8001_67N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8001_67N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005_3C MW]
CHNL# 102: [L7004_3C MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)

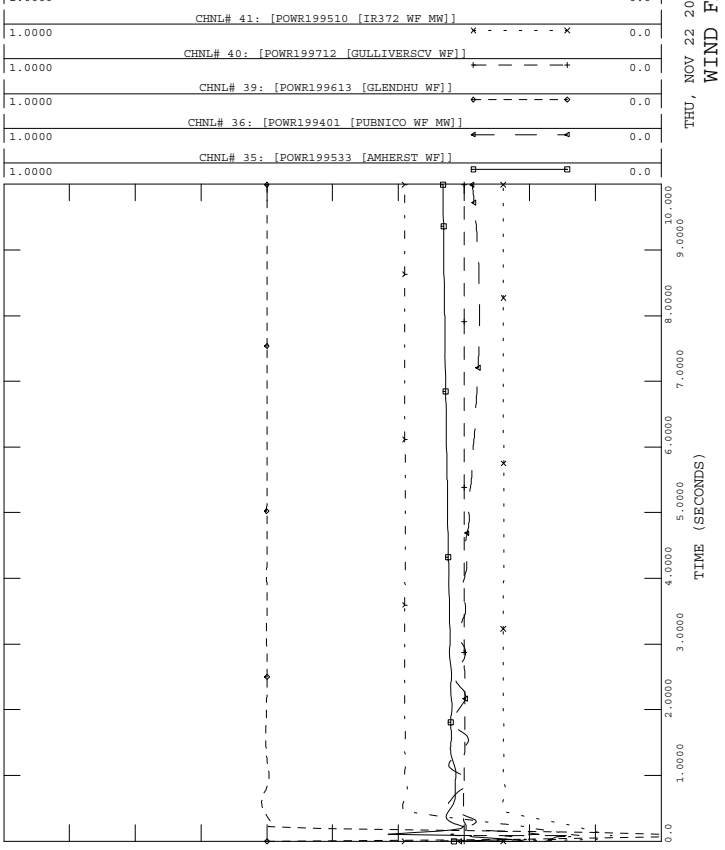

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8001_67N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8001_67N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)

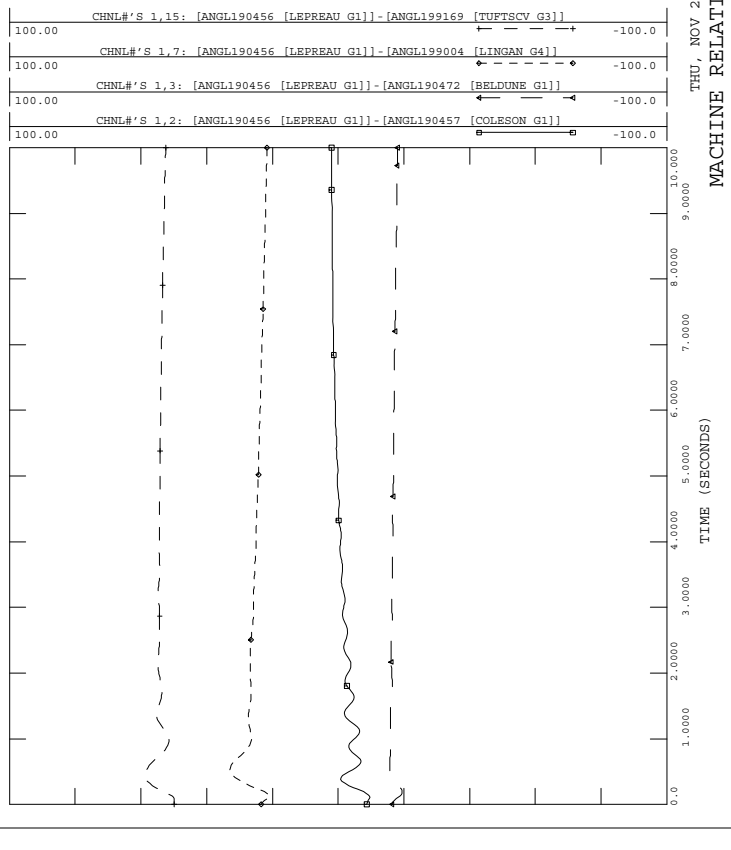
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_103H_2015LIGHT_750MW_NSNB-0.out



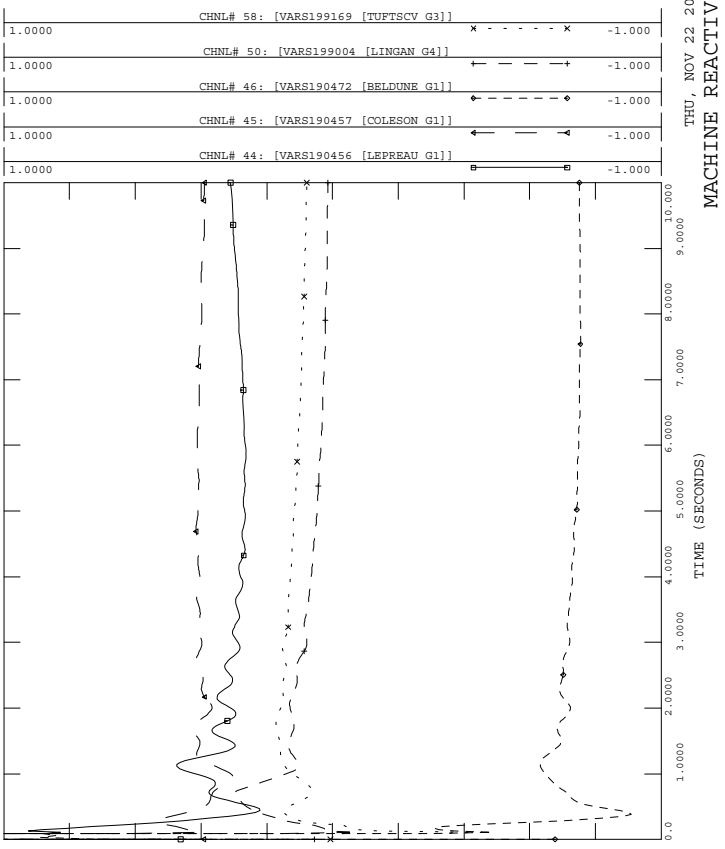
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_103H_2015LIGHT_750MW_NSNB-0.out

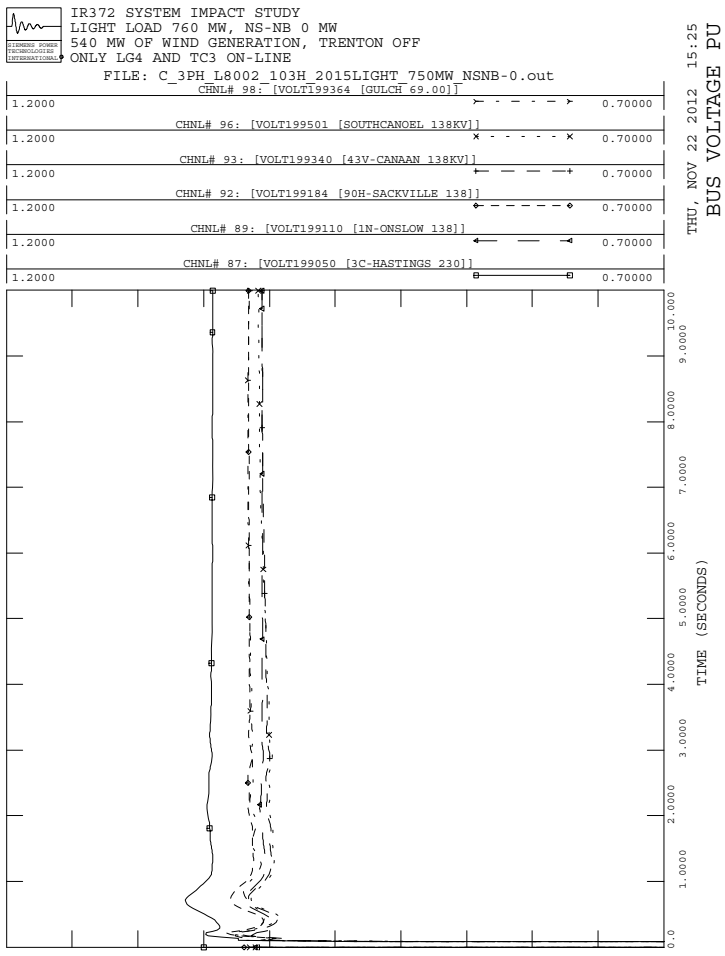


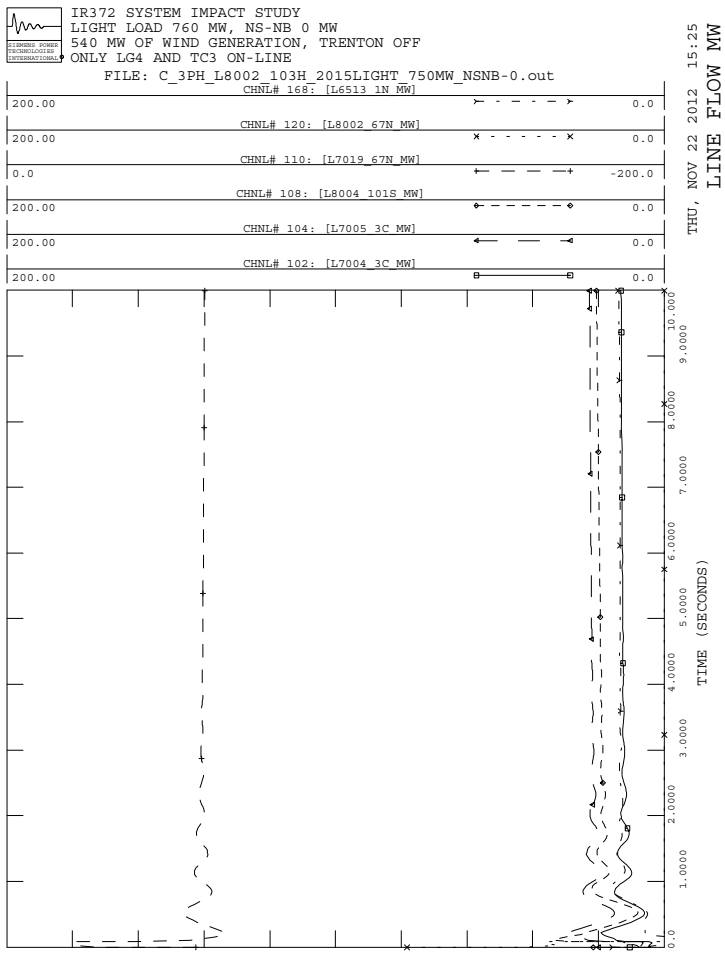
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_103H_2015LIGHT_750MW_NSNB-0.out

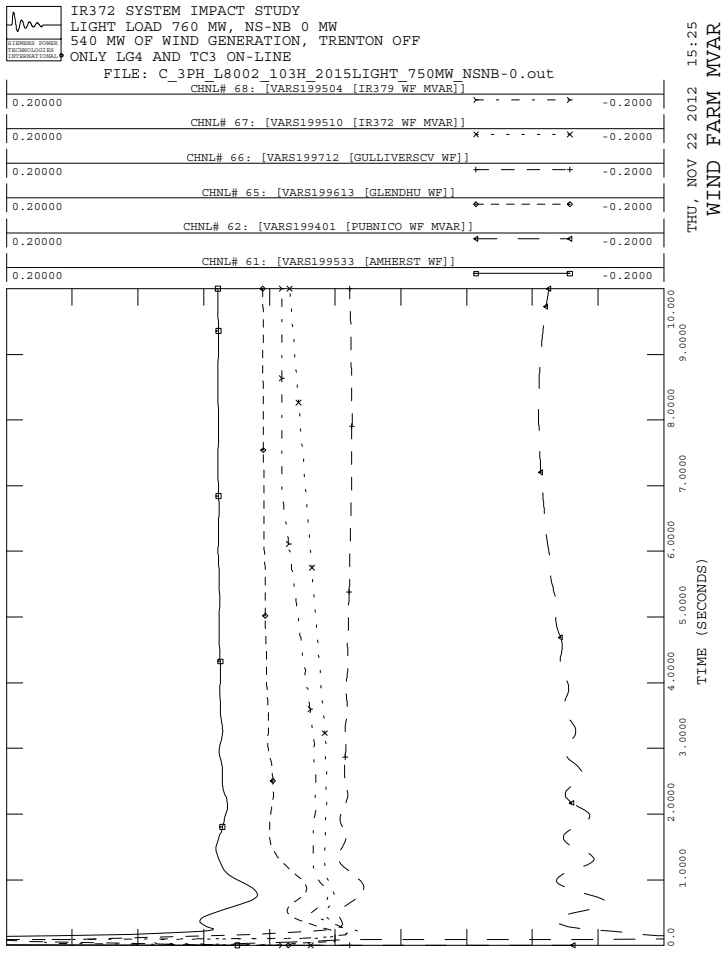


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_103H_2015LIGHT_750MW_NSNB-0.out




IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_103H_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_103H_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005 3C MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_103H_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
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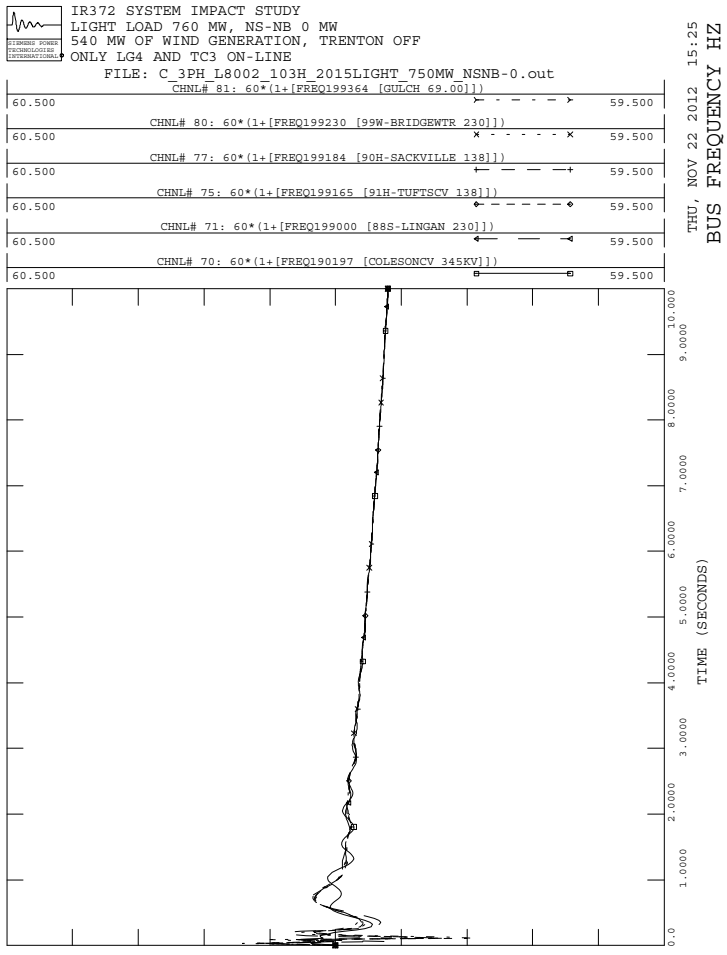
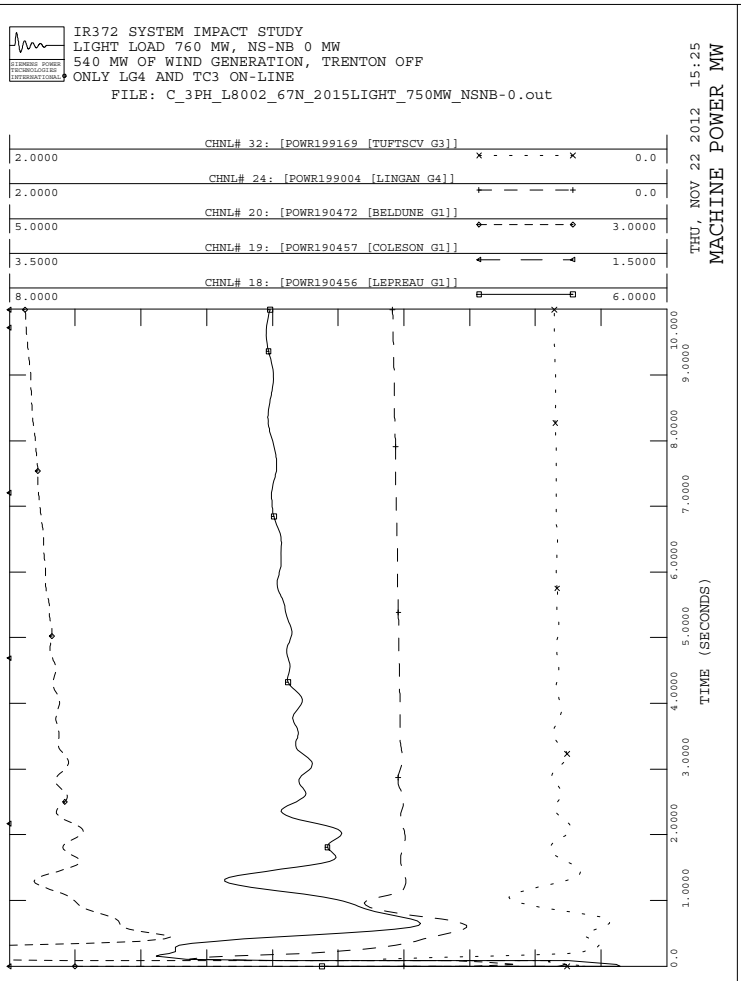
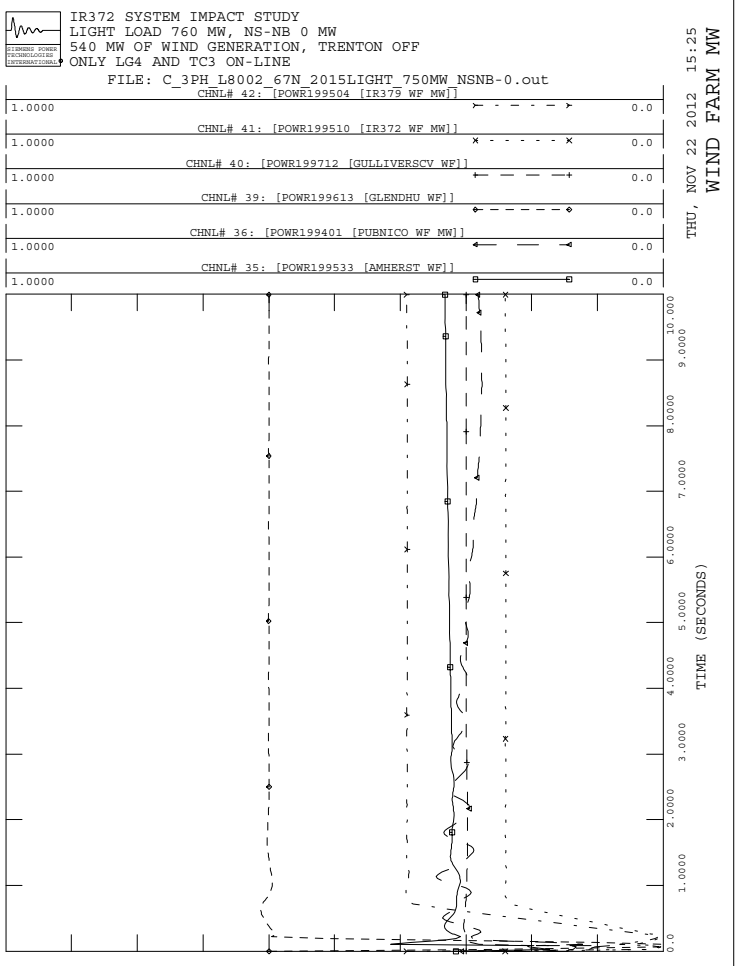
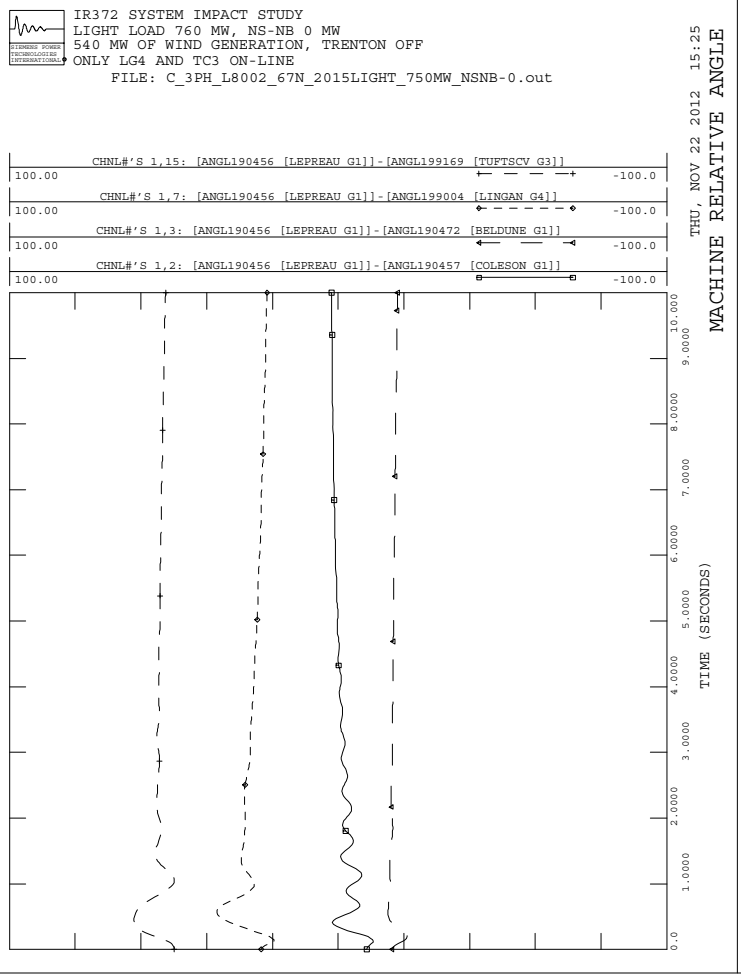
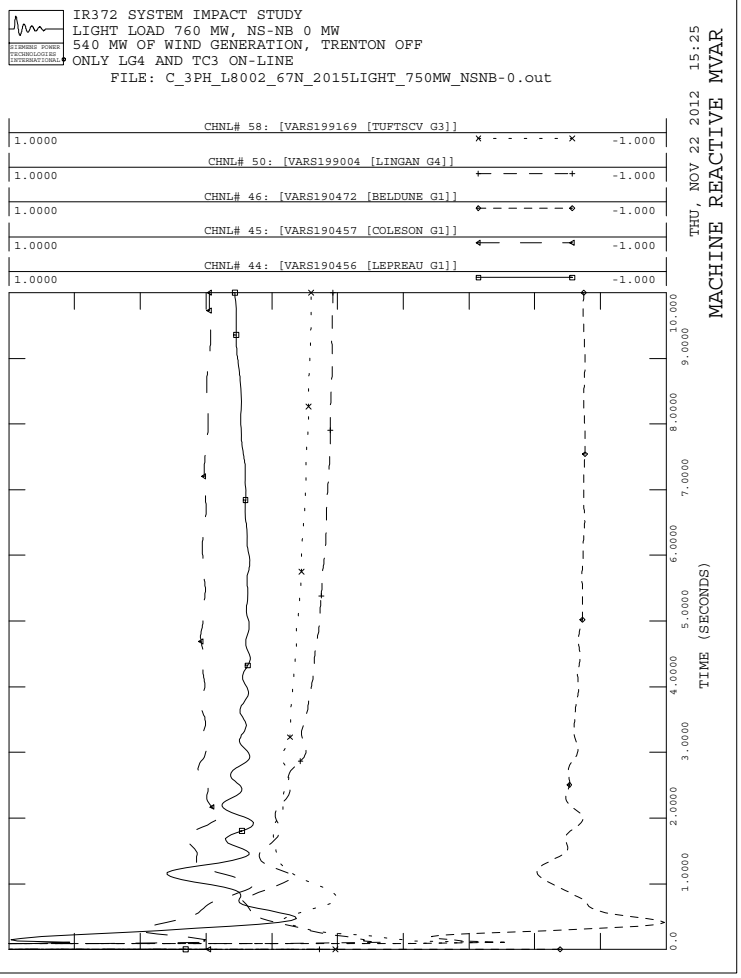
-0.2000
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)

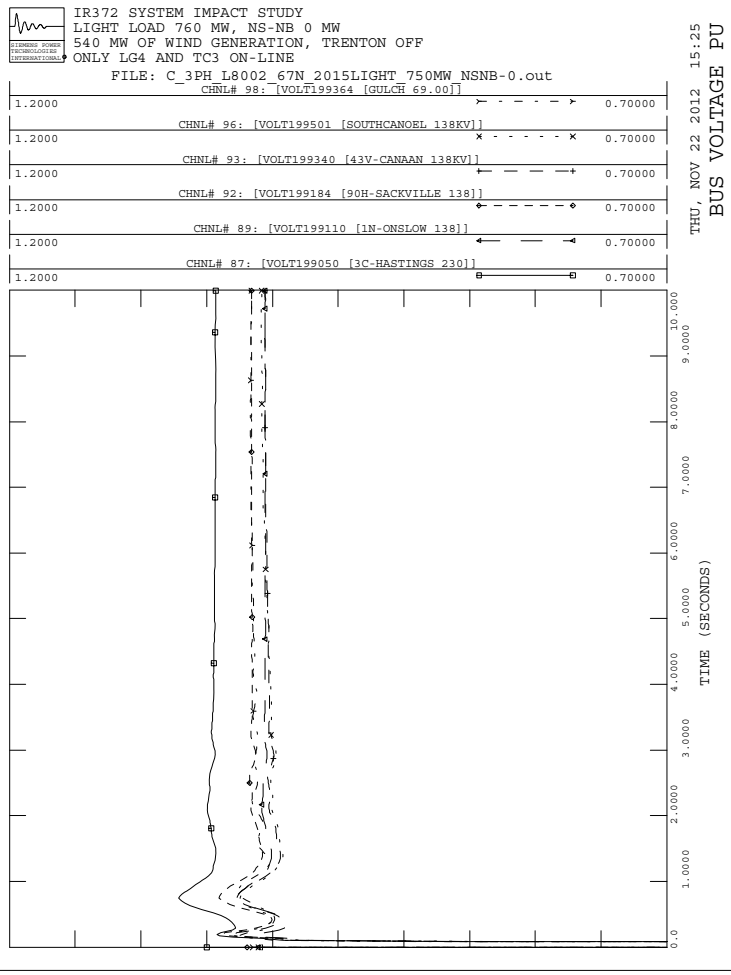

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_103H_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)

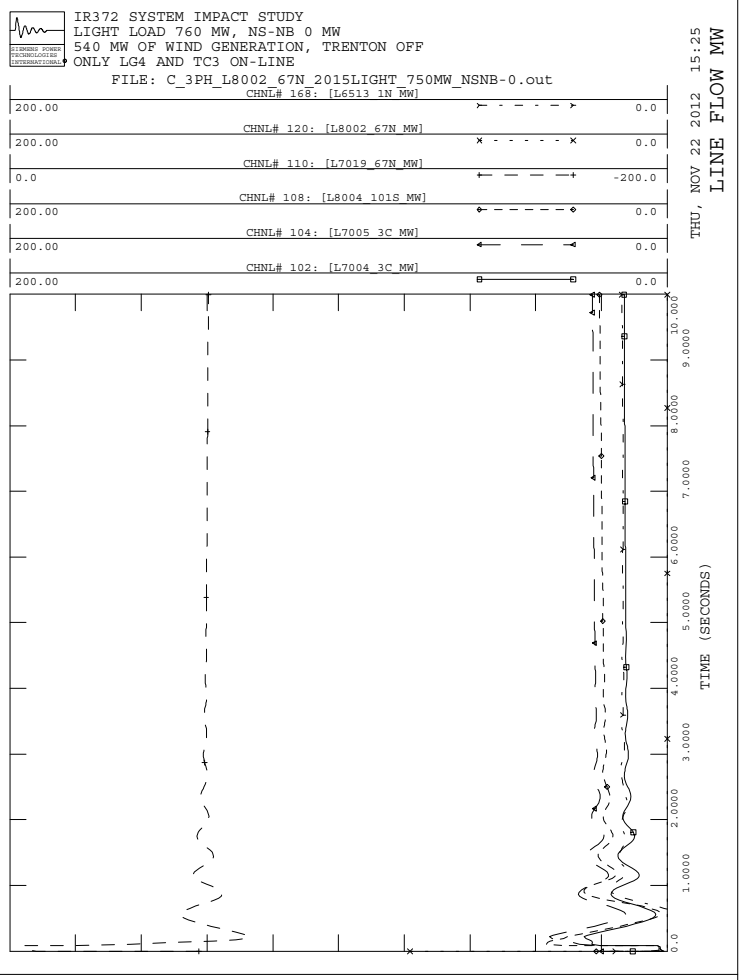

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
THU, NOV 22 2012 15:25
MACHINE POWER MW
TIME (SECONDS)

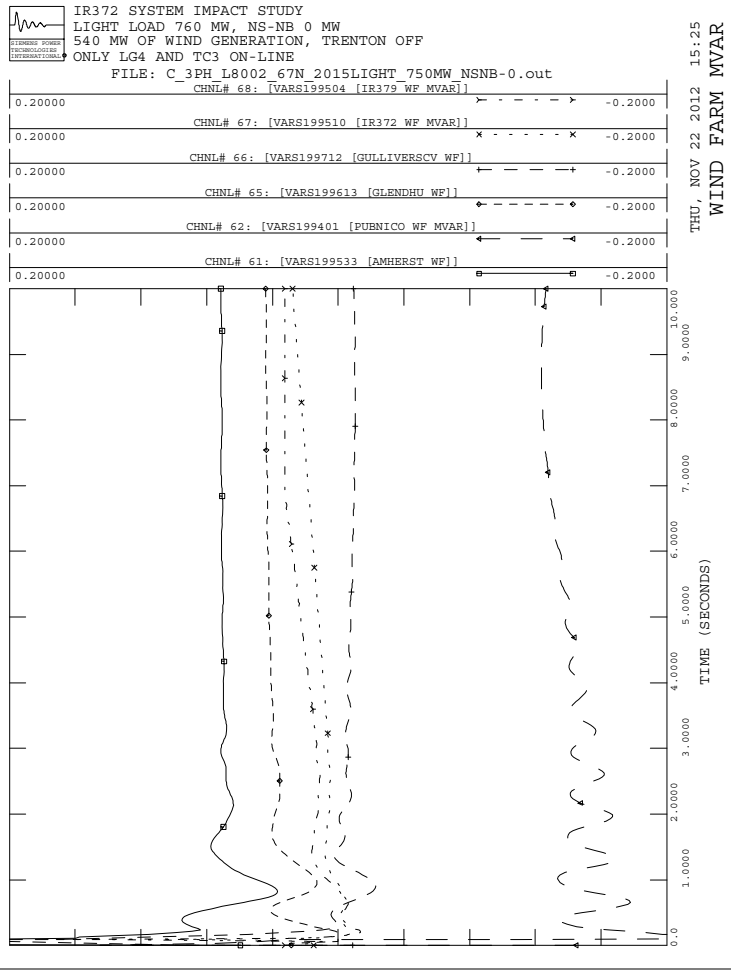

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
THU, NOV 22 2012 15:25
WIND FARM MW
TIME (SECONDS)

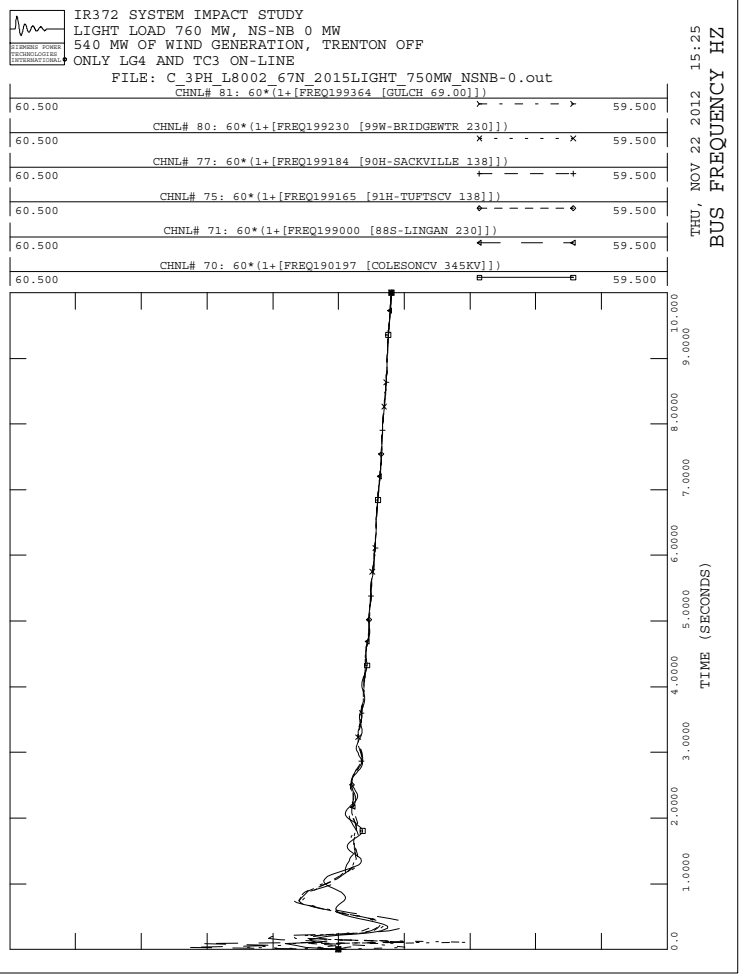

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_67N_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
THU, NOV 22 2012 15:25
MACHINE RELATIVE ANGLE
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
THU, NOV 22 2012 15:25
MACHINE REACTIVE MVAR
TIME (SECONDS)

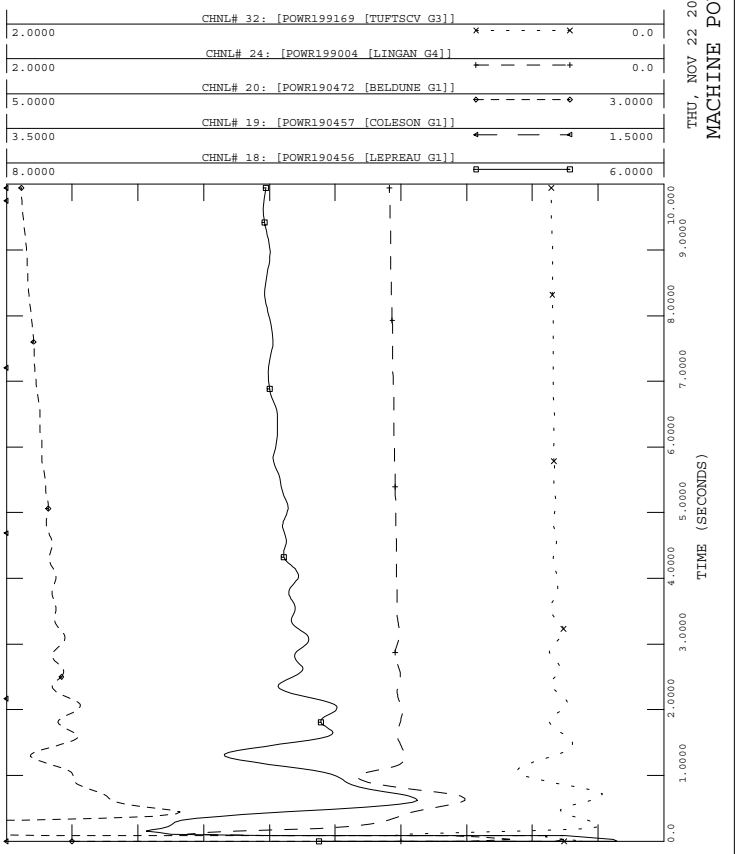

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513_1N_MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)

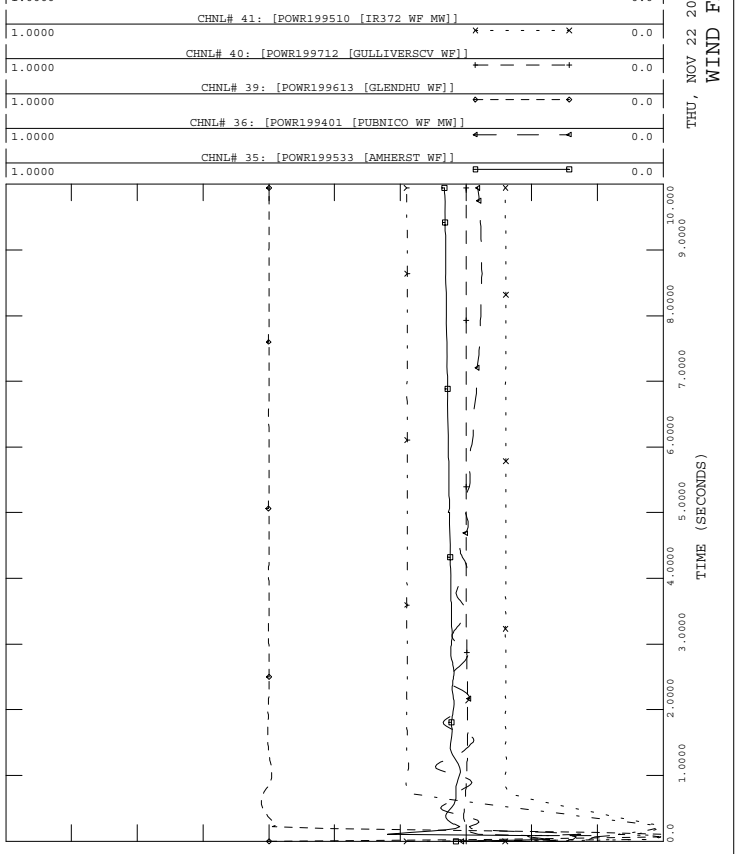

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8002_67N_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)

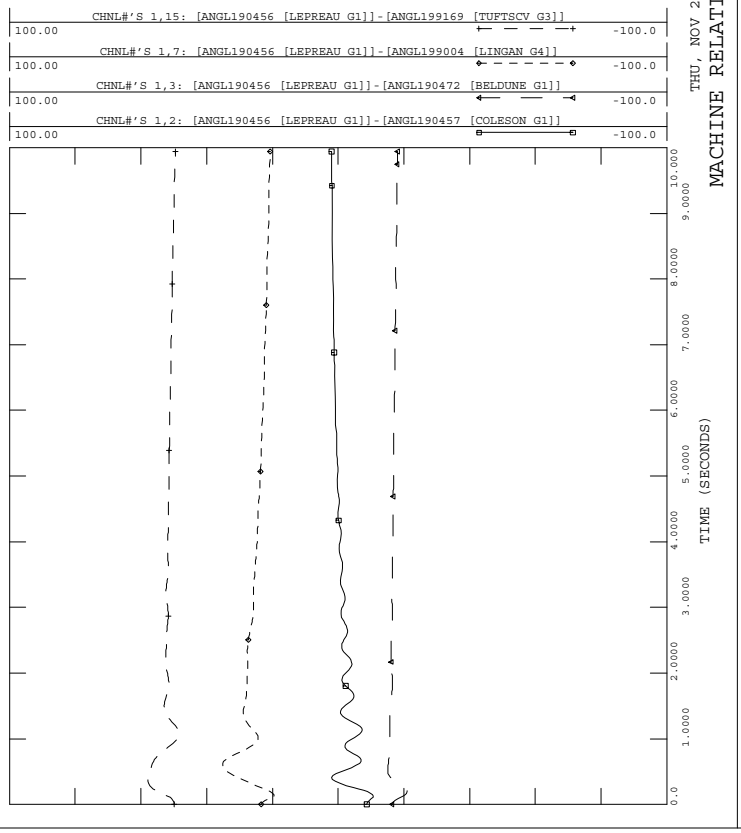
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_67N_g0_2015LIGHT_750MW_NSNB-0.out



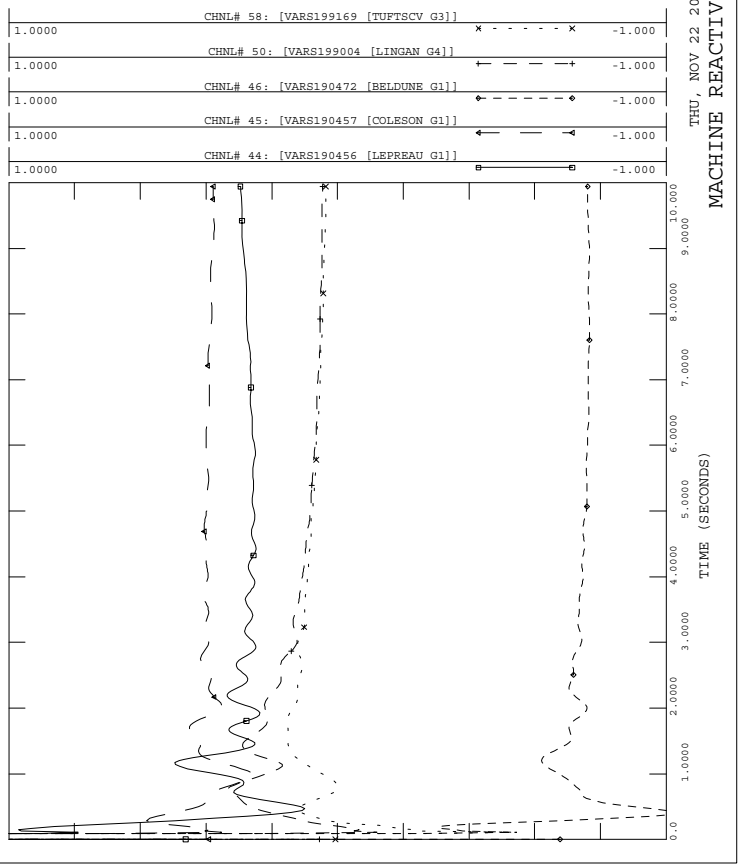
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_67N_g0_2015LIGHT_750MW_NSNB-0.out



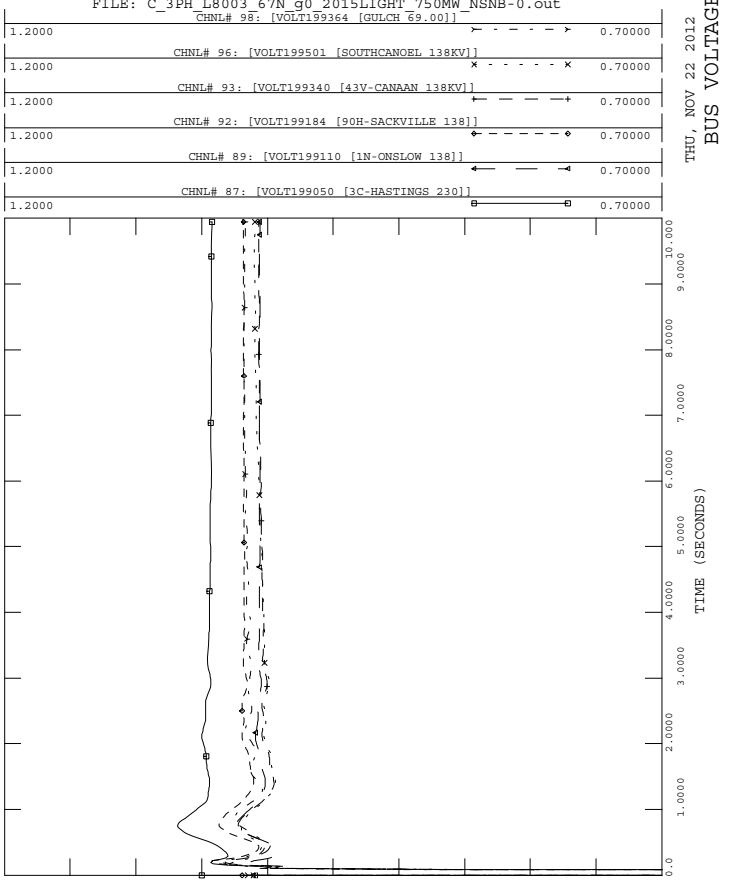
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_67N_g0_2015LIGHT_750MW_NSNB-0.out



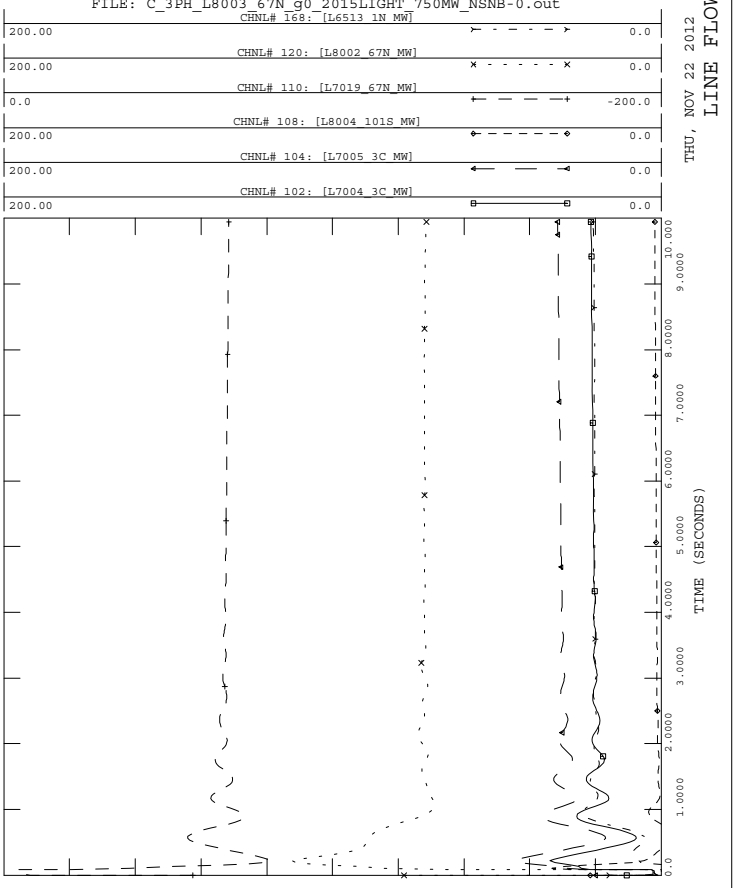
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_67N_g0_2015LIGHT_750MW_NSNB-0.out



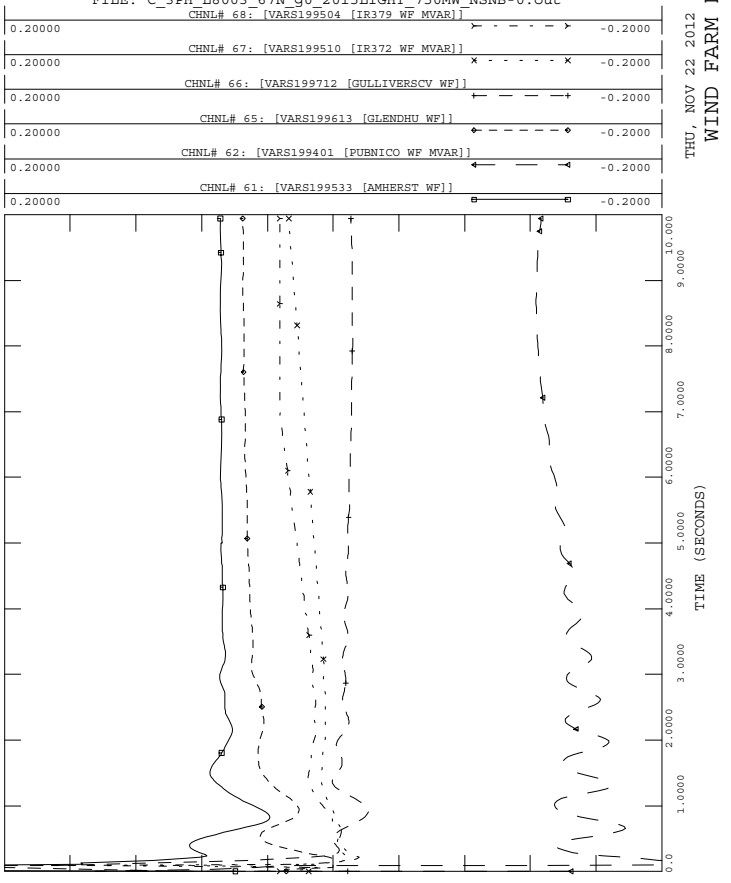
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_67N_g0_2015LIGHT_750MW_NSNB-0.out



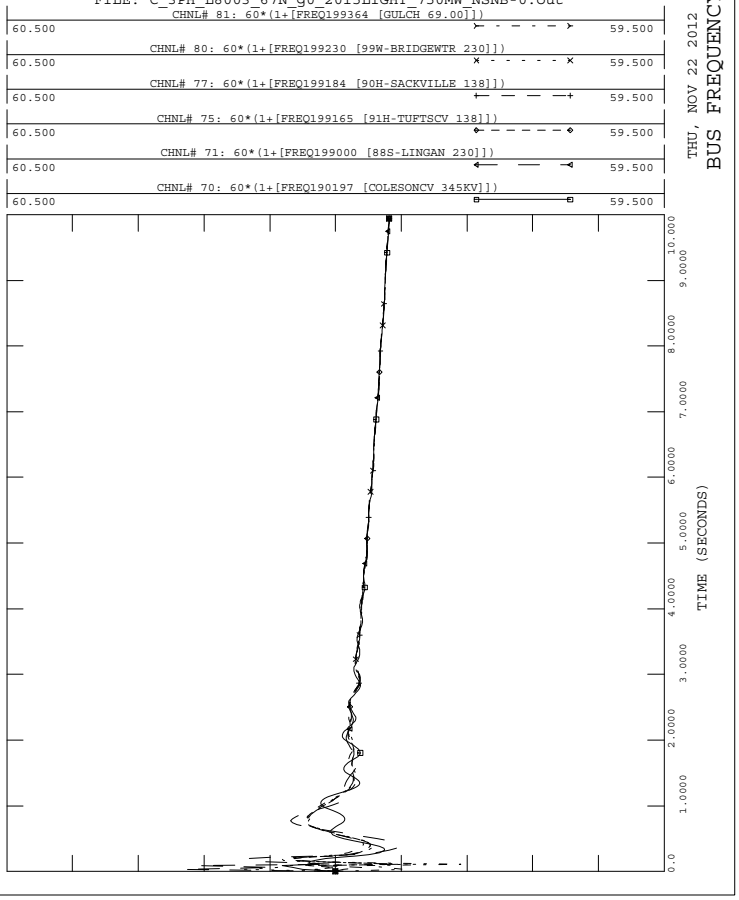
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_67N_g0_2015LIGHT_750MW_NSNB-0.out



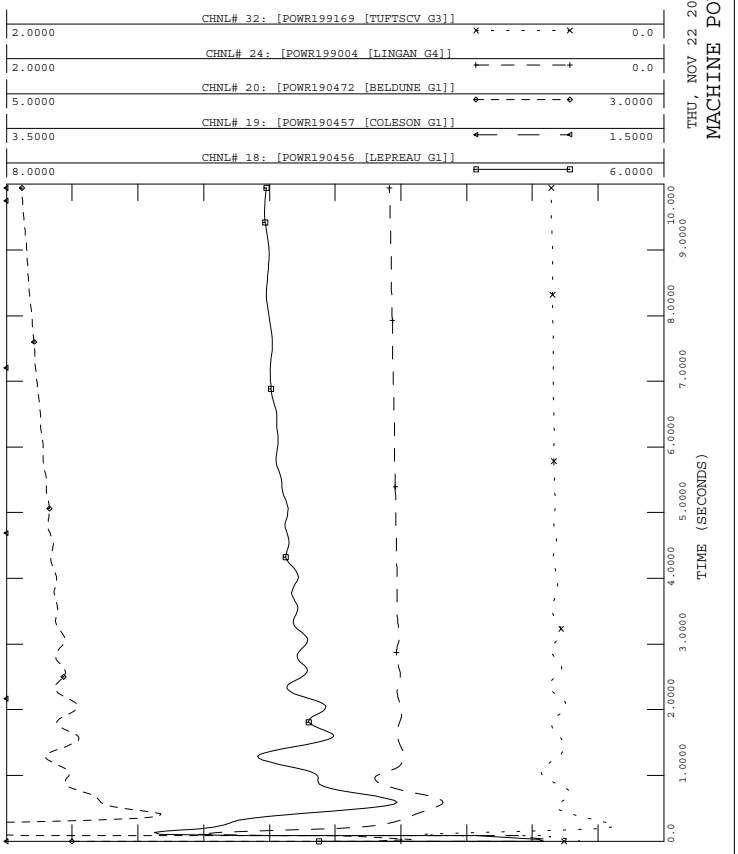
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_67N_g0_2015LIGHT_750MW_NSNB-0.out



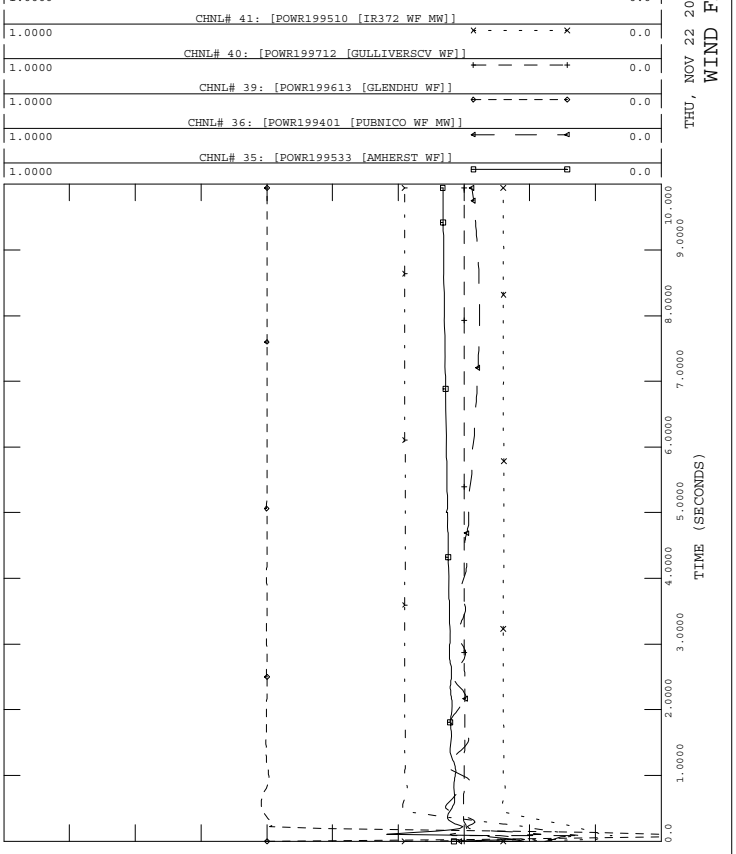
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_67N_g0_2015LIGHT_750MW_NSNB-0.out



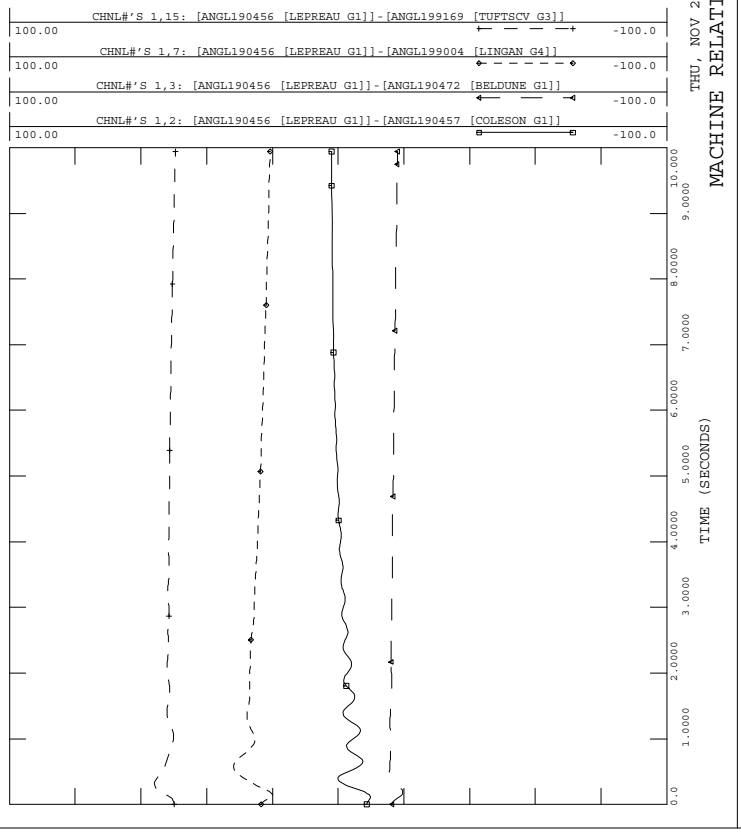
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_79N_g0_2015LIGHT_750MW_NSNB-0.out



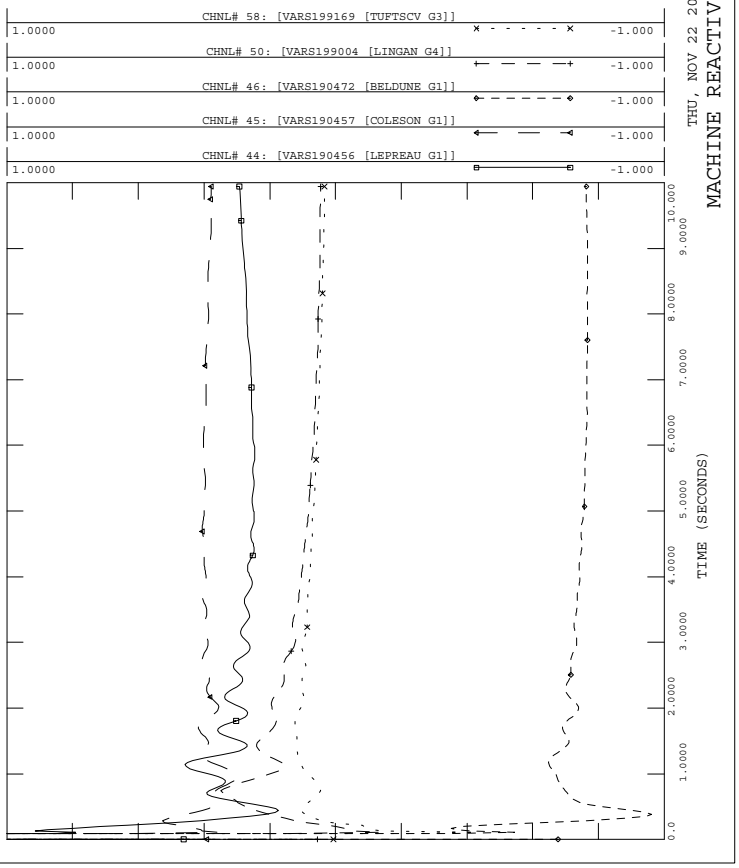
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_79N_g0_2015LIGHT_750MW_NSNB-0.out

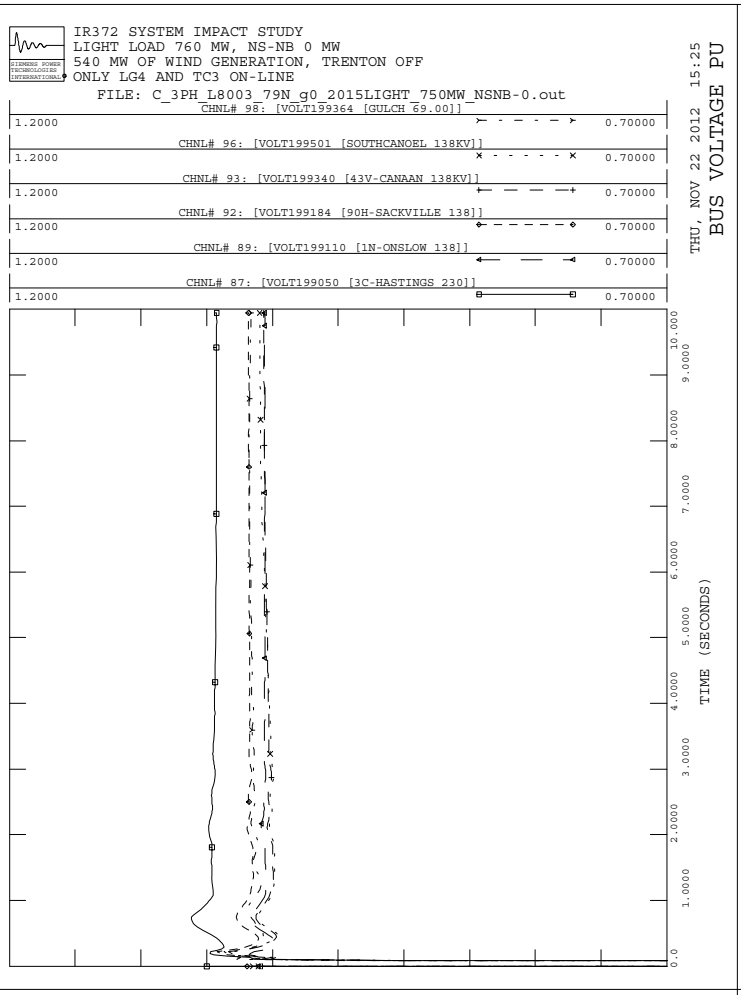


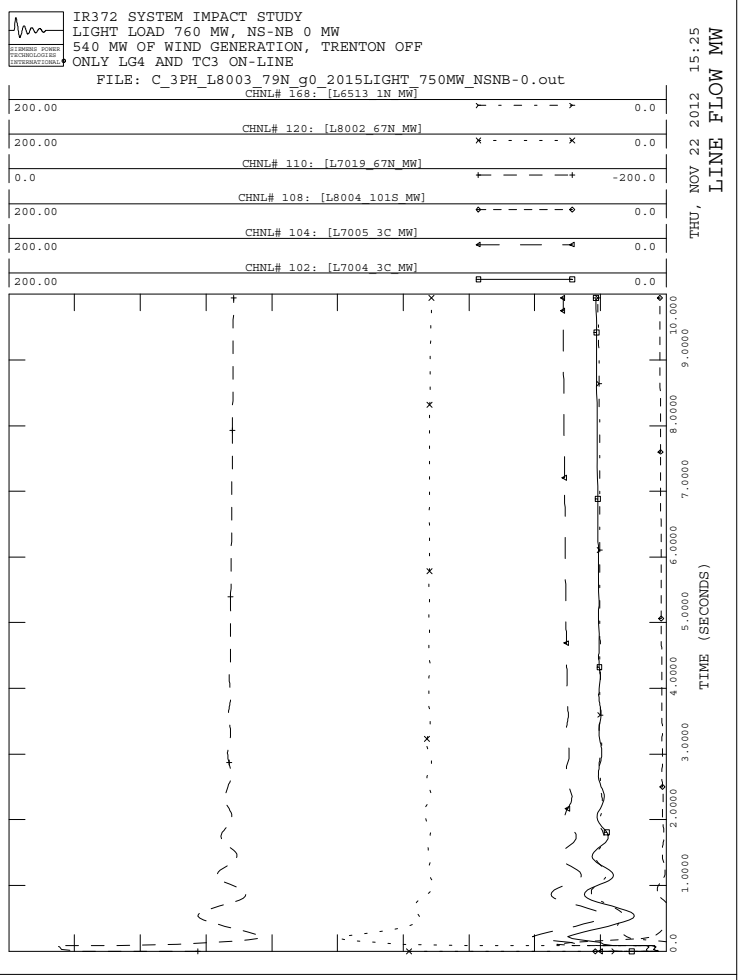
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_79N_g0_2015LIGHT_750MW_NSNB-0.out

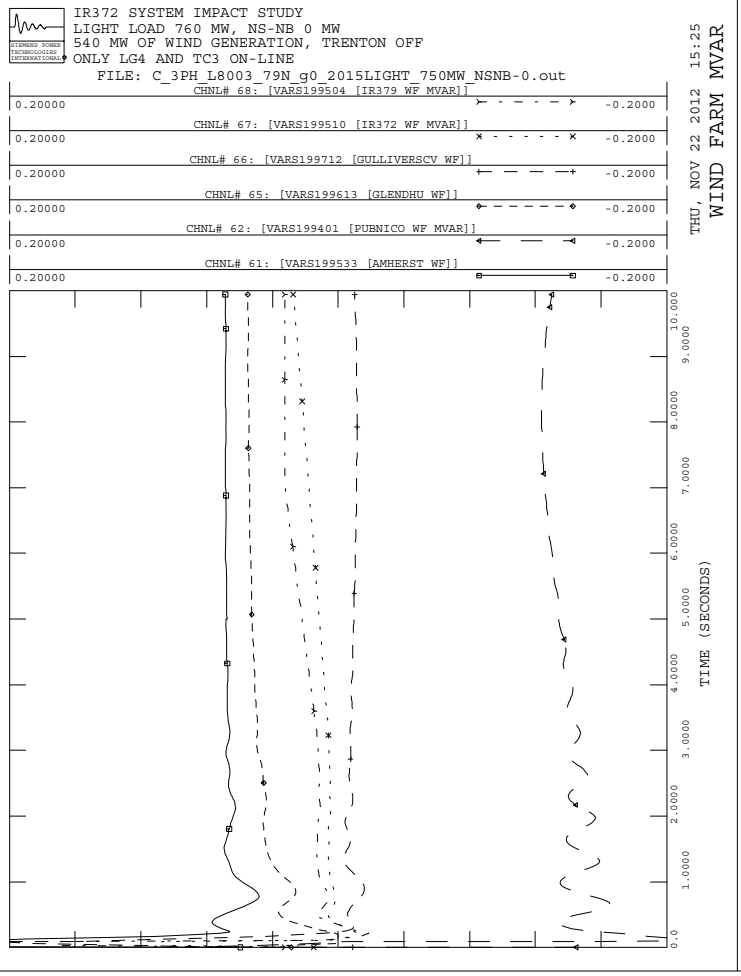


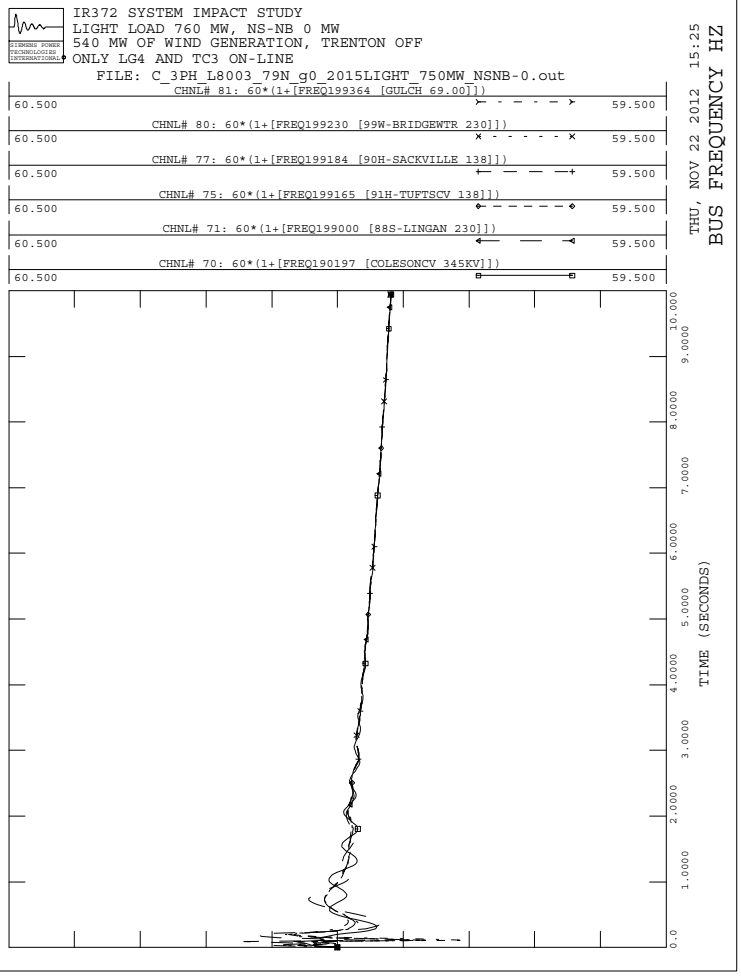
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_79N_g0_2015LIGHT_750MW_NSNB-0.out



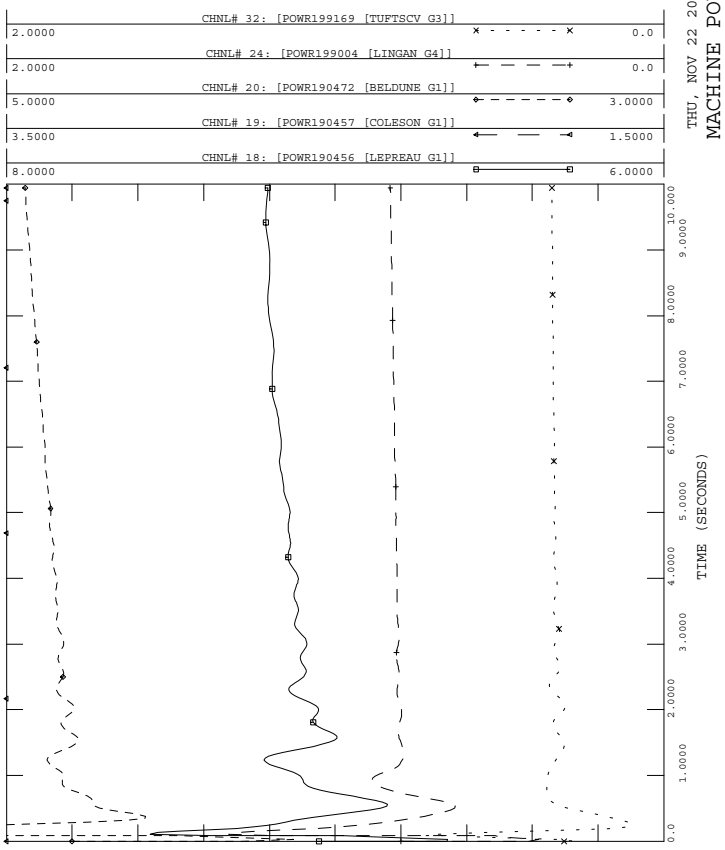

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_79N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_79N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005_3C MW]
CHNL# 102: [L7004_3C MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_79N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)

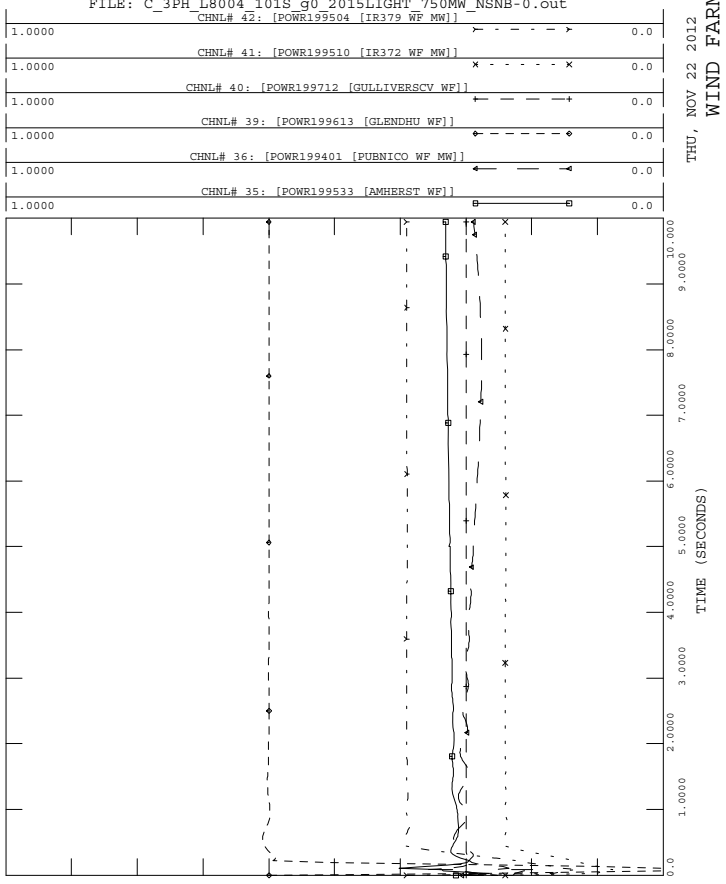

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8003_79N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_101S_g0_2015LIGHT_750MW_NSNB-0.out



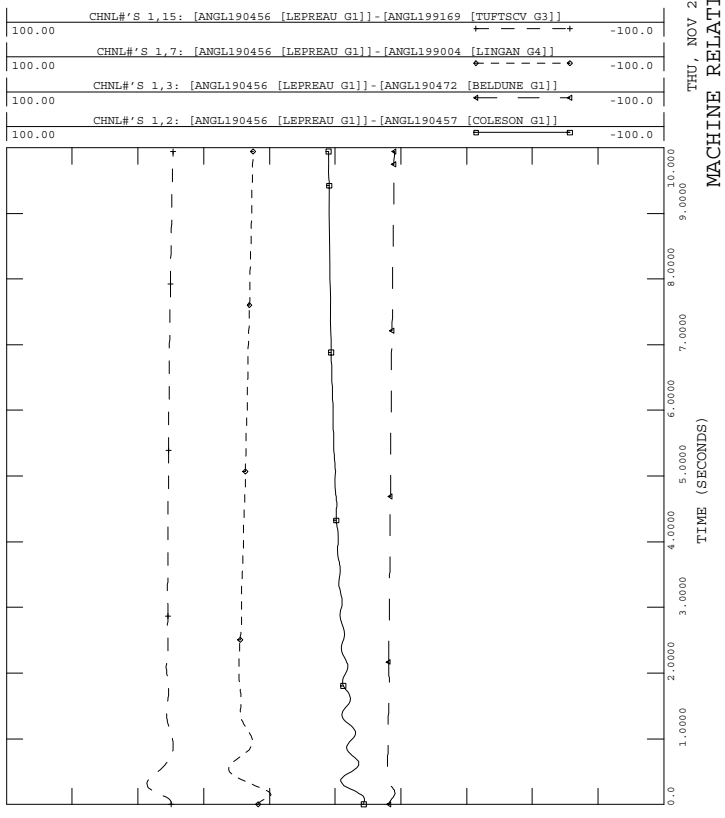
THU, NOV 22 2012 15:25
MACHINE POWER MW

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_101S_g0_2015LIGHT_750MW_NSNB-0.out



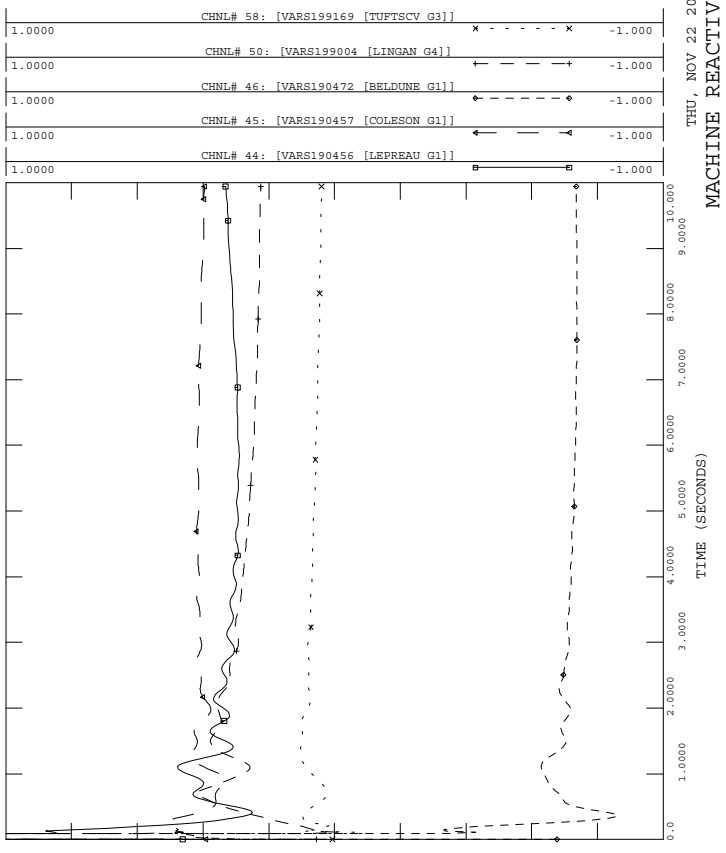
THU, NOV 22 2012 15:25
WIND FARM MW

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_101S_g0_2015LIGHT_750MW_NSNB-0.out

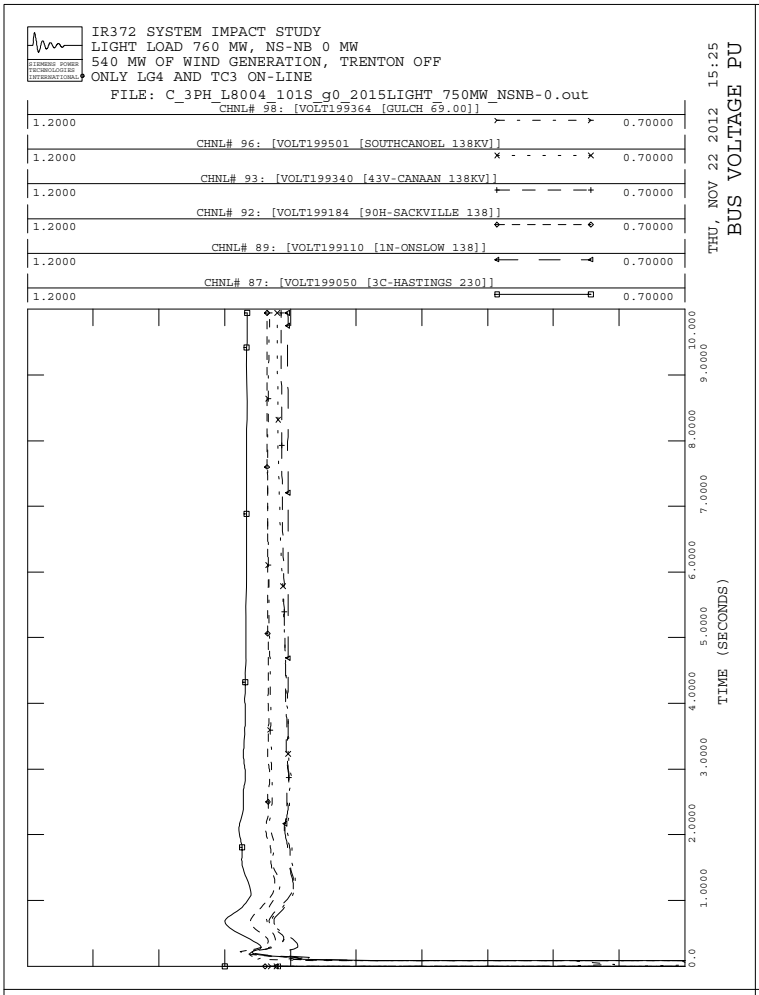


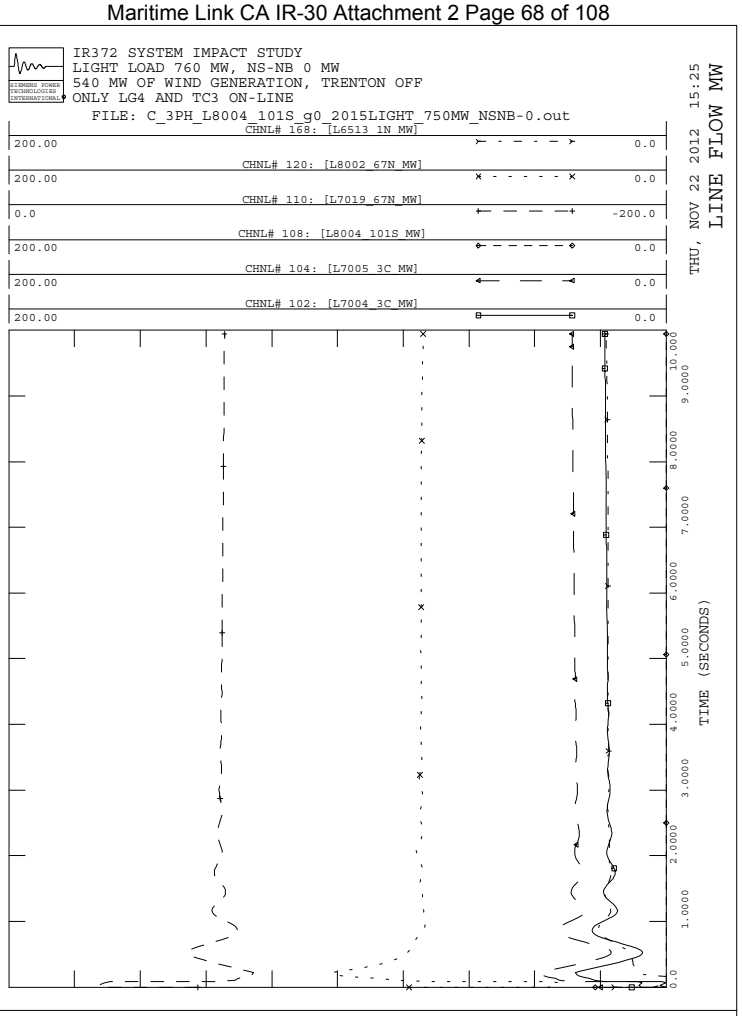
THU, NOV 22 2012 15:25
MACHINE RELATIVE ANGLE

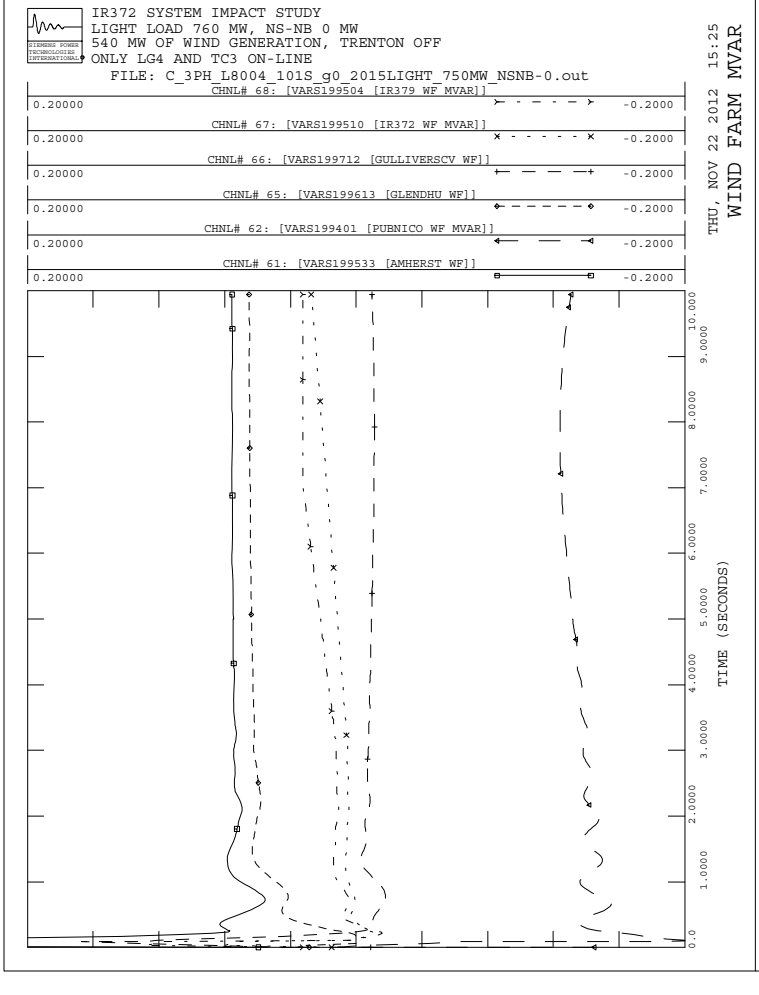
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_101S_g0_2015LIGHT_750MW_NSNB-0.out

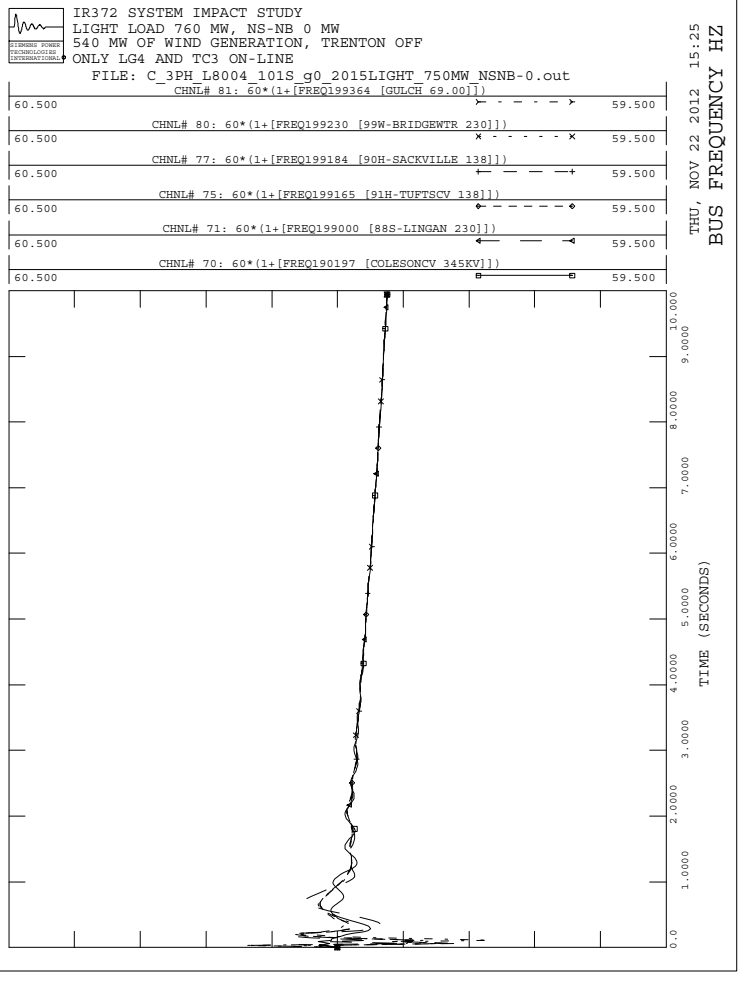


THU, NOV 22 2012 15:25
MACHINE REACTIVE MVAR

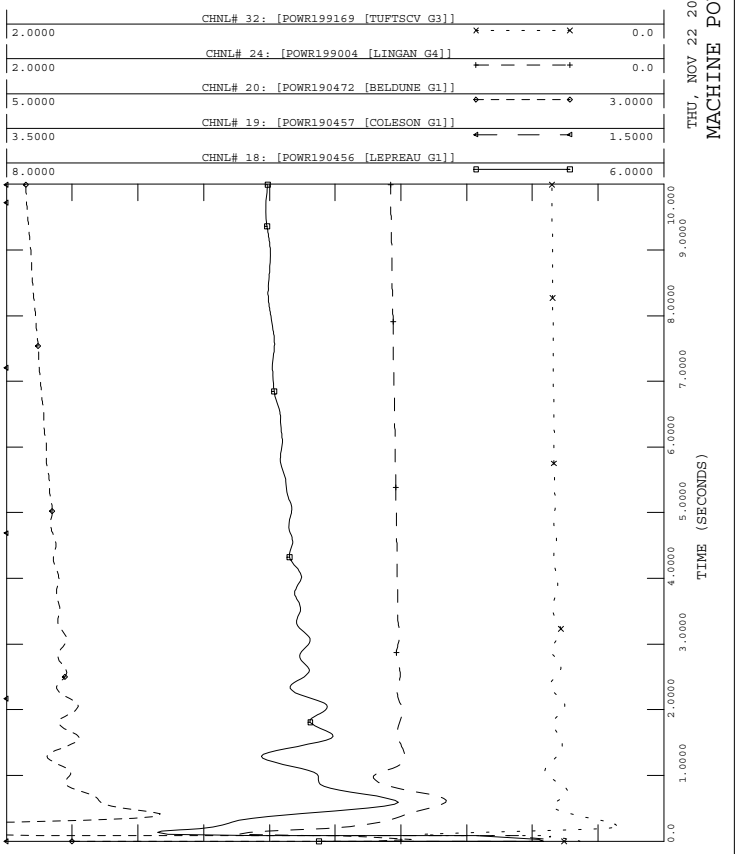

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_101S_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_101S_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)

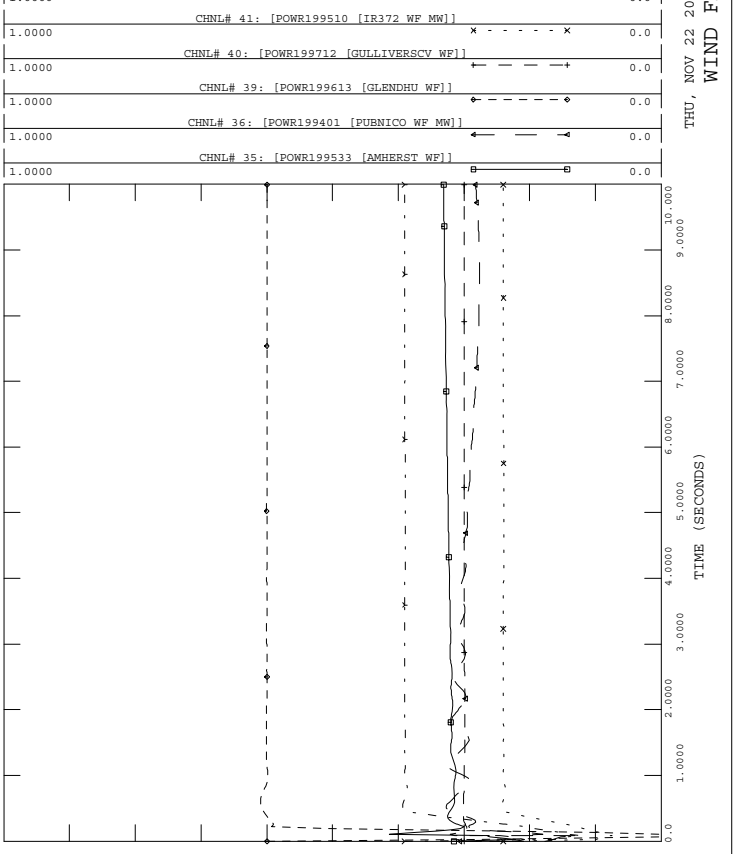

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_101S_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_101S_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)

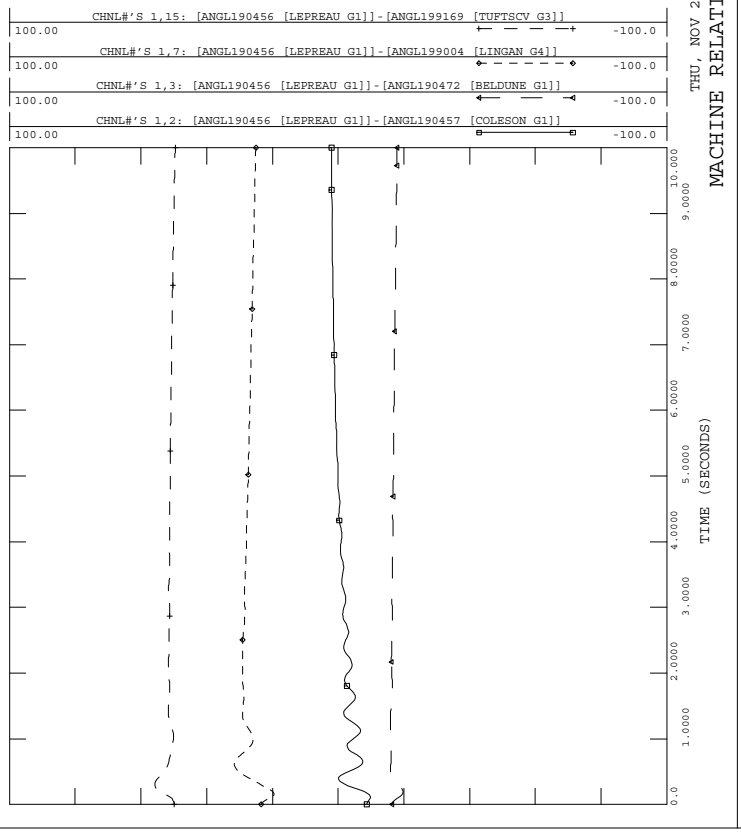
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_79N_g0_2015LIGHT_750MW_NSNB-0.out



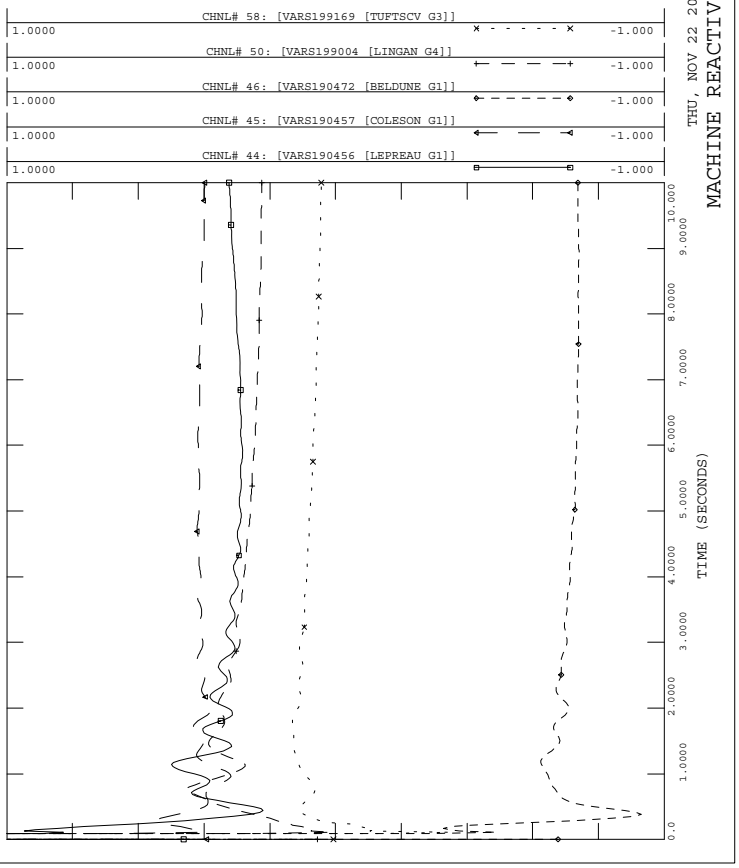
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_79N_g0_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_79N_g0_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_79N_g0_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_79N_g0_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
BUS VOLTAGE PU

CHNL# 98: [VOLT199364 [GULCH 69.00]] 1.2000 0.70000
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]] 1.2000 0.70000
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]] 1.2000 0.70000
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]] 1.2000 0.70000
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]] 1.2000 0.70000
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]] 1.2000 0.70000

0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000
TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_79N_g0_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
LINE FLOW MW

CHNL# 168: [L6513 1N MW] 200.00 0.0
CHNL# 120: [L8002_67N_MW] 200.00 0.0
CHNL# 110: [L7019_67N_MW] 0.0 -200.0
CHNL# 108: [L8004_101S_MW] 200.00 0.0
CHNL# 104: [L7005_3C_MW] 200.00 0.0
CHNL# 102: [L7004_3C_MW] 200.00 0.0

0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000
TIME (SECONDS)

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_79N_g0_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
WIND FARM MVAR

CHNL# 68: [VARS199504 [IR379 WF MVAR]] 0.20000 -0.2000
CHNL# 67: [VARS199510 [IR372 WF MVAR]] 0.20000 -0.2000
CHNL# 66: [VARS199712 [GULLIVERSCV WF]] 0.20000 -0.2000
CHNL# 65: [VARS199613 [GLENDHU WF]] 0.20000 -0.2000
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]] 0.20000 -0.2000
CHNL# 61: [VARS199533 [AMHERST WF]] 0.20000 -0.2000

0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000
TIME (SECONDS)

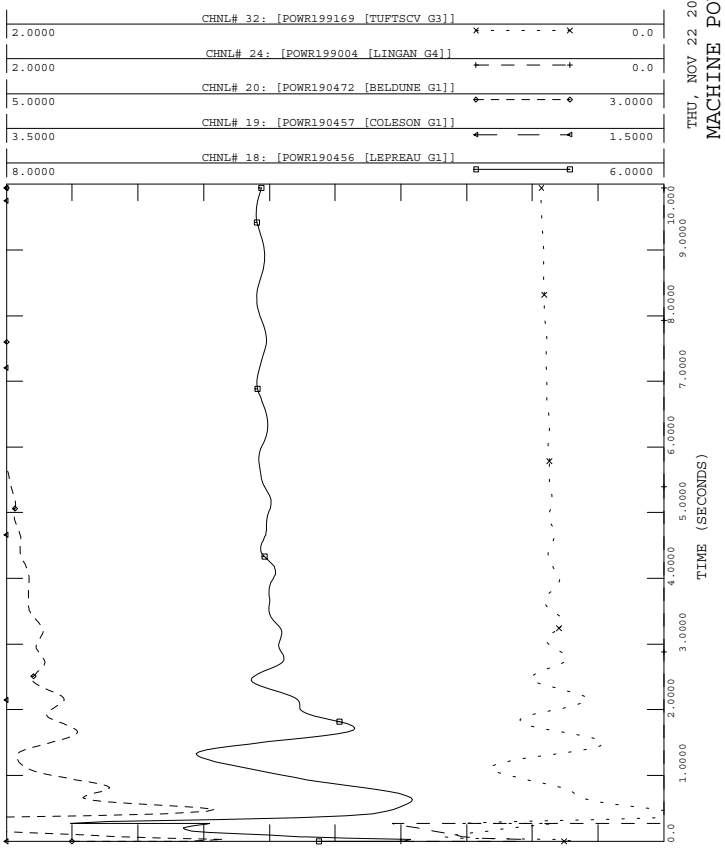
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_3PH_L8004_79N_g0_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
BUS FREQUENCY HZ

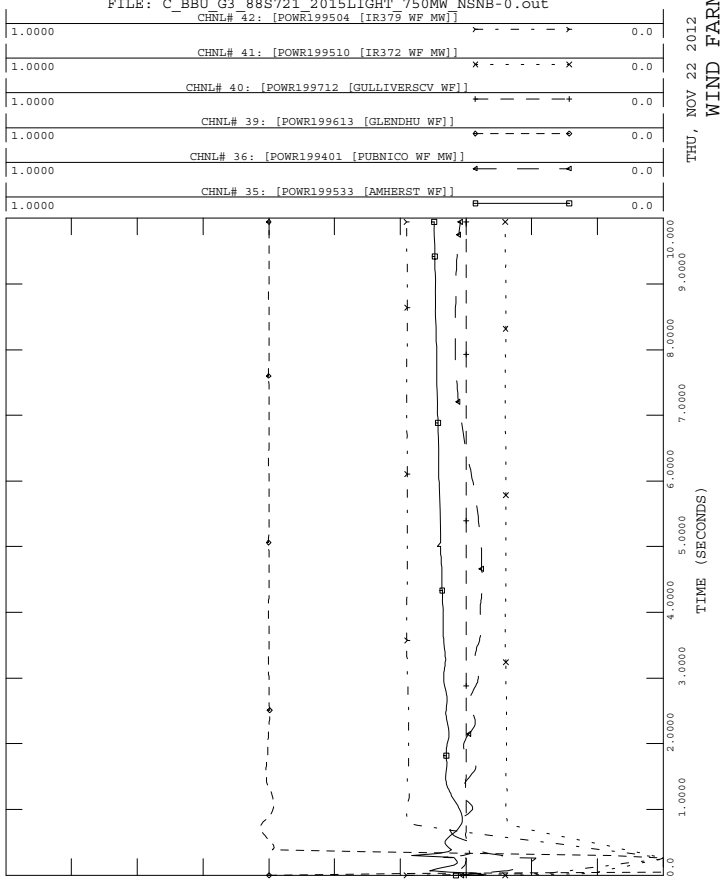
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]]) 60.500 59.500
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]]) 60.500 59.500
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]]) 60.500 59.500
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]]) 60.500 59.500
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]]) 60.500 59.500
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]]) 60.500 59.500

0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000
TIME (SECONDS)

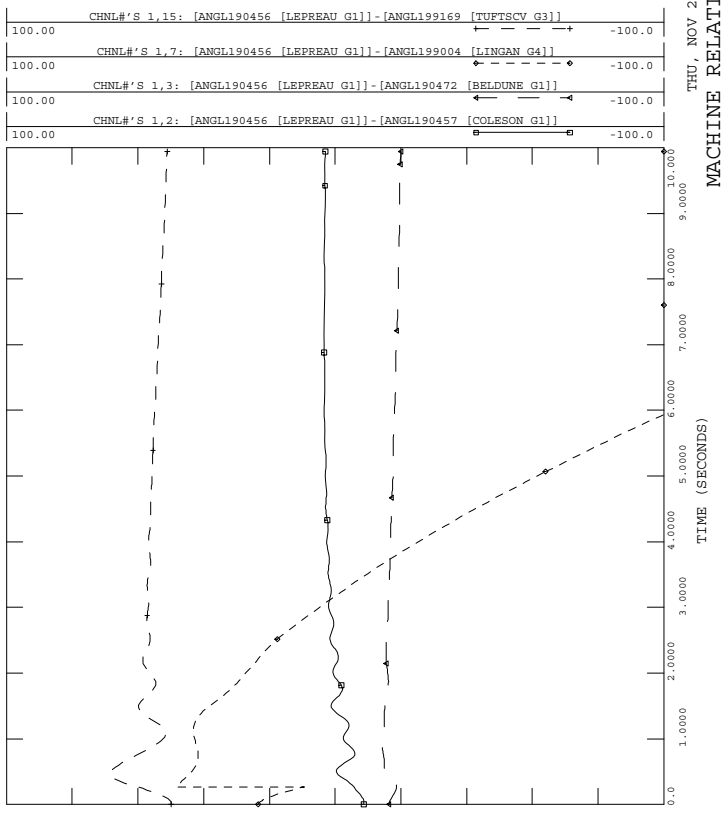
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_G3_88S721_2015LIGHT_750MW_NSNB-0.out



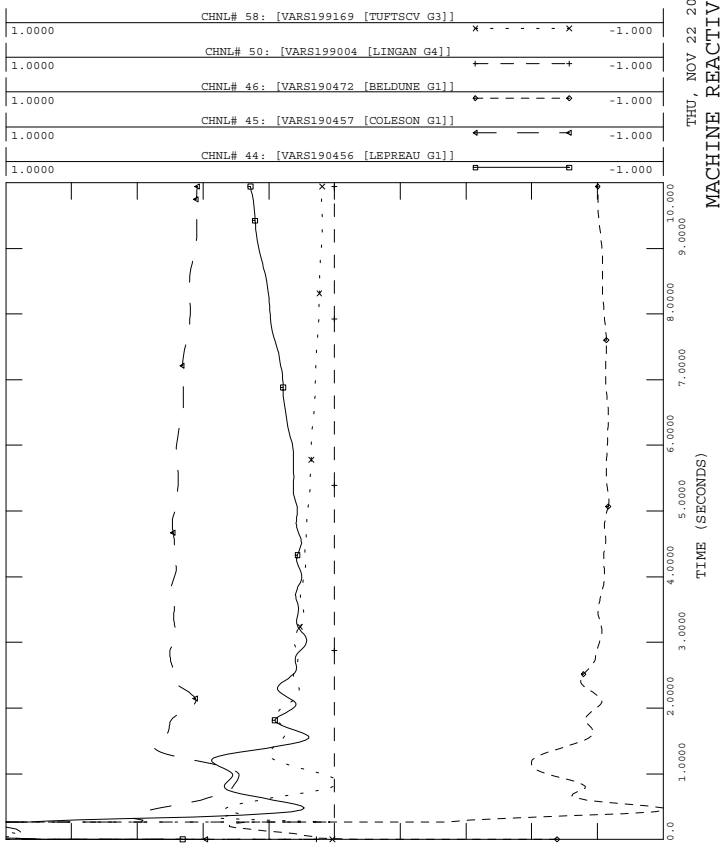
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_G3_88S721_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_G3_88S721_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_G3_88S721_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_G3_88S721_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
BUS VOLTAGE PU

CHNL# 98: [VOLT199364 [GULCH 69.00]] 1.2000 0.70000
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]] 1.2000 0.70000
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]] 1.2000 0.70000
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]] 1.2000 0.70000
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]] 1.2000 0.70000
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]] 1.2000 0.70000

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_G3_88S721_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
LINE FLOW MW

CHNL# 168: [L6513 1N MW] 200.00 0.0
CHNL# 120: [L8002_67N_MW] 200.00 0.0
CHNL# 110: [L7019_67N_MW] 0.0 -200.0
CHNL# 108: [L8004_101S_MW] 200.00 0.0
CHNL# 104: [L7005_3C_MW] 200.00 0.0
CHNL# 102: [L7004_3C_MW] 200.00 0.0

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_G3_88S721_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
WIND FARM MVAR

CHNL# 68: [VARS199504 [IR379 WF MVAR]] 0.20000 -0.2000
CHNL# 67: [VARS199510 [IR372 WF MVAR]] 0.20000 -0.2000
CHNL# 66: [VARS199712 [GULLIVERSCV WF]] 0.20000 -0.2000
CHNL# 65: [VARS199613 [GLENDHU WF]] 0.20000 -0.2000
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]] 0.20000 -0.2000
CHNL# 61: [VARS199533 [AMHERST WF]] 0.20000 -0.2000

TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

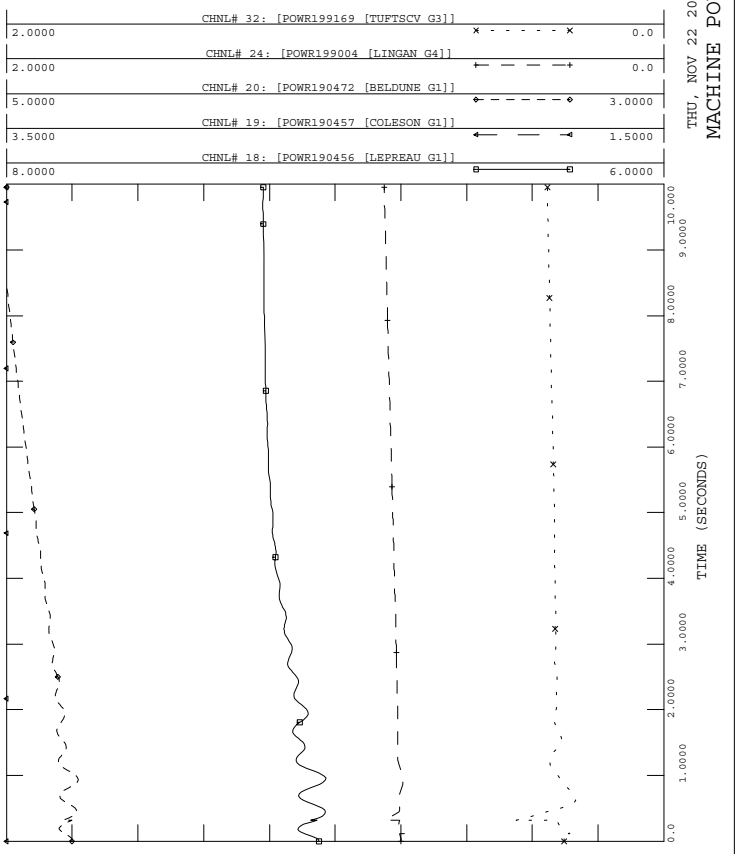
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_G3_88S721_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
BUS FREQUENCY HZ

CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]]) 60.500 59.500
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]]) 60.500 59.500
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]]) 60.500 59.500
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]]) 60.500 59.500
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]]) 60.500 59.500
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]]) 60.500 59.500

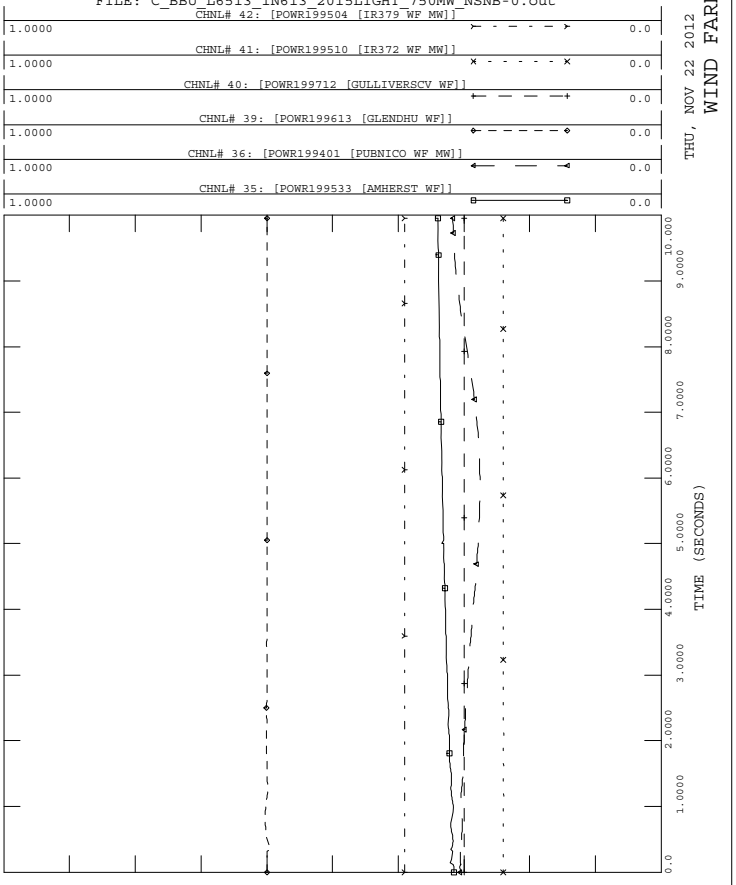
TIME (SECONDS) 0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L6513_1N613_2015LIGHT_750MW_NSNB-0.out



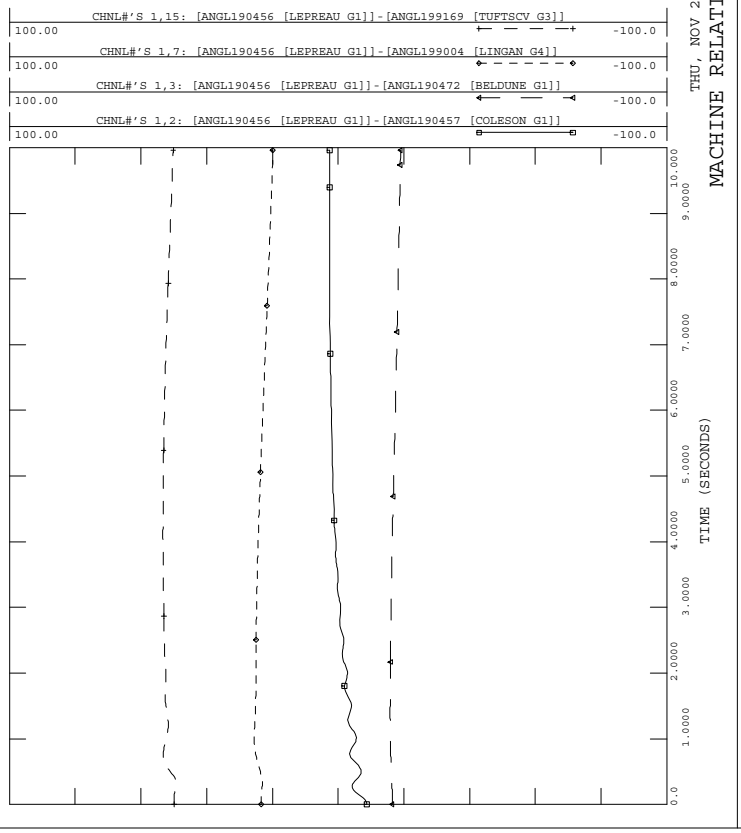
THU, NOV 22 2012 15:25
MACHINE POWER MW

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L6513_1N613_2015LIGHT_750MW_NSNB-0.out



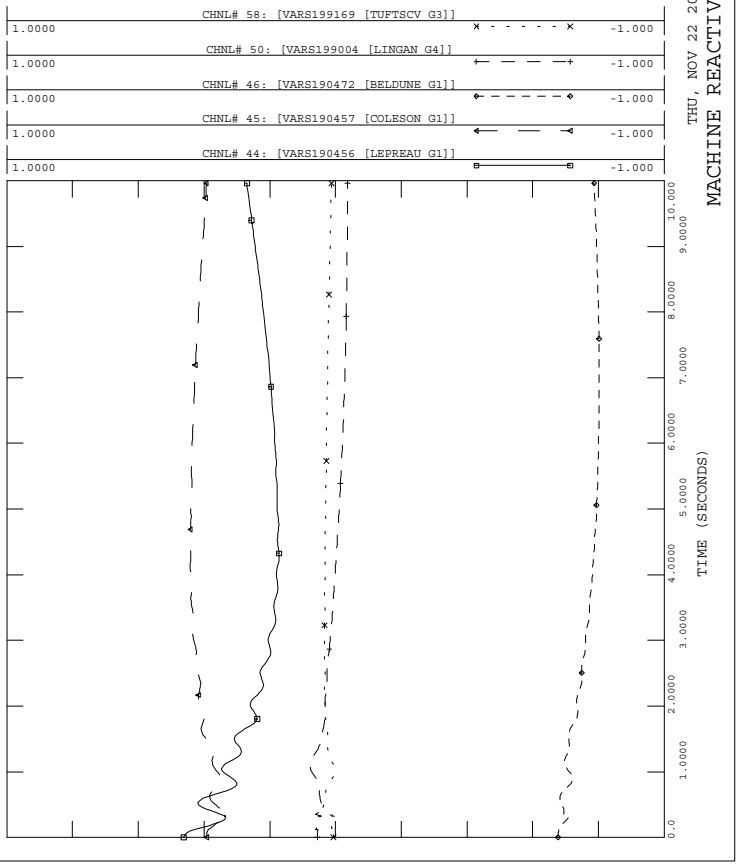
THU, NOV 22 2012 15:25
WIND FARM MW

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L6513_1N613_2015LIGHT_750MW_NSNB-0.out



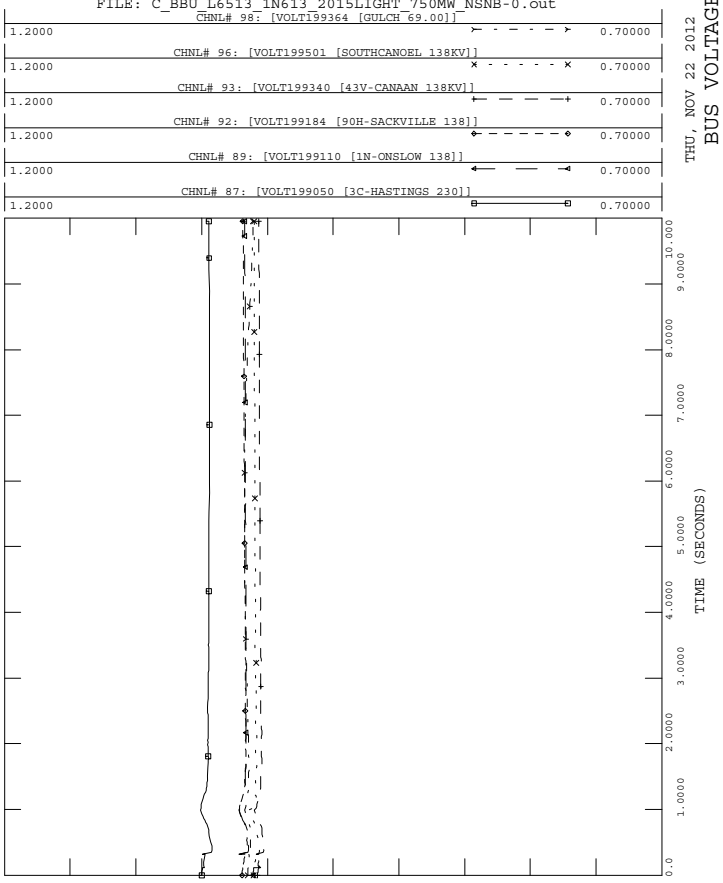
THU, NOV 22 2012 15:25
MACHINE RELATIVE ANGLE

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L6513_1N613_2015LIGHT_750MW_NSNB-0.out



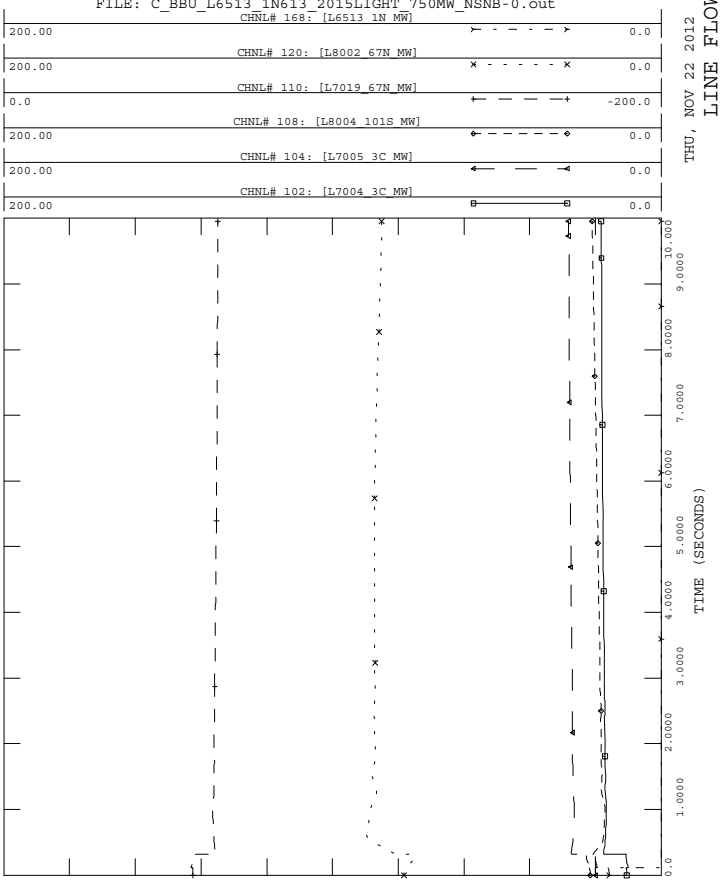
THU, NOV 22 2012 15:25
MACHINE REACTIVE MVAR

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L6513_1N613_2015LIGHT_750MW_NSNB-0.out



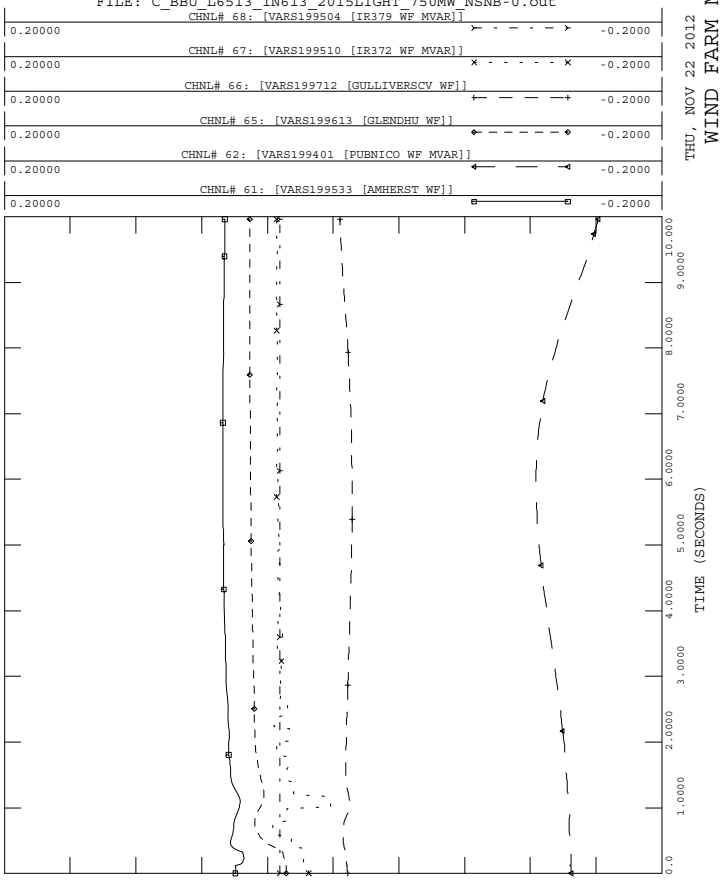
THU, NOV 22 2012 15:25
BUS VOLTAGE PU

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L6513_1N613_2015LIGHT_750MW_NSNB-0.out



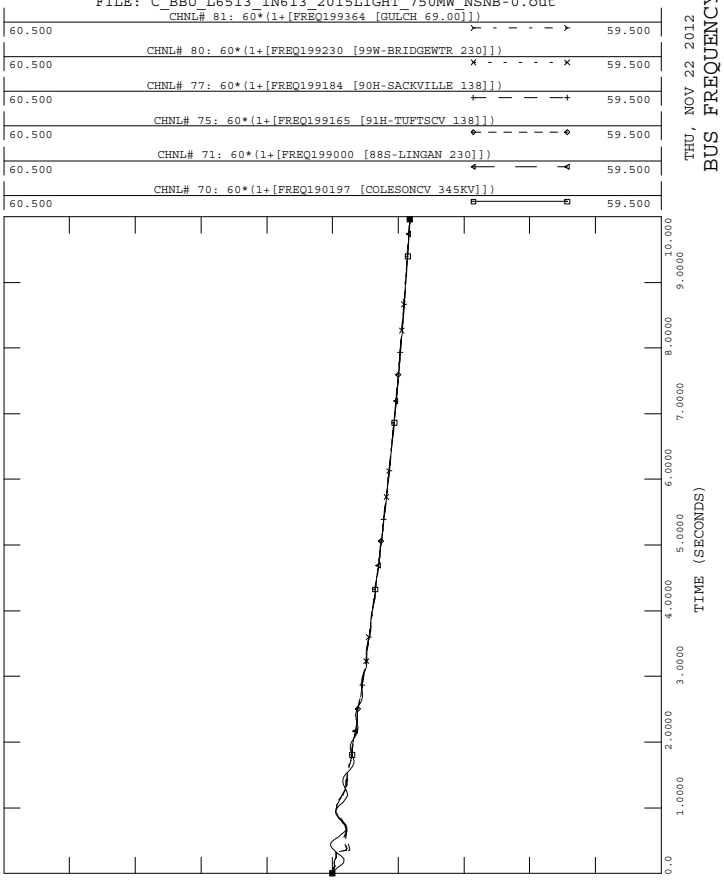
THU, NOV 22 2012 15:25
LINE FLOW MW

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L6513_1N613_2015LIGHT_750MW_NSNB-0.out



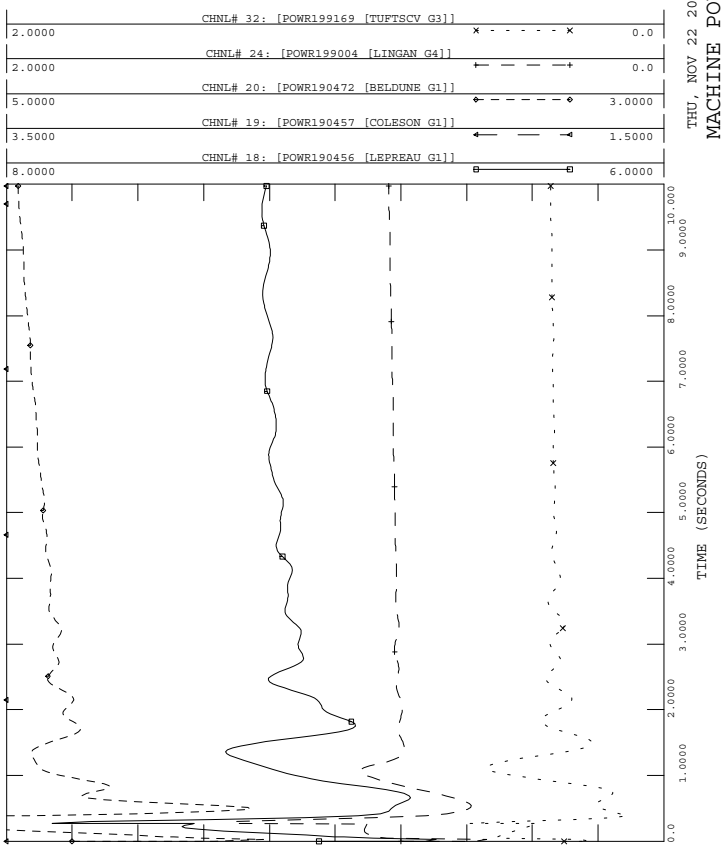
THU, NOV 22 2012 15:25
WIND FARM MVAR

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L6513_1N613_2015LIGHT_750MW_NSNB-0.out

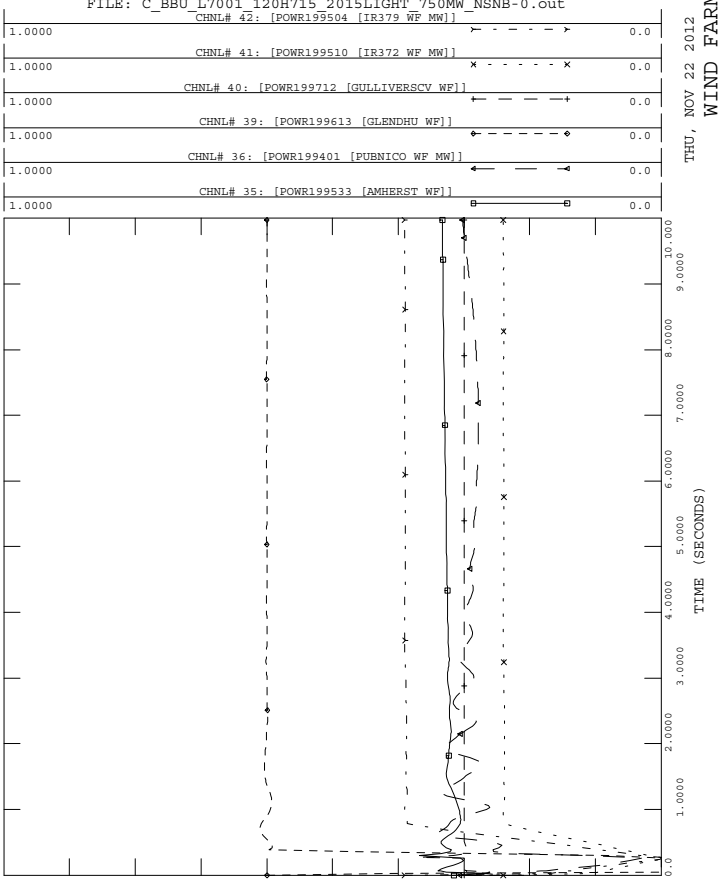


THU, NOV 22 2012 15:25
BUS FREQUENCY HZ

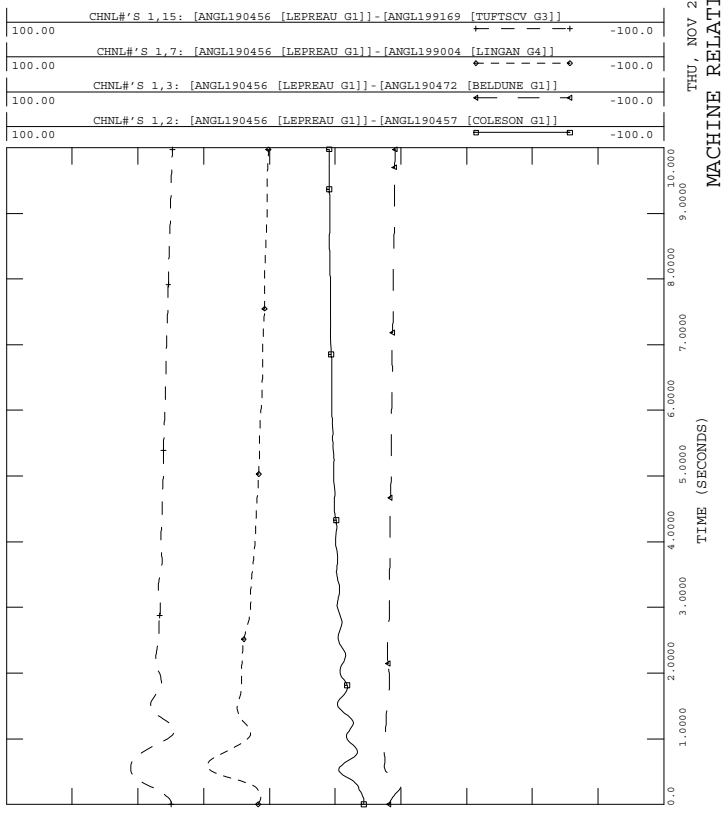
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7001_120H715_2015LIGHT_750MW_NSNB-0.out



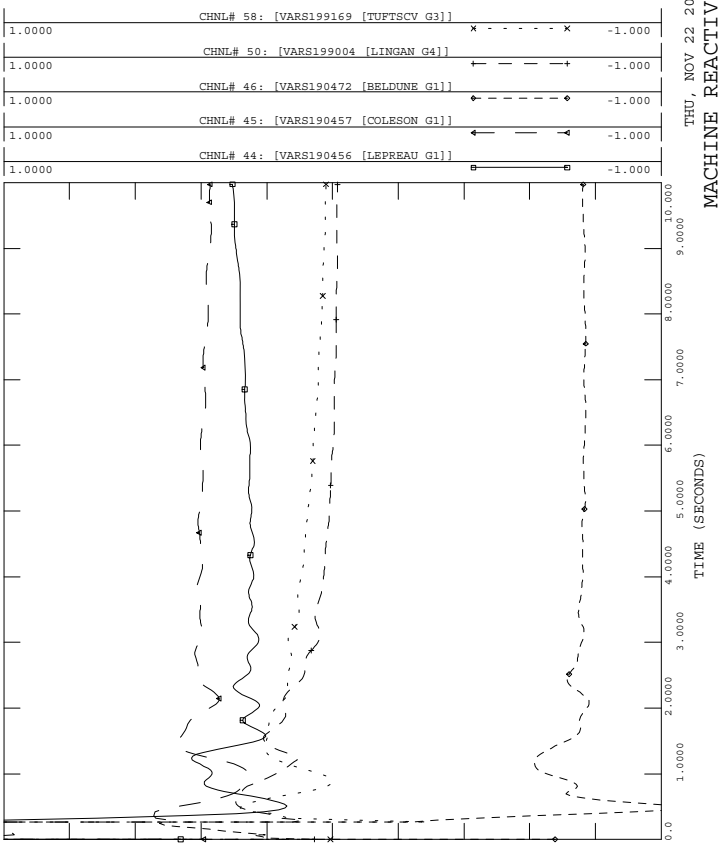
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7001_120H715_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7001_120H715_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7001_120H715_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7001_120H715_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
BUS VOLTAGE PU

CHNL# 98: [VOLT199364 [GULCH 69.00]] 1.2000 0.70000
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]] 1.2000 0.70000
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]] 1.2000 0.70000
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]] 1.2000 0.70000
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]] 1.2000 0.70000
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]] 1.2000 0.70000

TIME (SECONDS)
0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7001_120H715_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
LINE FLOW MW

CHNL# 168: [L6513 1N MW] 200.00 0.0
CHNL# 120: [L8002_67N_MW] 200.00 0.0
CHNL# 110: [L7019_67N_MW] 0.0 -200.0
CHNL# 108: [L8004_101S_MW] 200.00 0.0
CHNL# 104: [L7005_3C_MW] 200.00 0.0
CHNL# 102: [L7004_3C_MW] 200.00 0.0

TIME (SECONDS)
0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7001_120H715_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
WIND FARM MVAR

CHNL# 68: [VARS199504 [IR379 WF MVAR]] 0.20000 -0.2000
CHNL# 67: [VARS199510 [IR372 WF MVAR]] 0.20000 -0.2000
CHNL# 66: [VARS199712 [GULLIVERSCV WF]] 0.20000 -0.2000
CHNL# 65: [VARS199613 [GLENDHU WF]] 0.20000 -0.2000
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]] 0.20000 -0.2000
CHNL# 61: [VARS199533 [AMHERST WF]] 0.20000 -0.2000

TIME (SECONDS)
0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

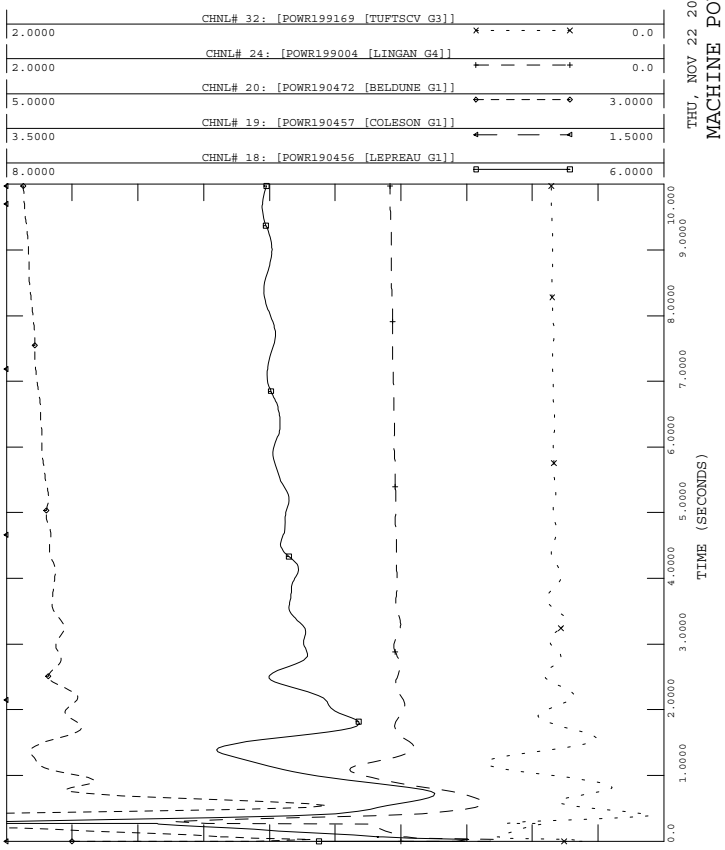
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7001_120H715_2015LIGHT_750MW_NSNB-0.out

THU, NOV 22 2012 15:25
BUS FREQUENCY HZ

CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]]) 60.500 59.500
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]]) 60.500 59.500
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]]) 60.500 59.500
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]]) 60.500 59.500
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]]) 60.500 59.500
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]]) 60.500 59.500

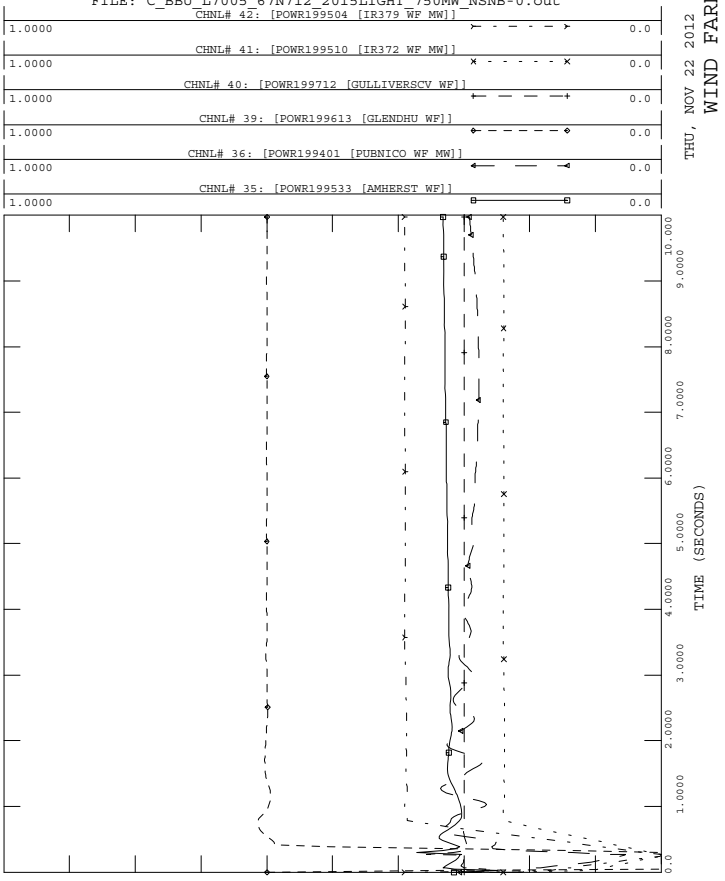
TIME (SECONDS)
0.0 1.0000 2.0000 3.0000 4.0000 5.0000 6.0000 7.0000 8.0000 9.0000 10.000

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7005_67N712_2015LIGHT_750MW_NSNB-0.out



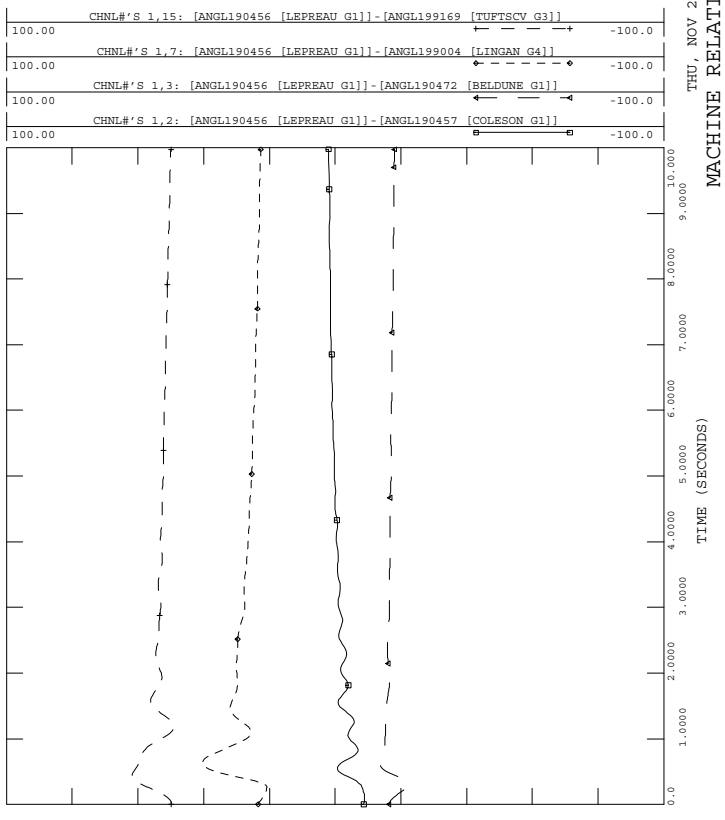
THU, NOV 22 2012 15:25
MACHINE POWER MW

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7005_67N712_2015LIGHT_750MW_NSNB-0.out



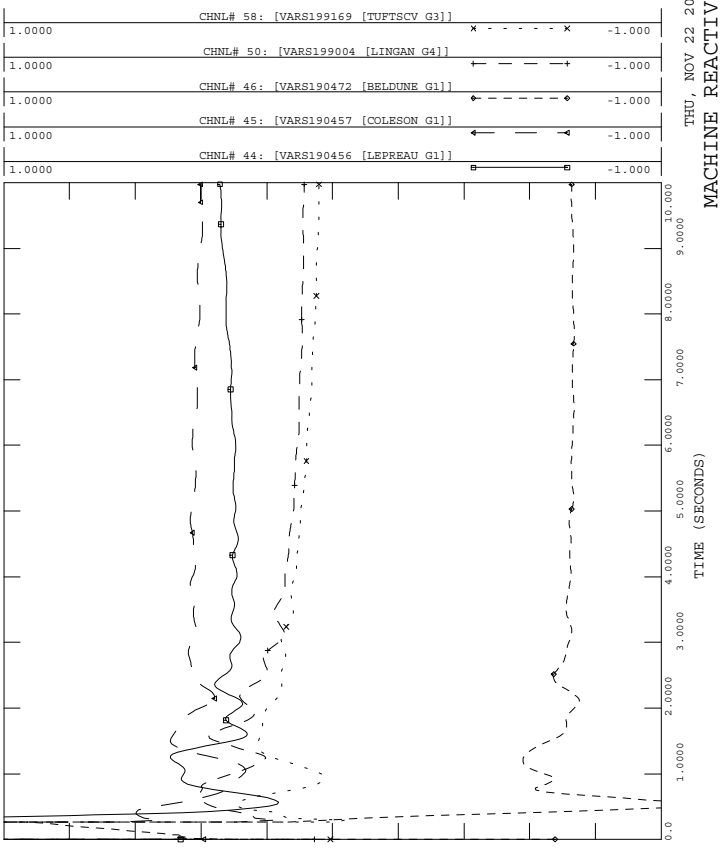
THU, NOV 22 2012 15:25
WIND FARM MW

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7005_67N712_2015LIGHT_750MW_NSNB-0.out

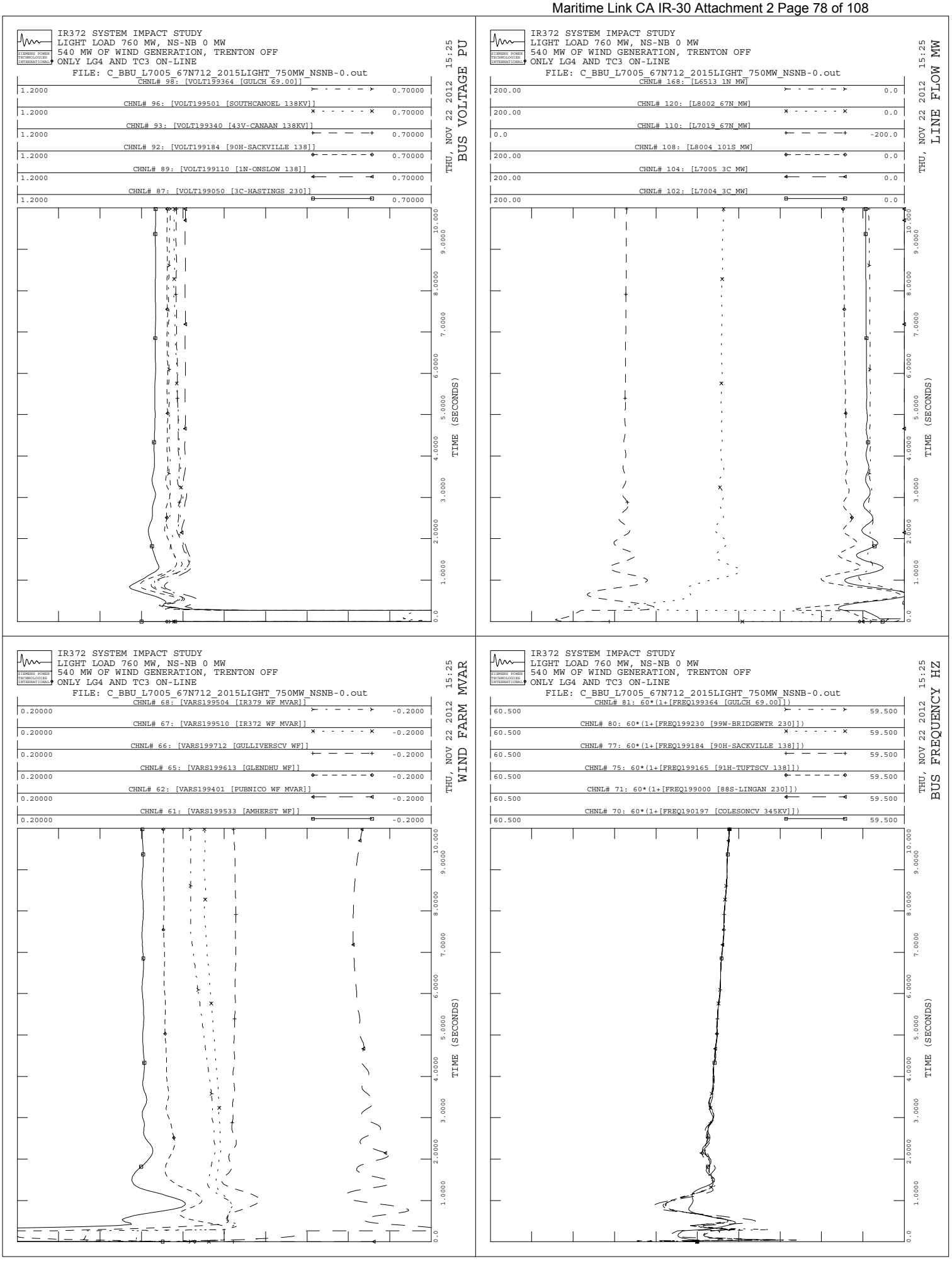


THU, NOV 22 2012 15:25
MACHINE RELATIVE ANGLE

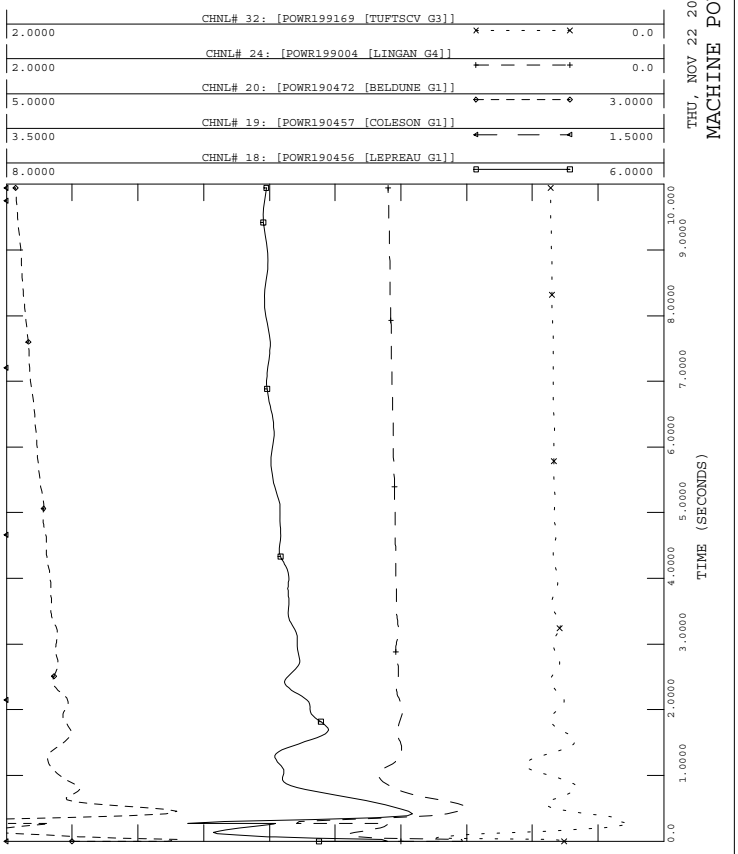
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7005_67N712_2015LIGHT_750MW_NSNB-0.out



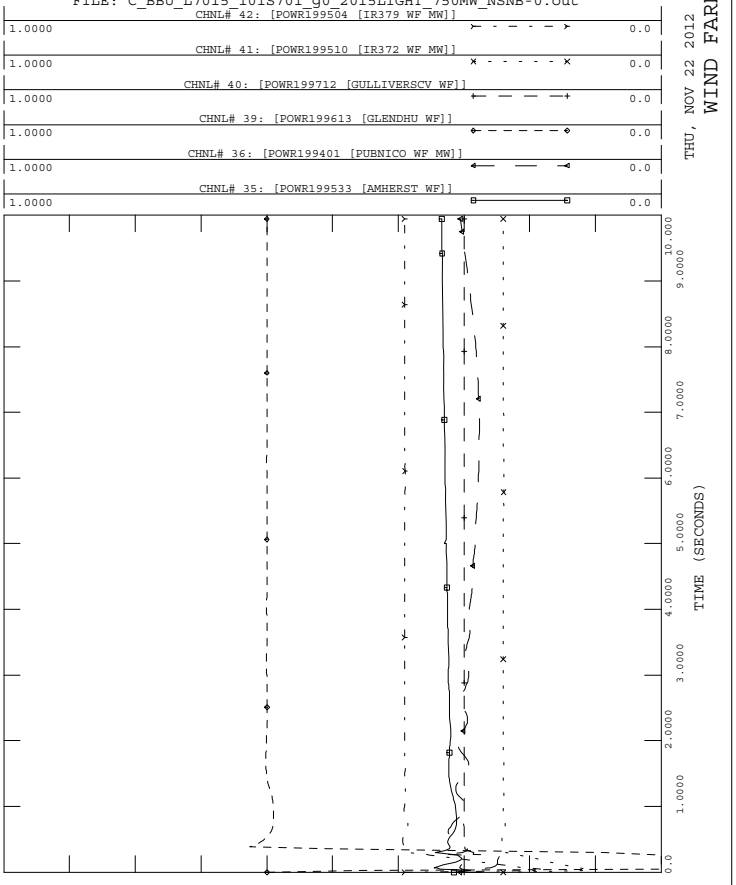
THU, NOV 22 2012 15:25
MACHINE REACTIVE MVAR


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7005_67N712_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7005_67N712_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7005_67N712_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7005_67N712_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)

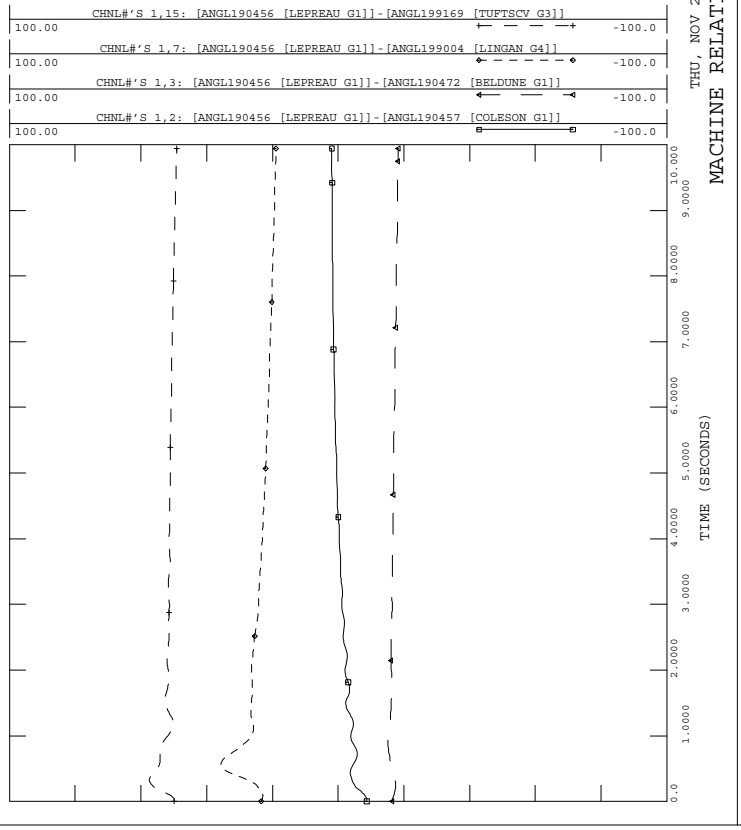
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7015_101S701_g0_2015LIGHT_750MW_NSNB-0.out



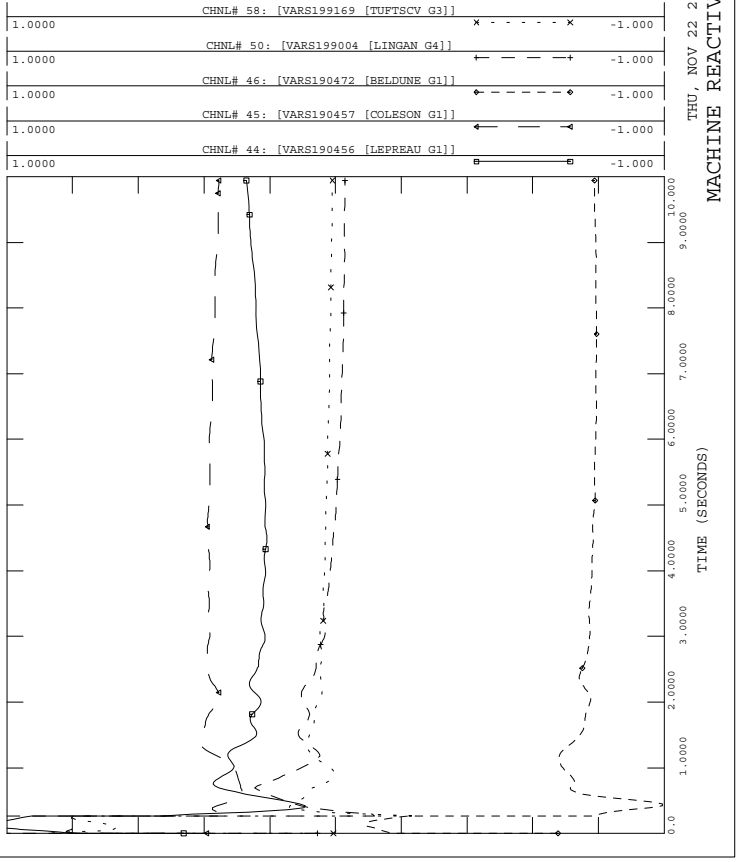
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7015_101S701_g0_2015LIGHT_750MW_NSNB-0.out



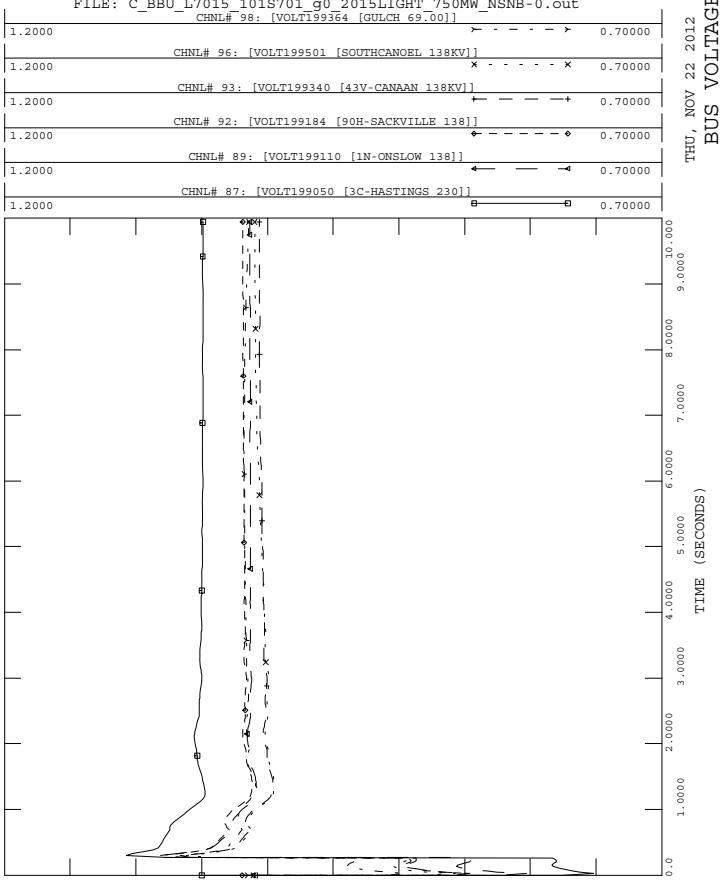
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7015_101S701_g0_2015LIGHT_750MW_NSNB-0.out



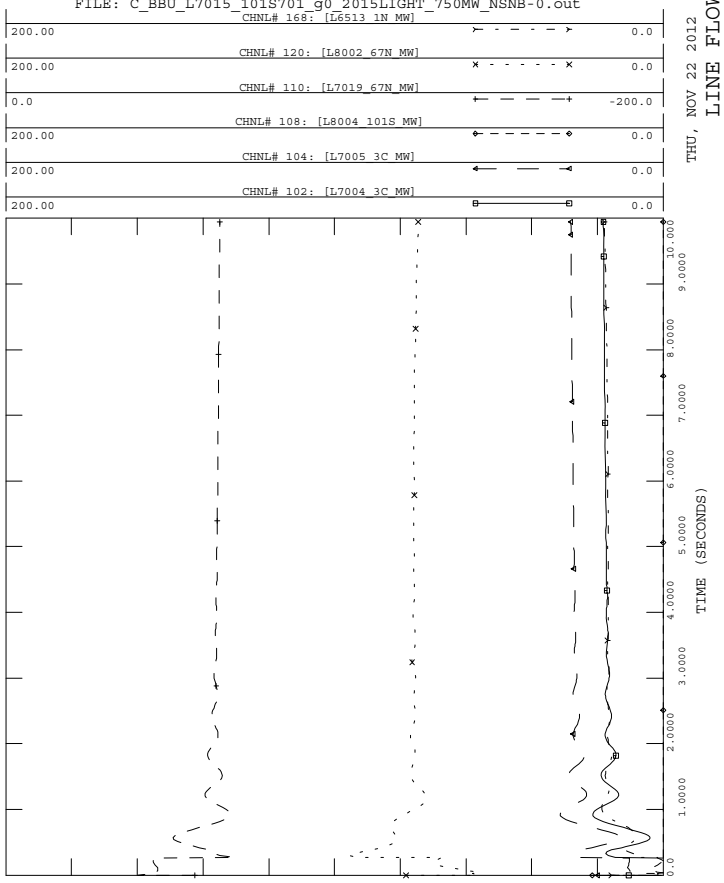
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7015_101S701_g0_2015LIGHT_750MW_NSNB-0.out



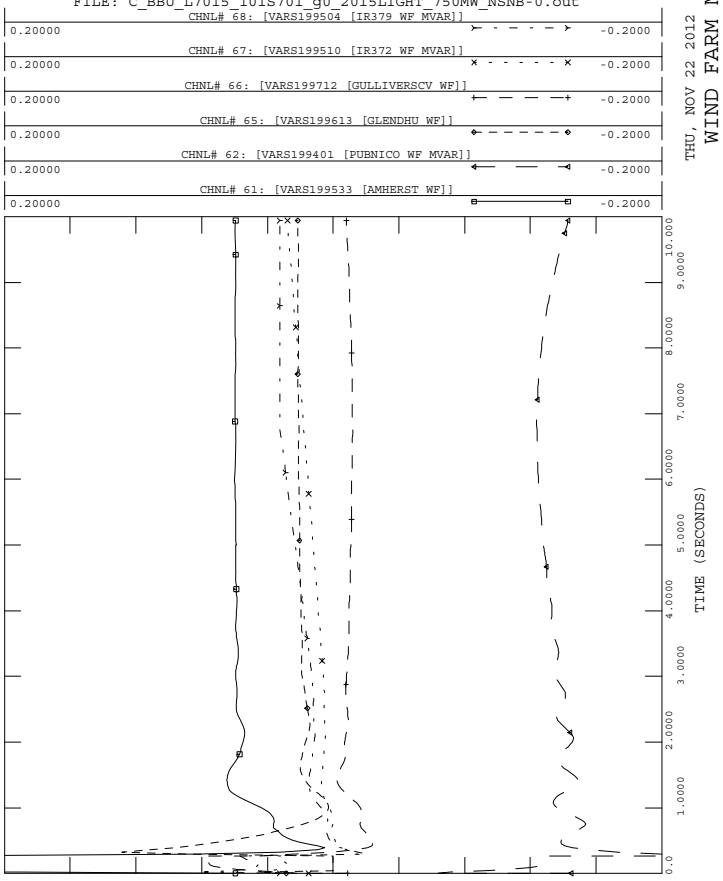
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7015_101S701_g0_2015LIGHT_750MW_NSNB-0.out



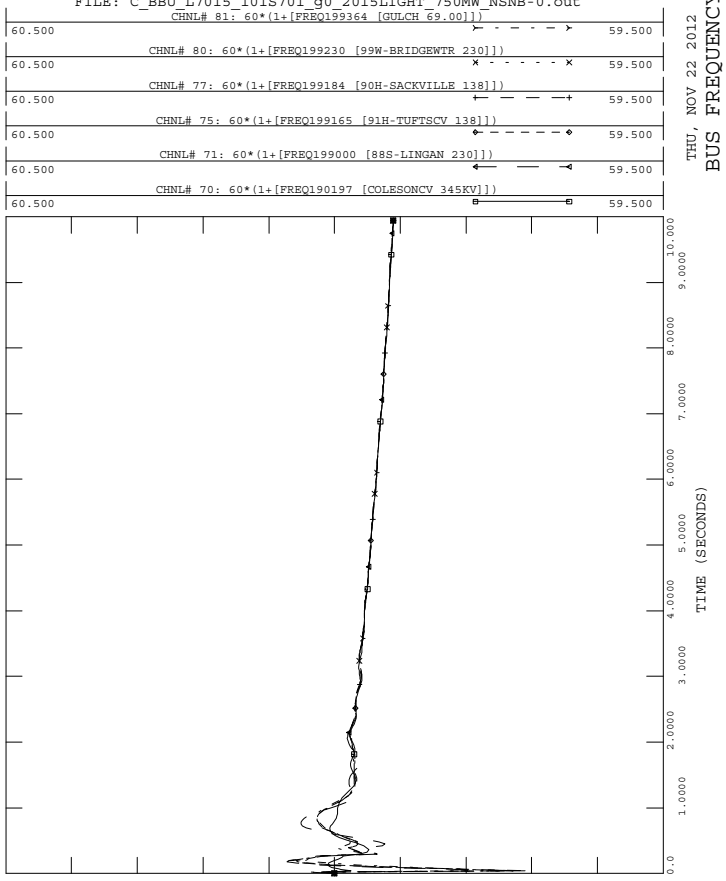
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7015_101S701_g0_2015LIGHT_750MW_NSNB-0.out



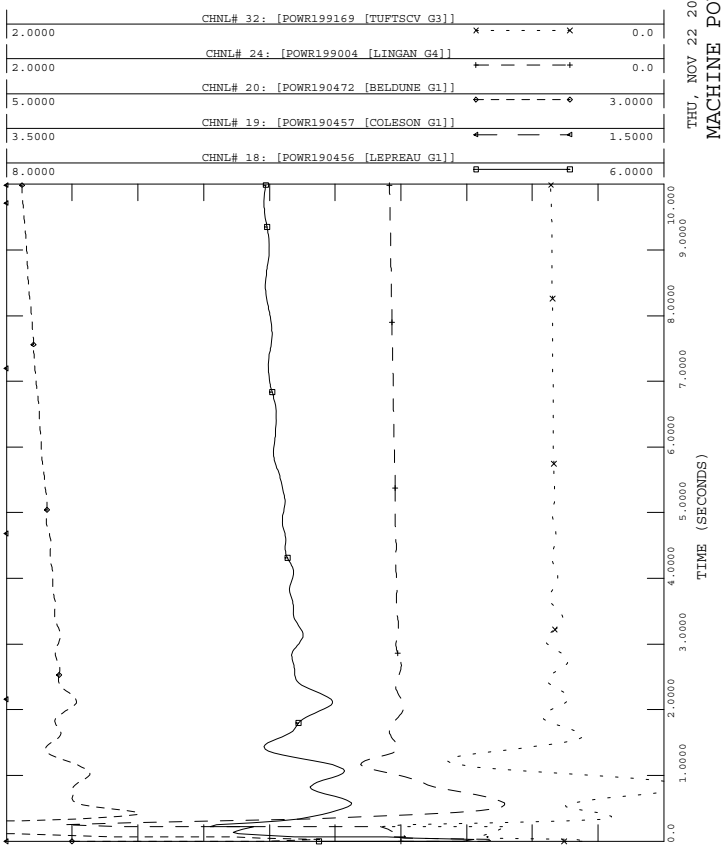
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7015_101S701_g0_2015LIGHT_750MW_NSNB-0.out



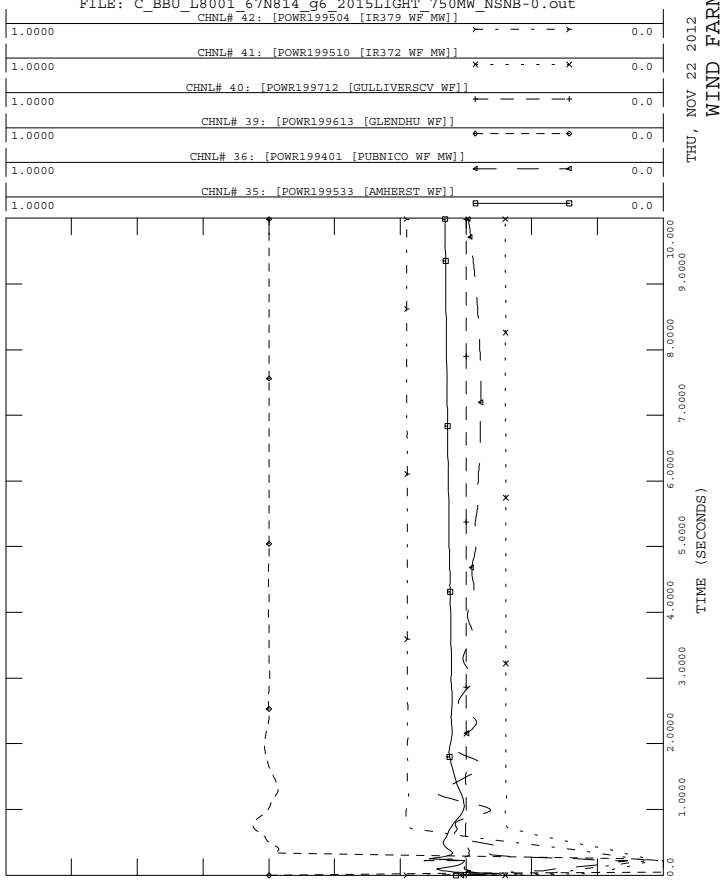
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L7015_101S701_g0_2015LIGHT_750MW_NSNB-0.out



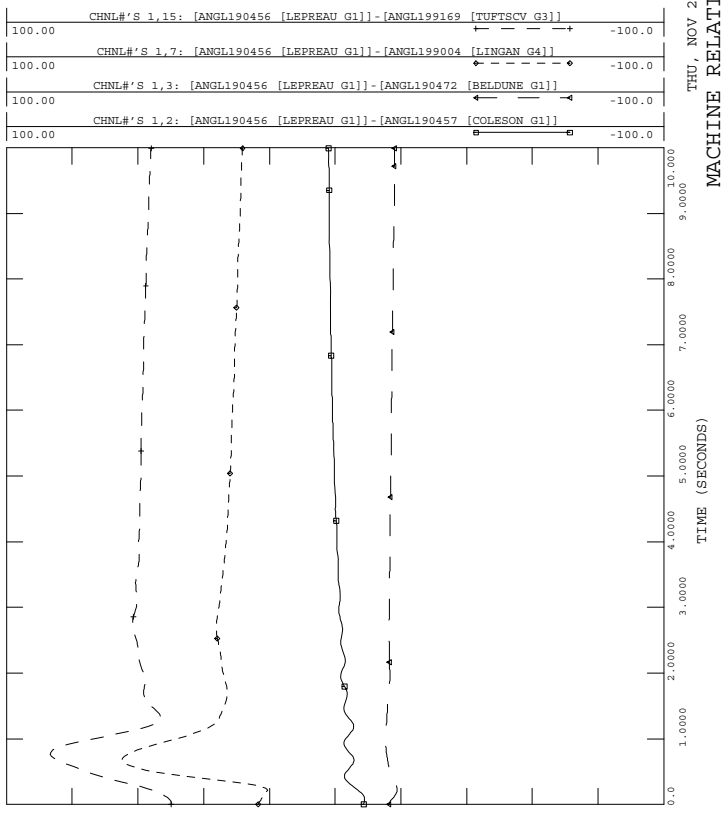
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8001_67N814_g6_2015LIGHT_750MW_NSNB-0.out



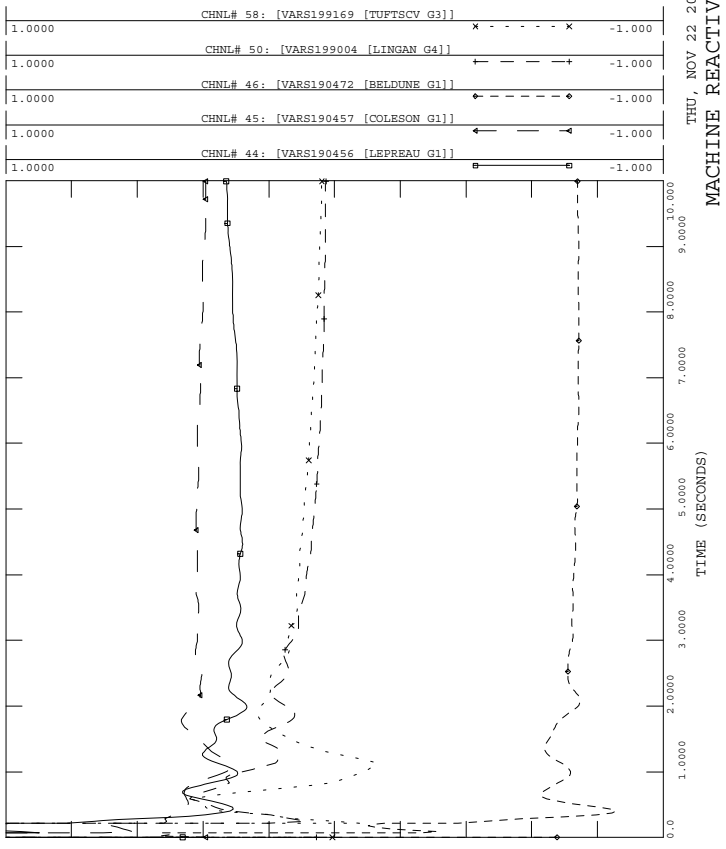
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8001_67N814_g6_2015LIGHT_750MW_NSNB-0.out

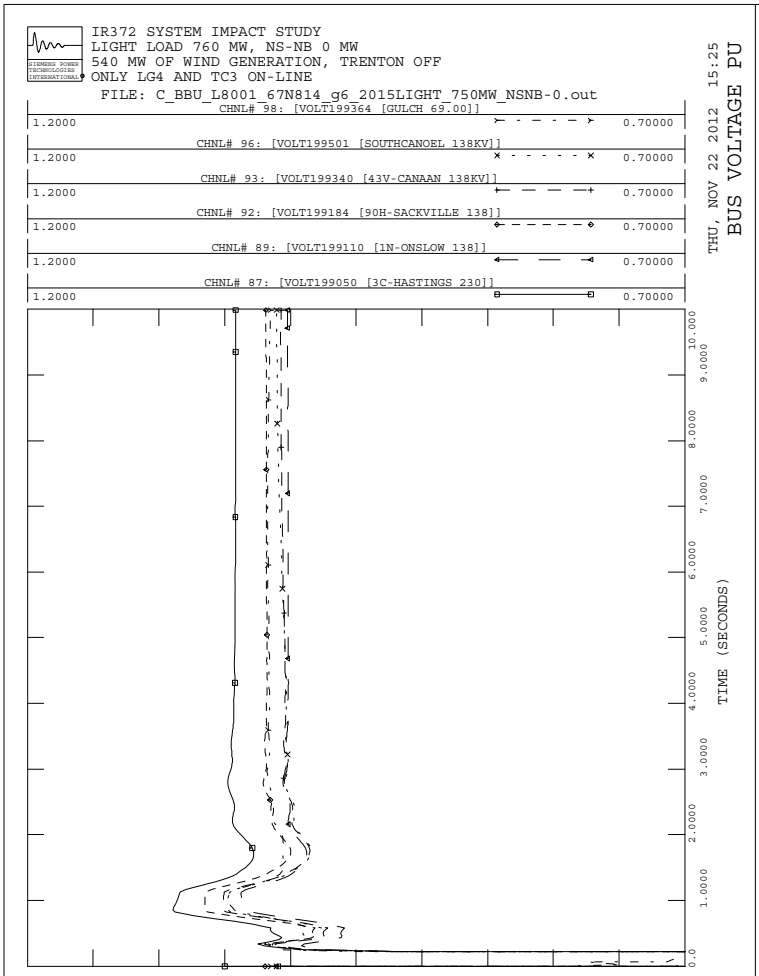


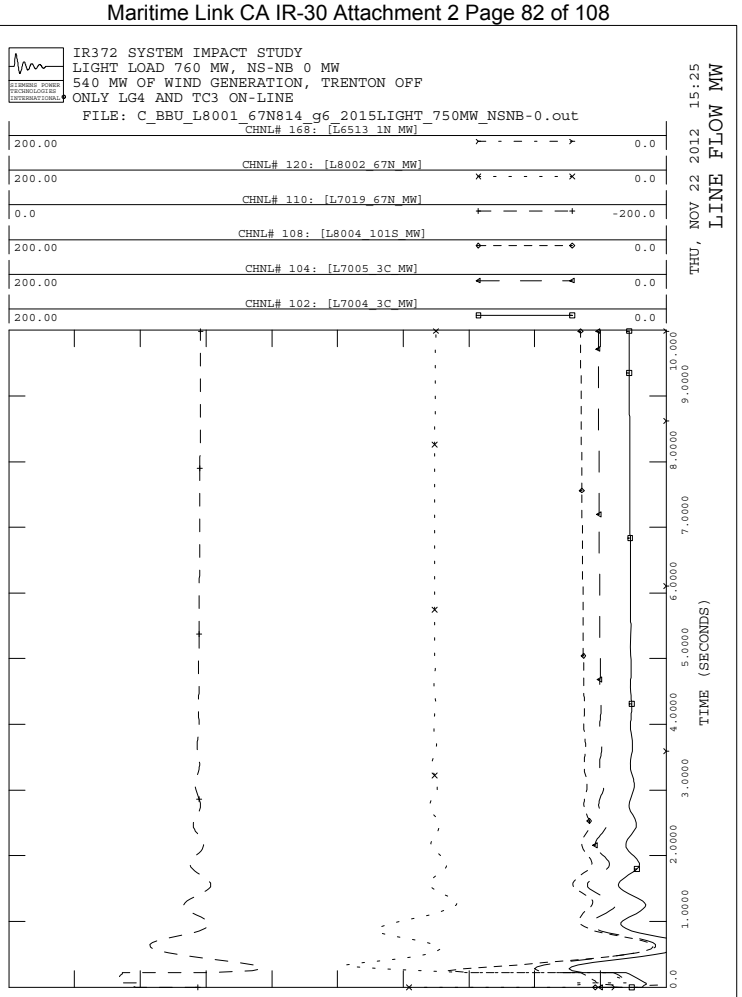
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8001_67N814_g6_2015LIGHT_750MW_NSNB-0.out

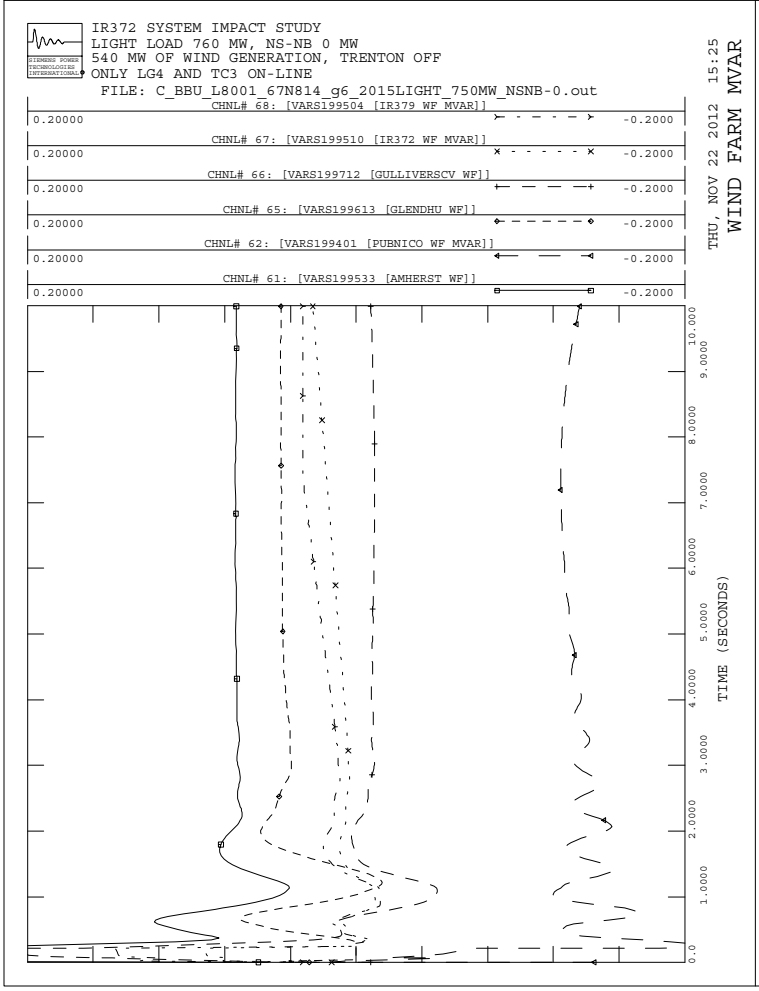


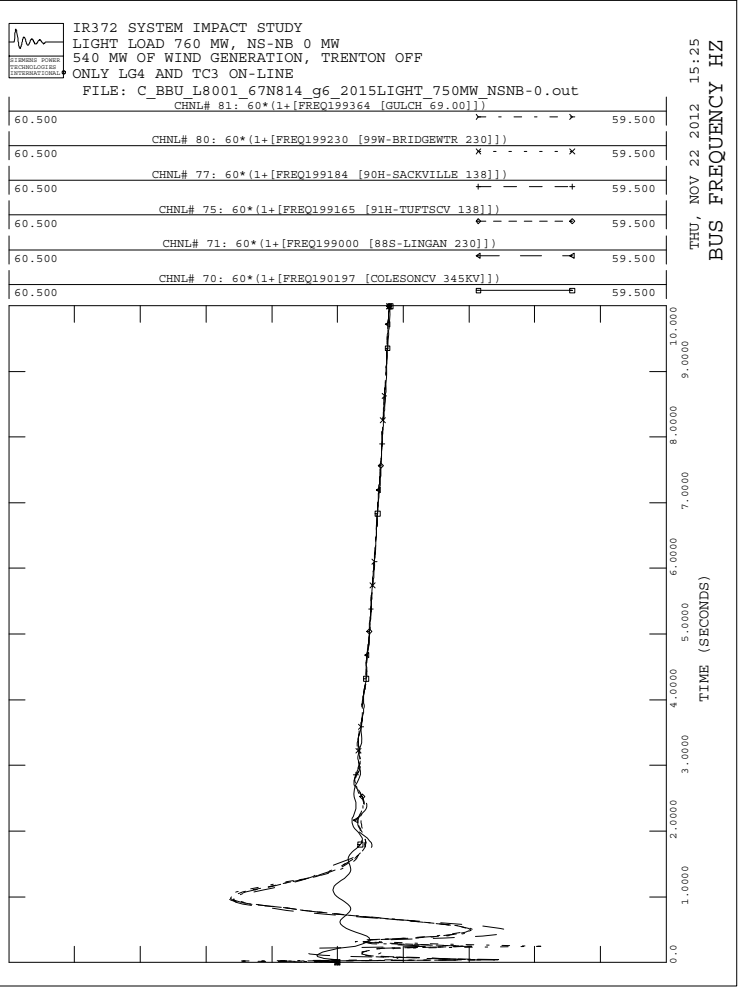
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8001_67N814_g6_2015LIGHT_750MW_NSNB-0.out

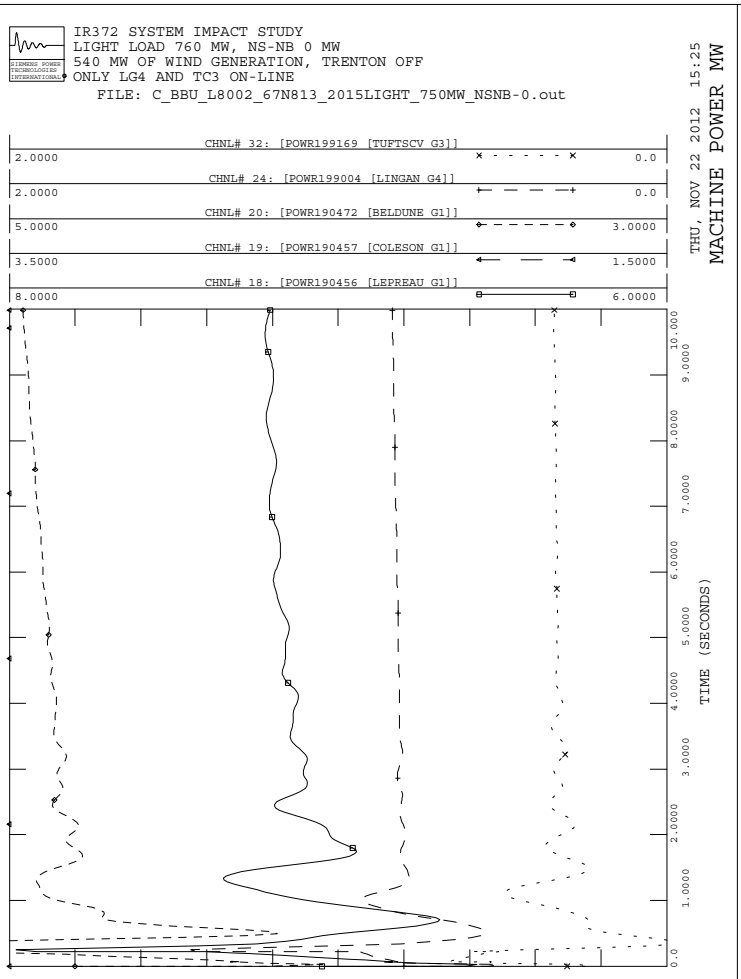


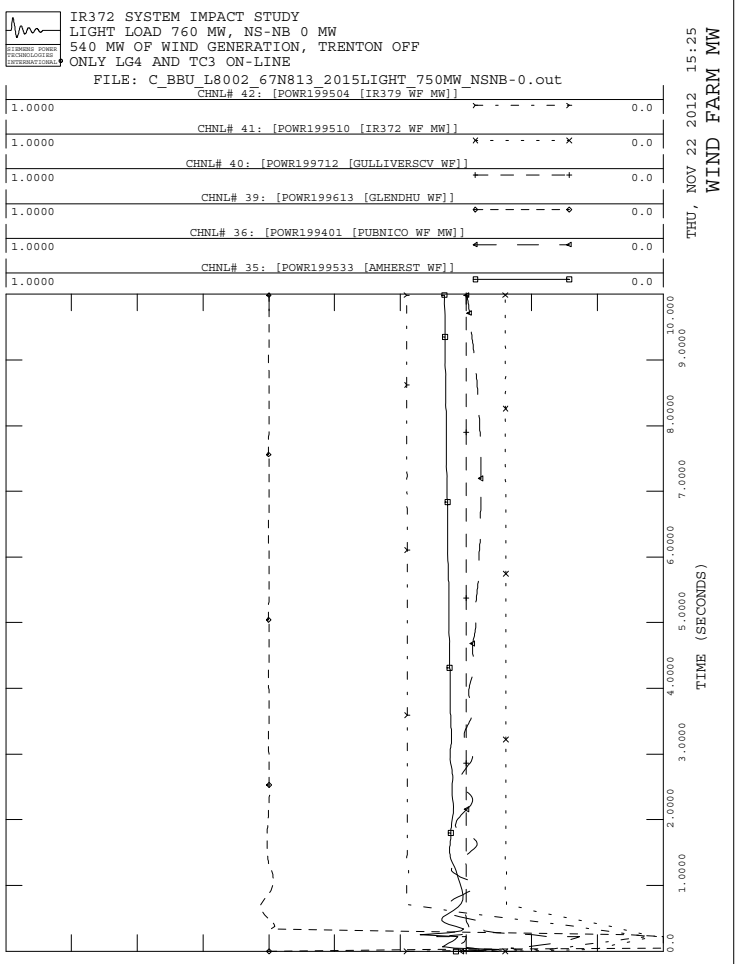

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8001_67N814_g6_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)

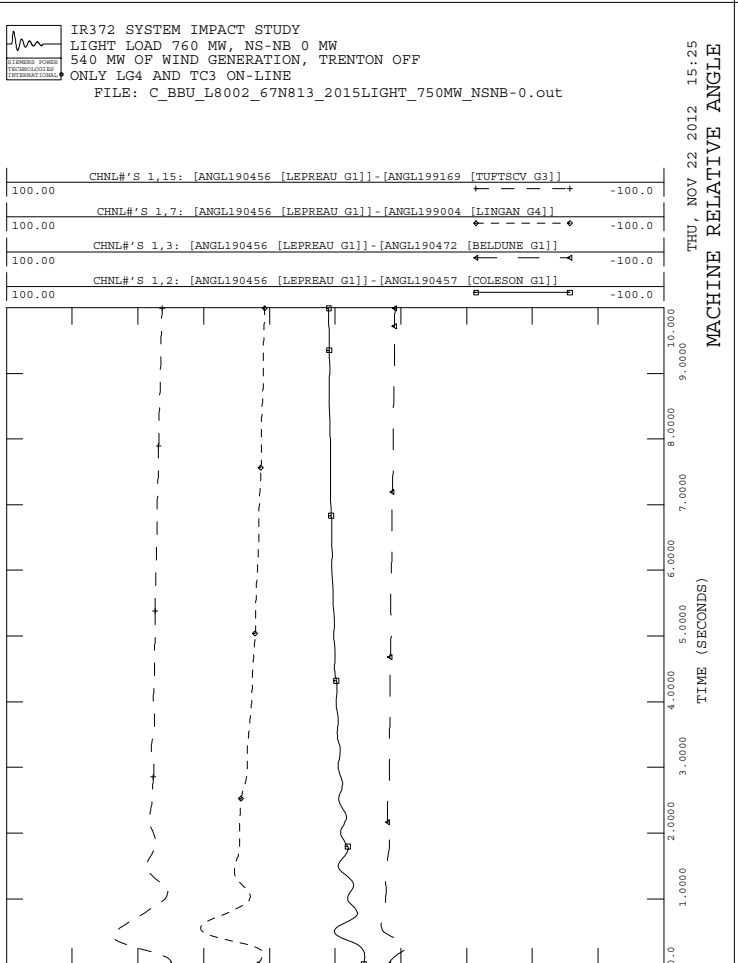

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8001_67N814_g6_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)

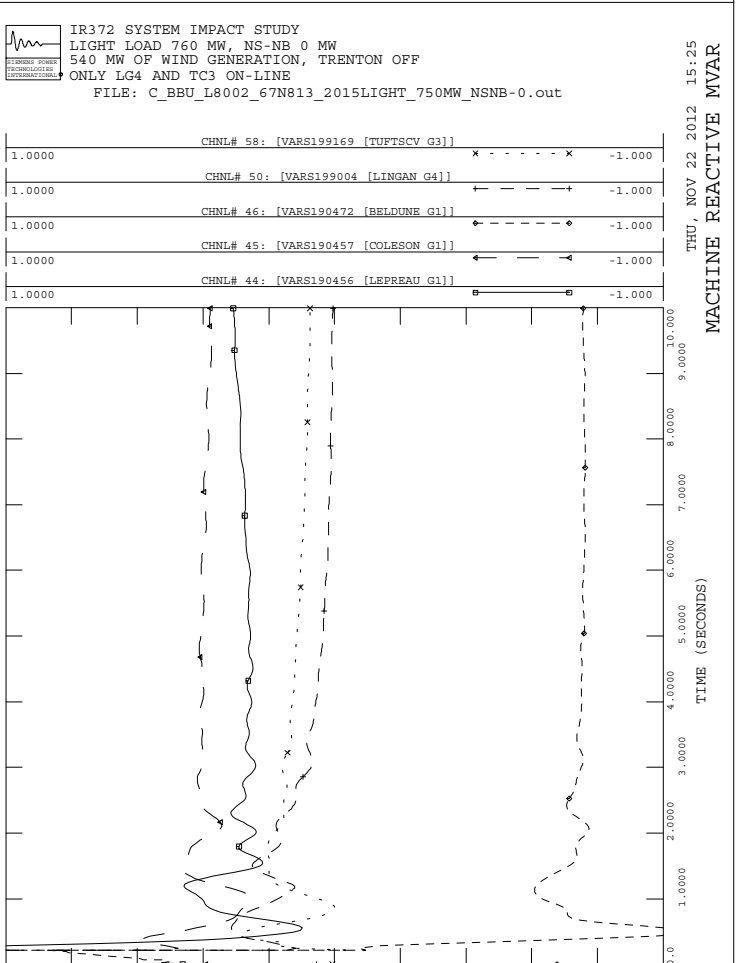

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8001_67N814_g6_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)

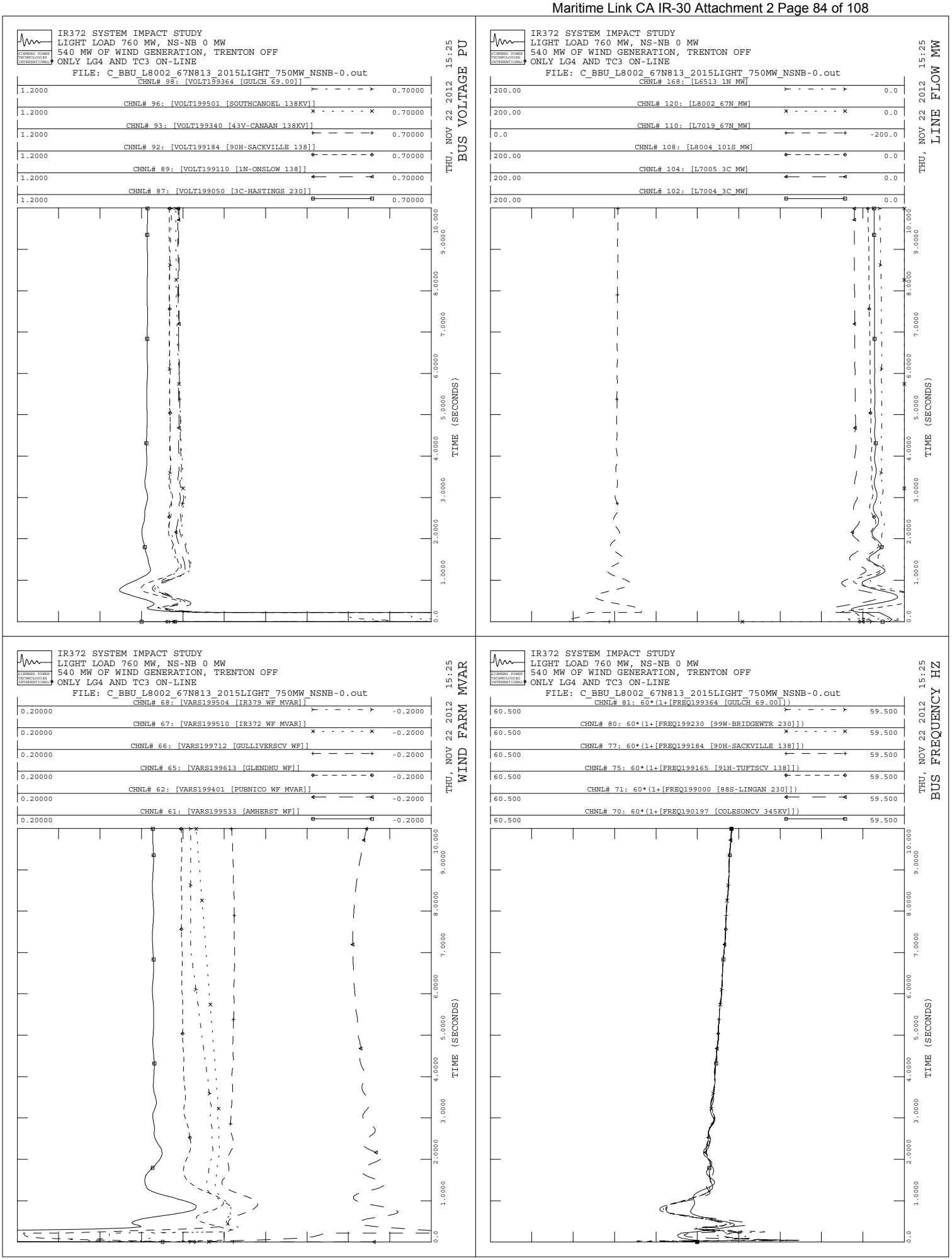

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8001_67N814_g6_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8002_67N813_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
THU, NOV 22 2012 15:25
MACHINE POWER MW
TIME (SECONDS)

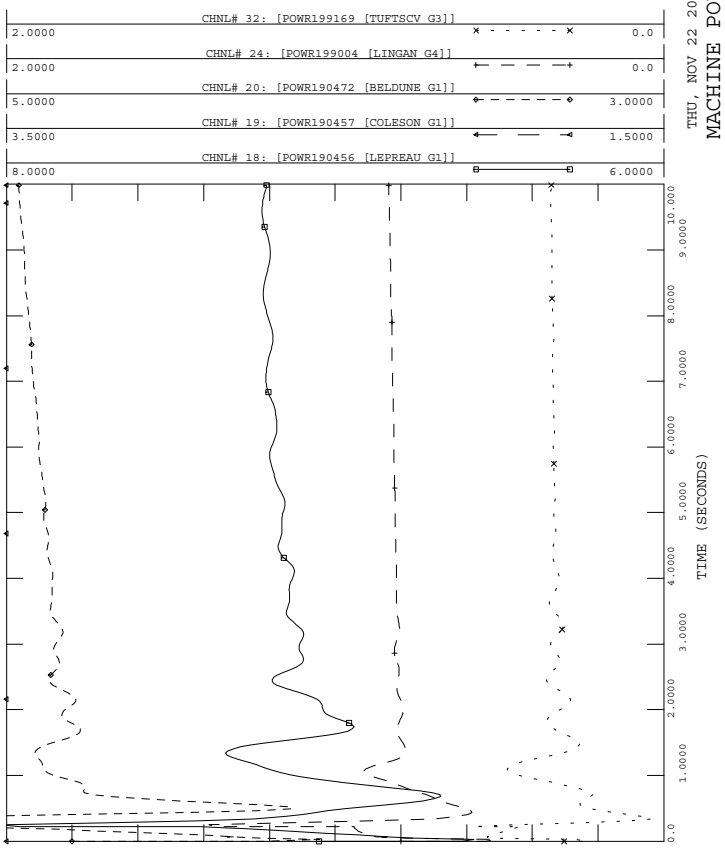

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8002_67N813_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
THU, NOV 22 2012 15:25
WIND FARM MW
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8002_67N813_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
THU, NOV 22 2012 15:25
MACHINE RELATIVE ANGLE
TIME (SECONDS)

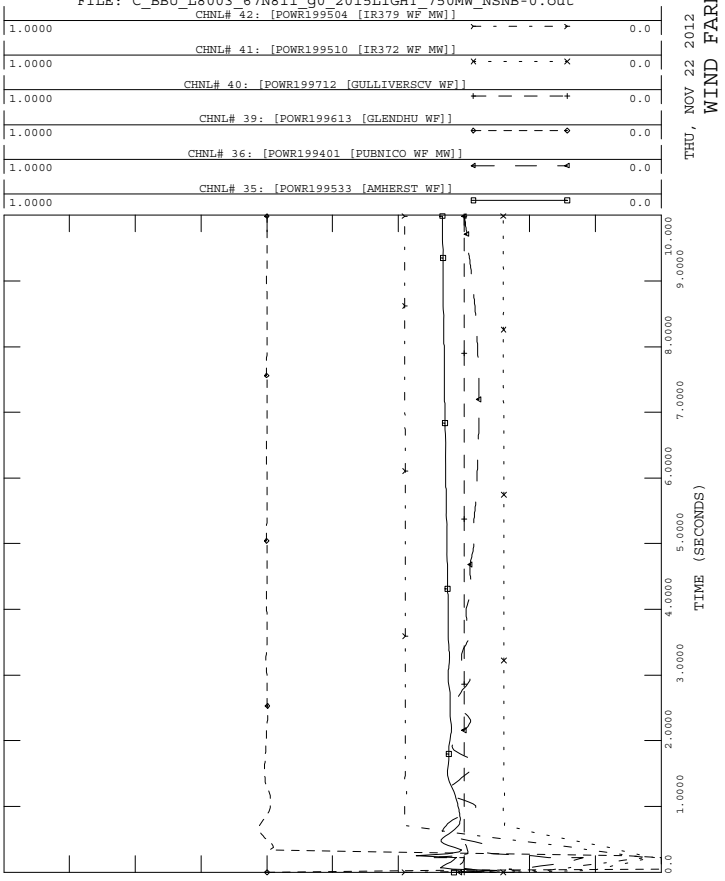

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8002_67N813_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
THU, NOV 22 2012 15:25
MACHINE REACTIVE MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8002_67N813_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8002_67N813_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8002_67N813_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8002_67N813_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)

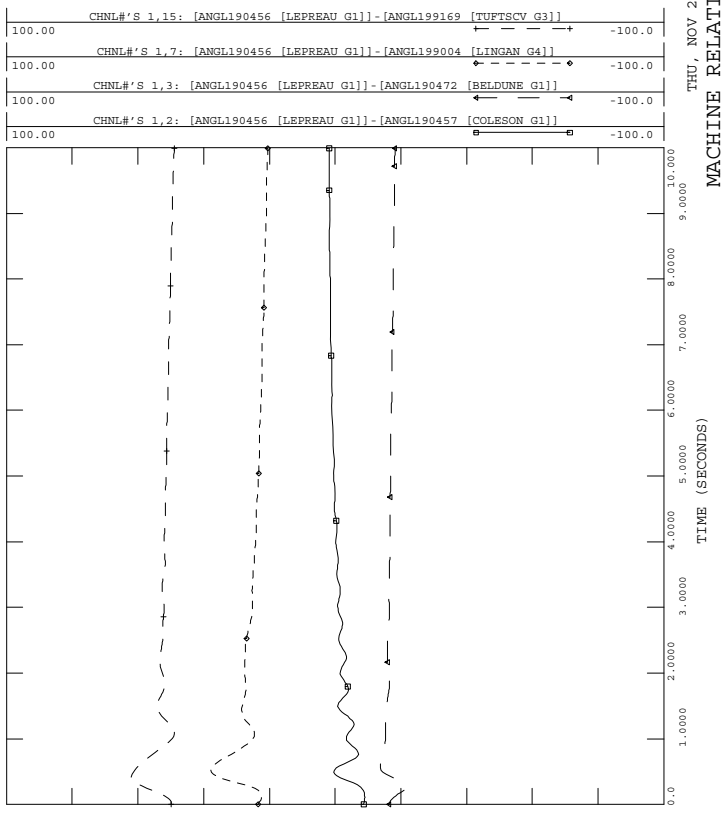
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N811_g0_2015LIGHT_750MW_NSNB-0.out



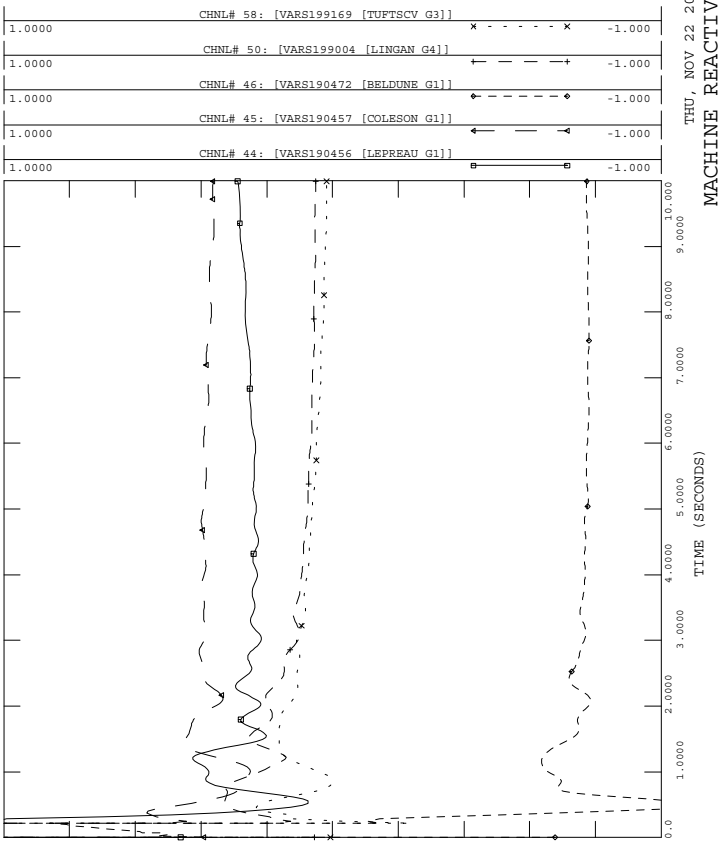
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N811_g0_2015LIGHT_750MW_NSNB-0.out

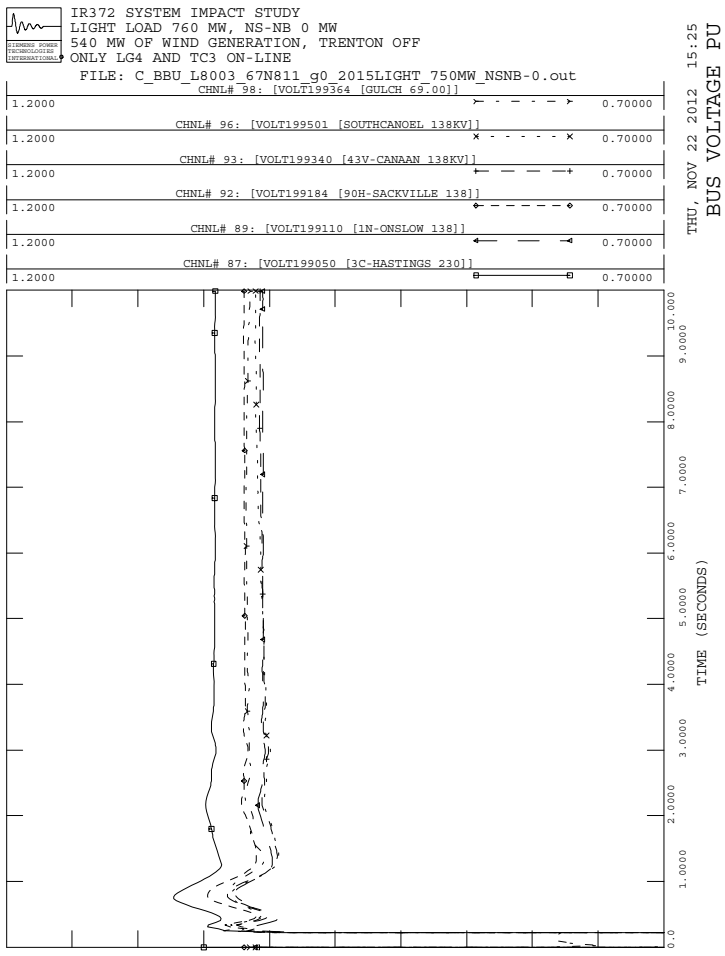


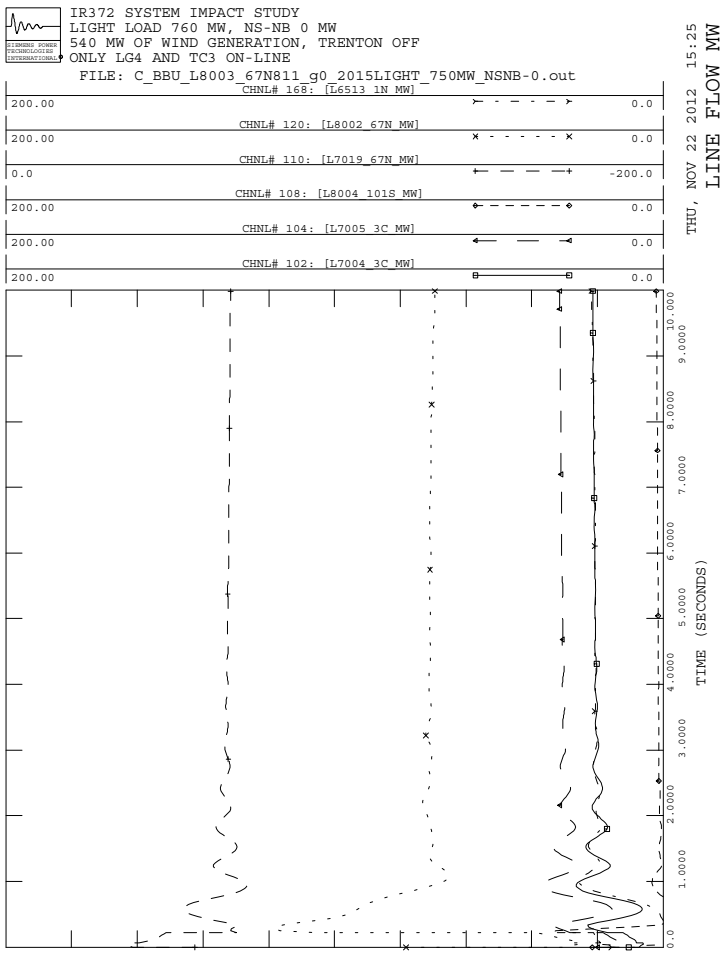
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N811_g0_2015LIGHT_750MW_NSNB-0.out

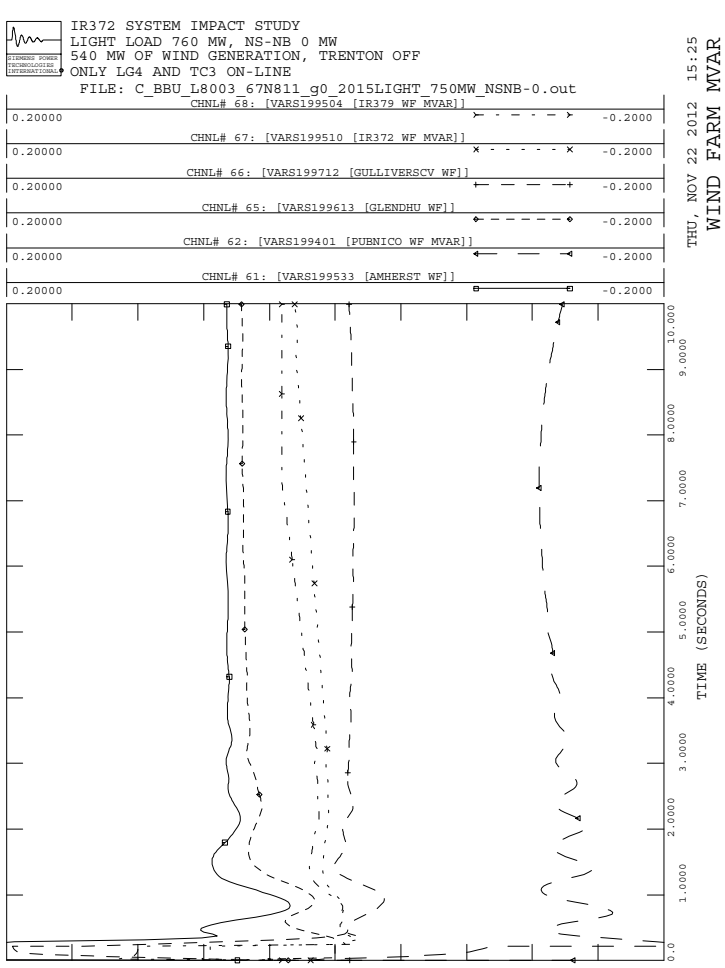


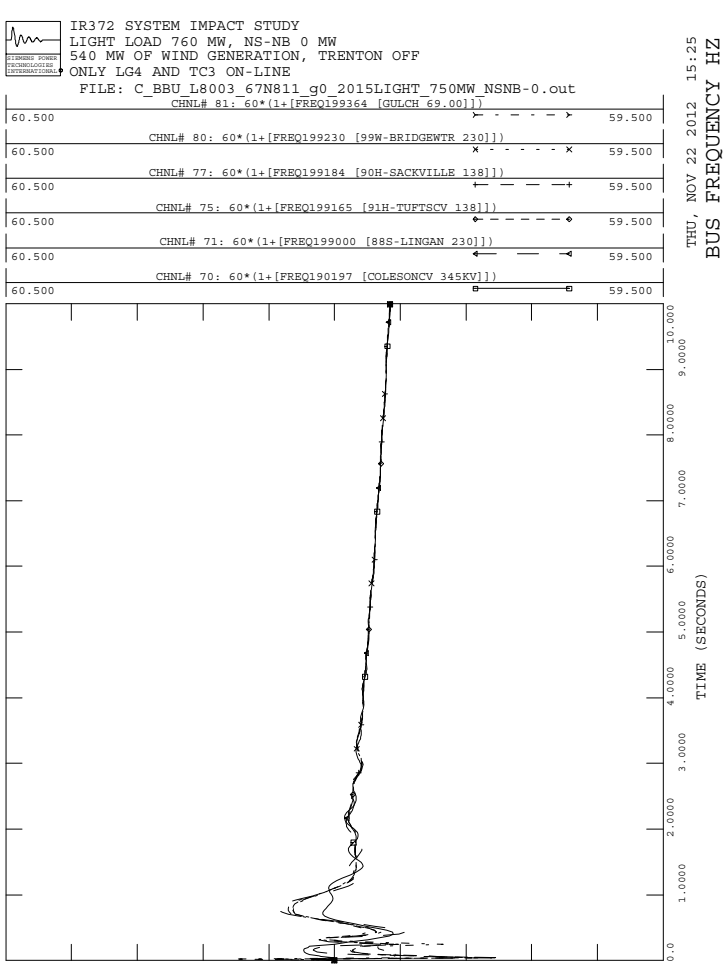
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N811_g0_2015LIGHT_750MW_NSNB-0.out



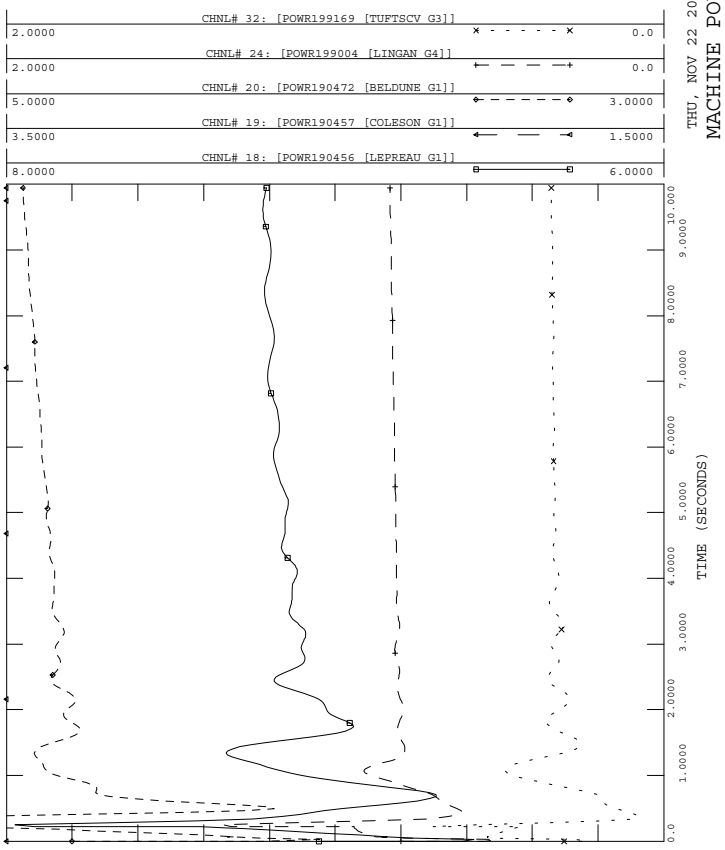

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N811_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N811_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)

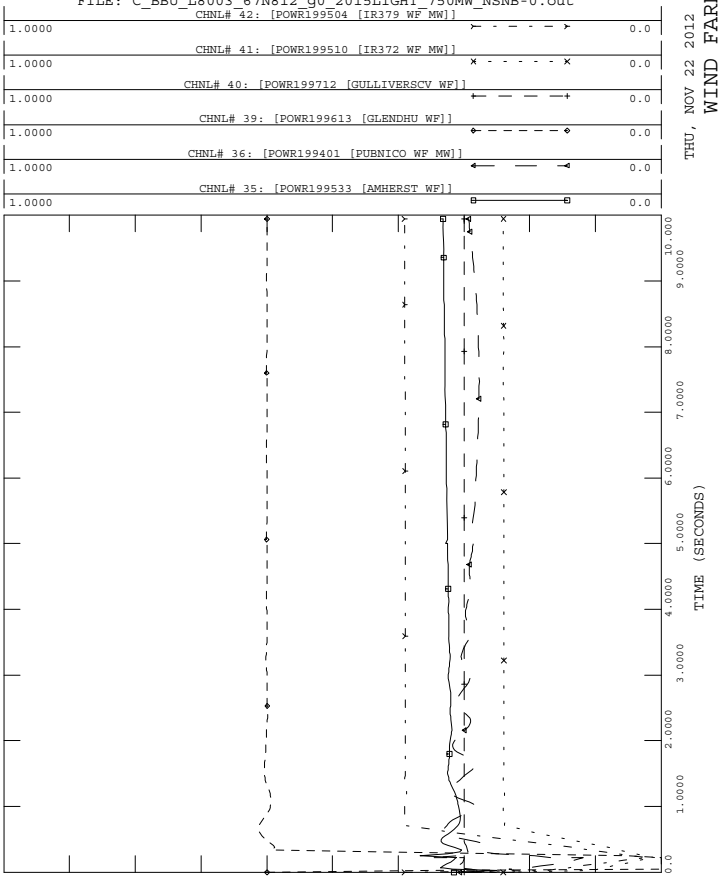

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N811_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N811_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)

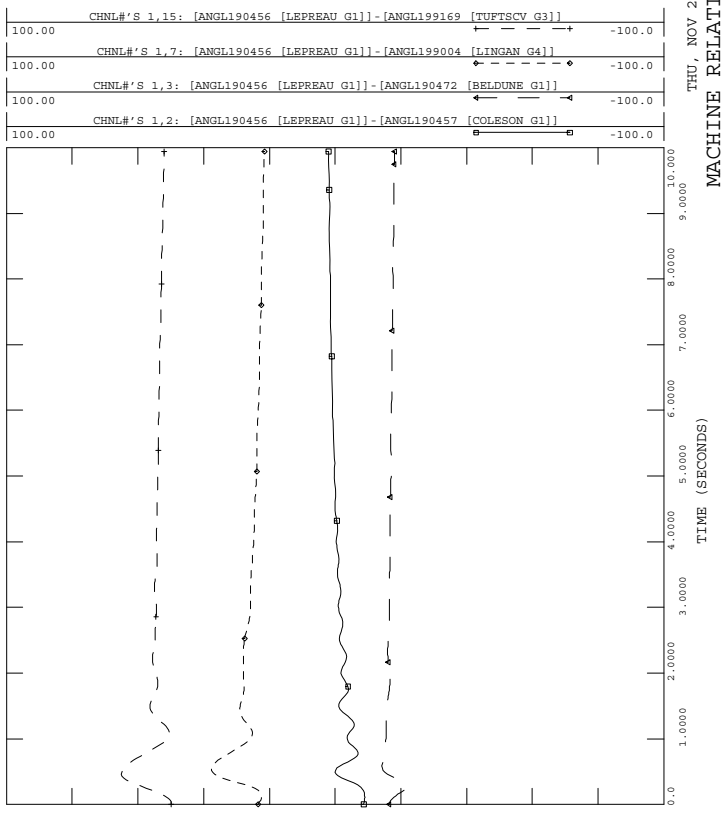
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N812_g0_2015LIGHT_750MW_NSNB-0.out



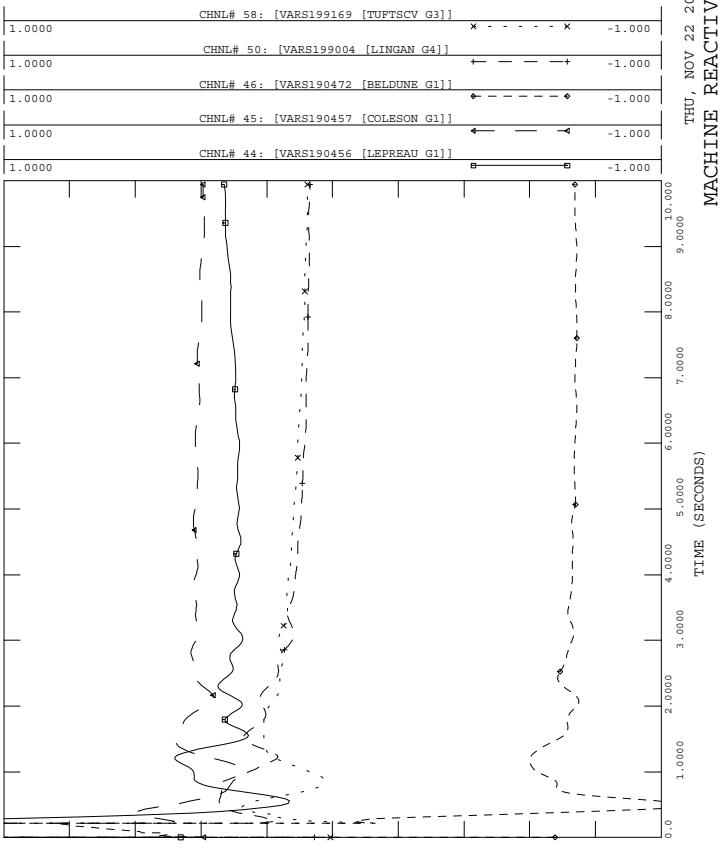
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N812_g0_2015LIGHT_750MW_NSNB-0.out

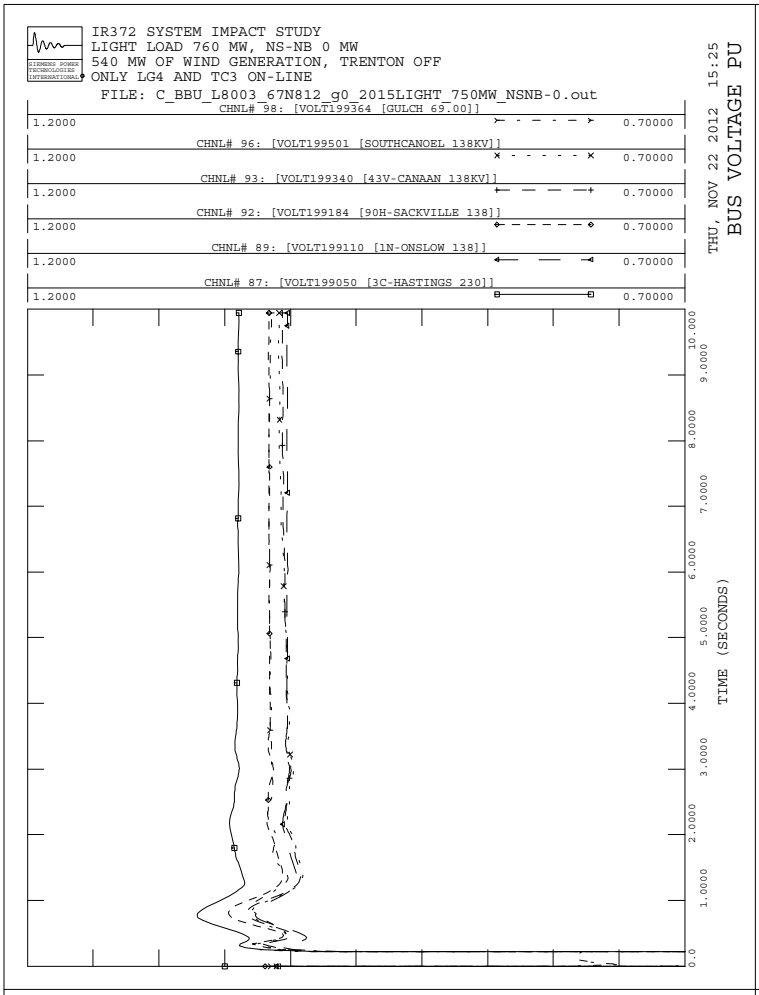


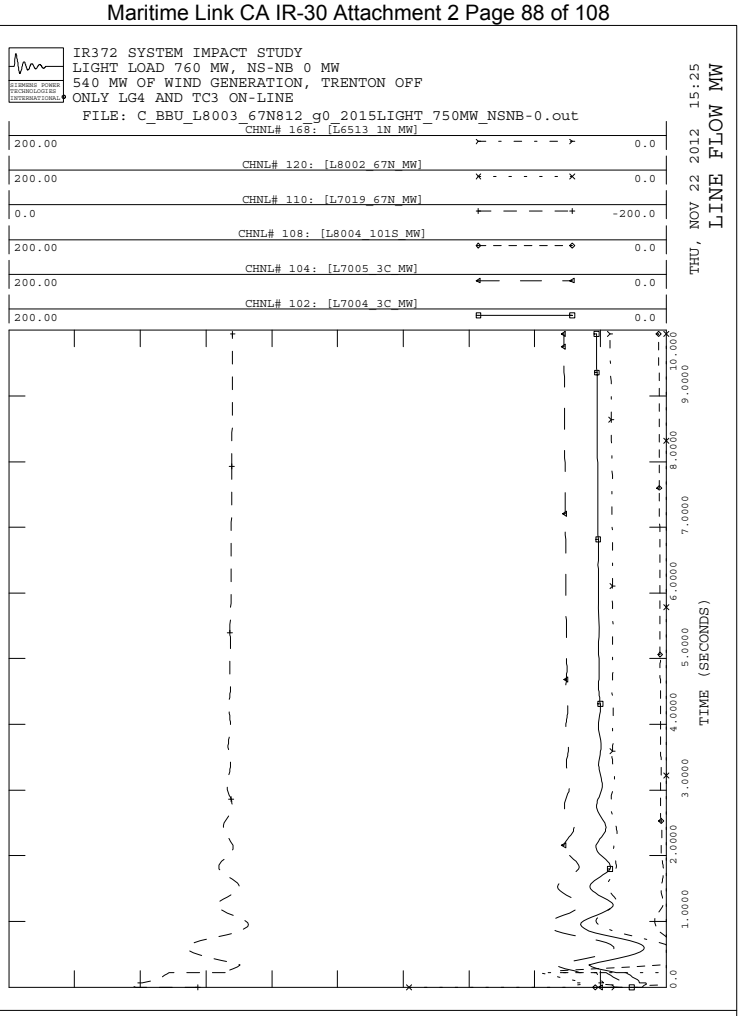
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N812_g0_2015LIGHT_750MW_NSNB-0.out

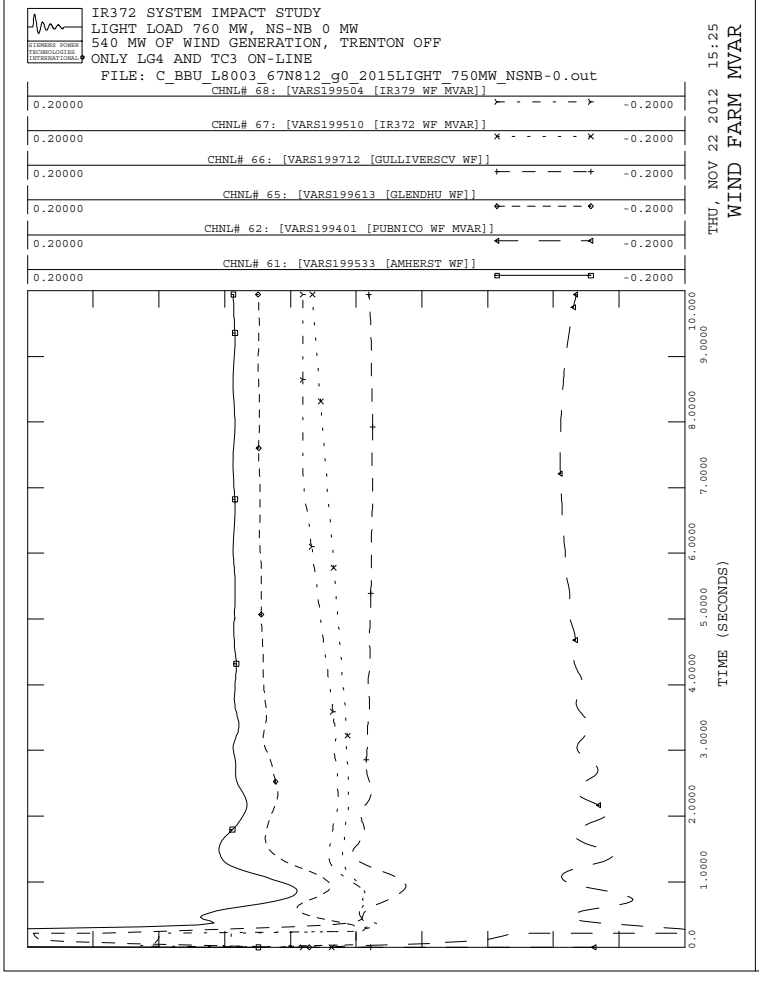


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N812_g0_2015LIGHT_750MW_NSNB-0.out




IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N812_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N812_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N812_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
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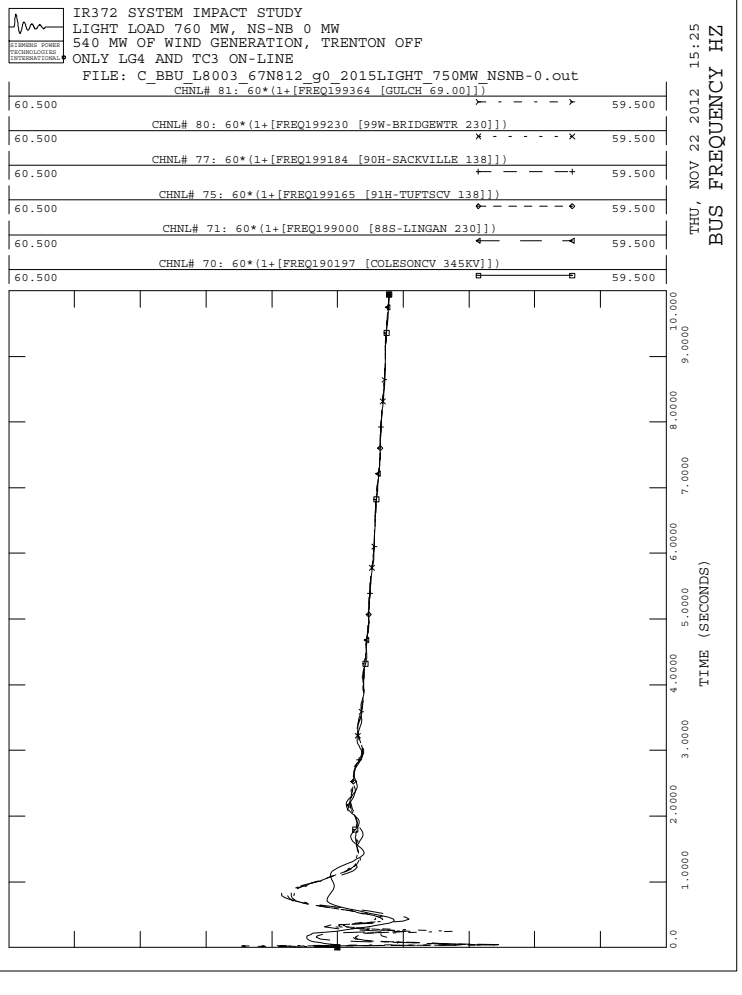
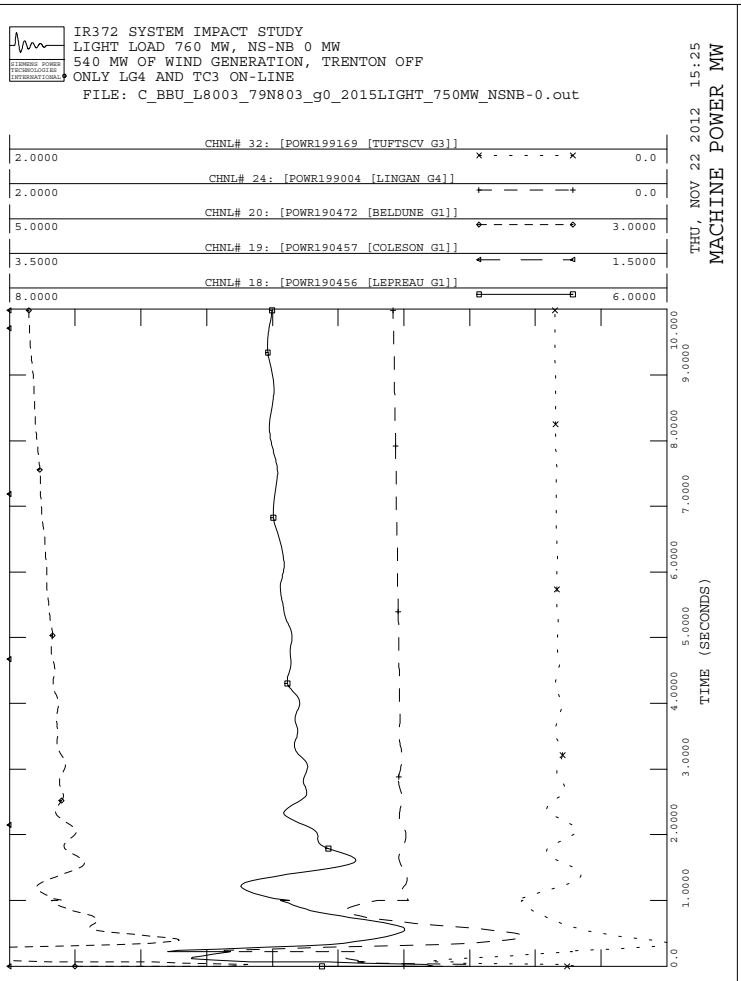
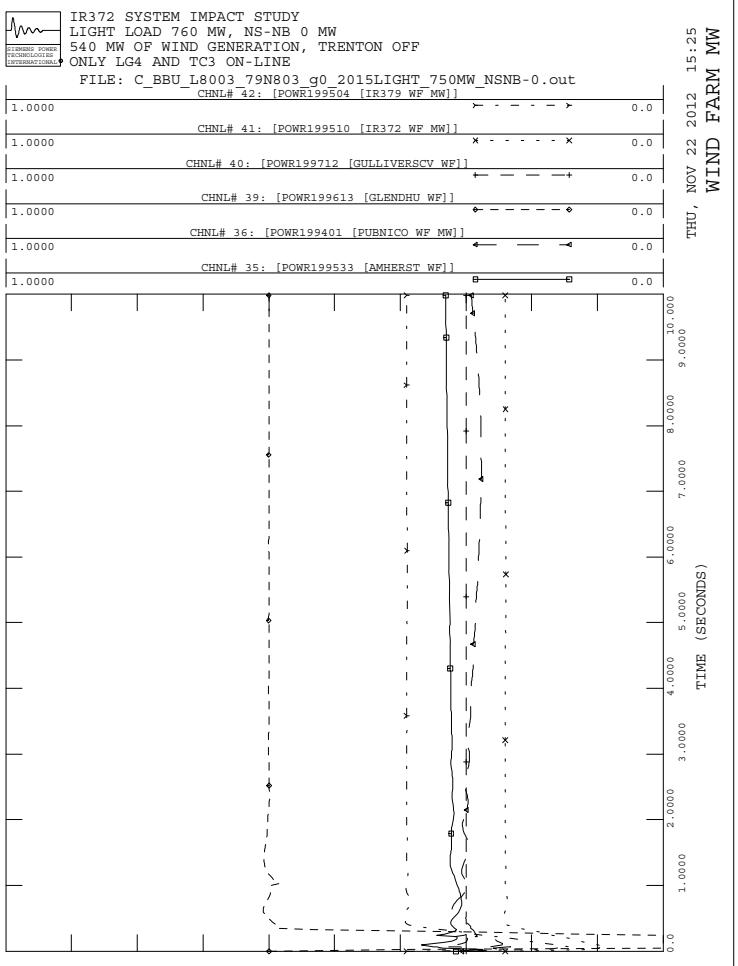
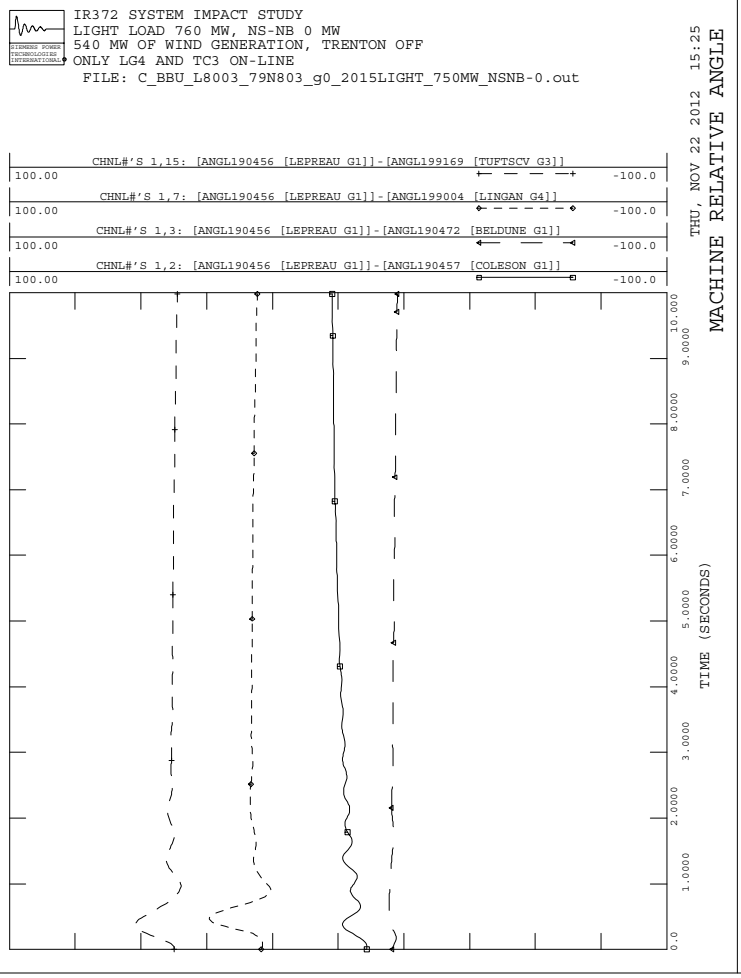
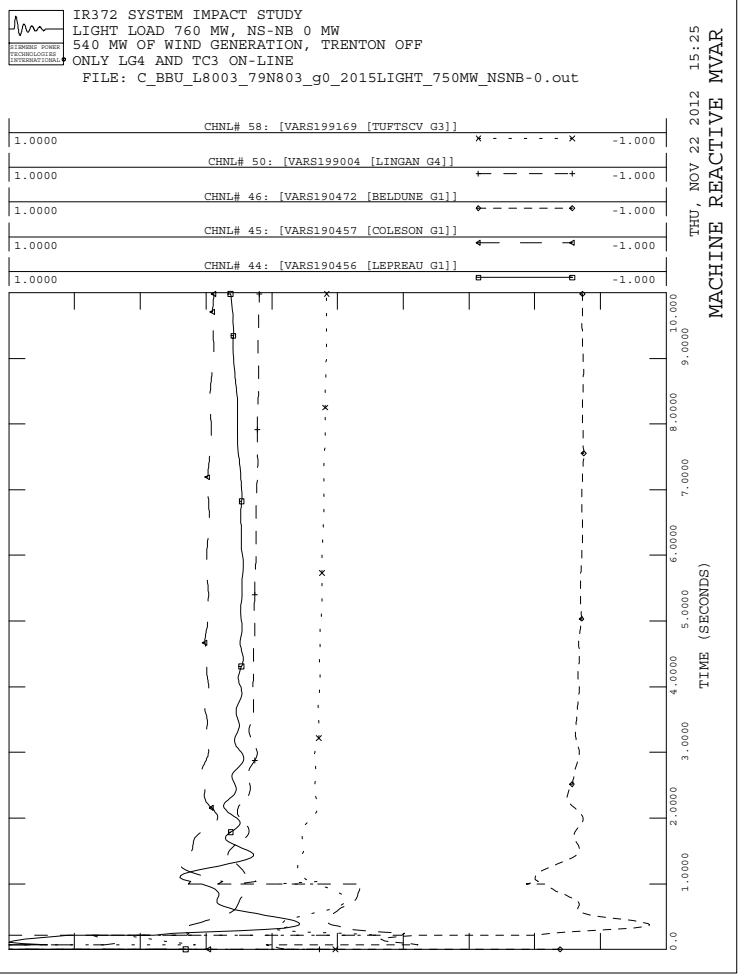
-0.2000
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)

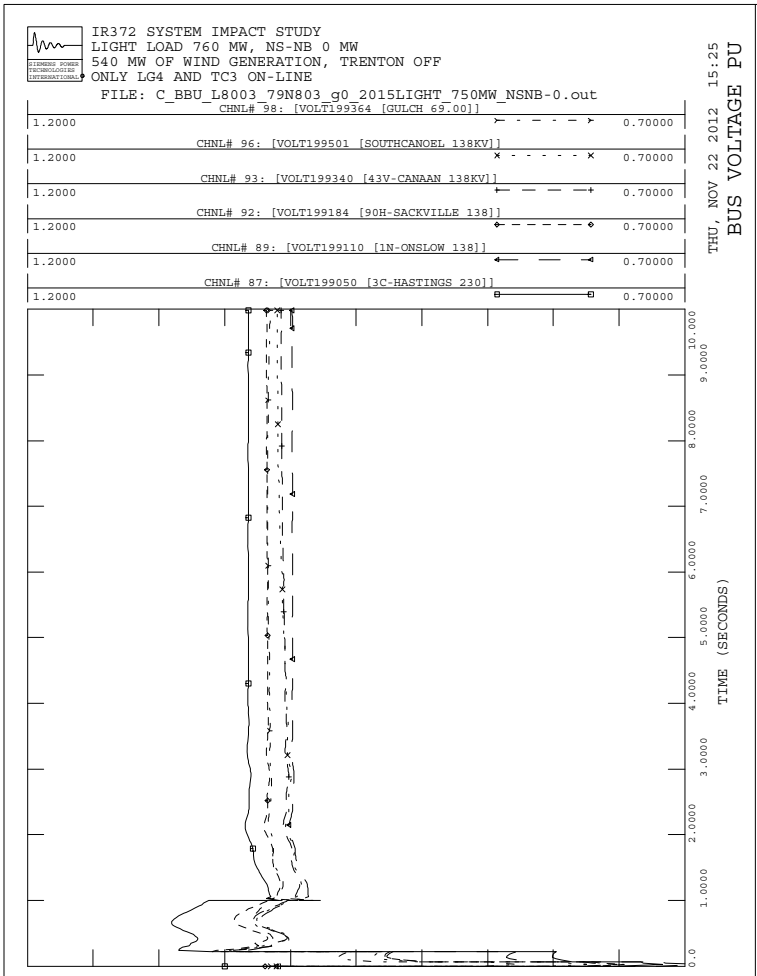

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_67N812_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)

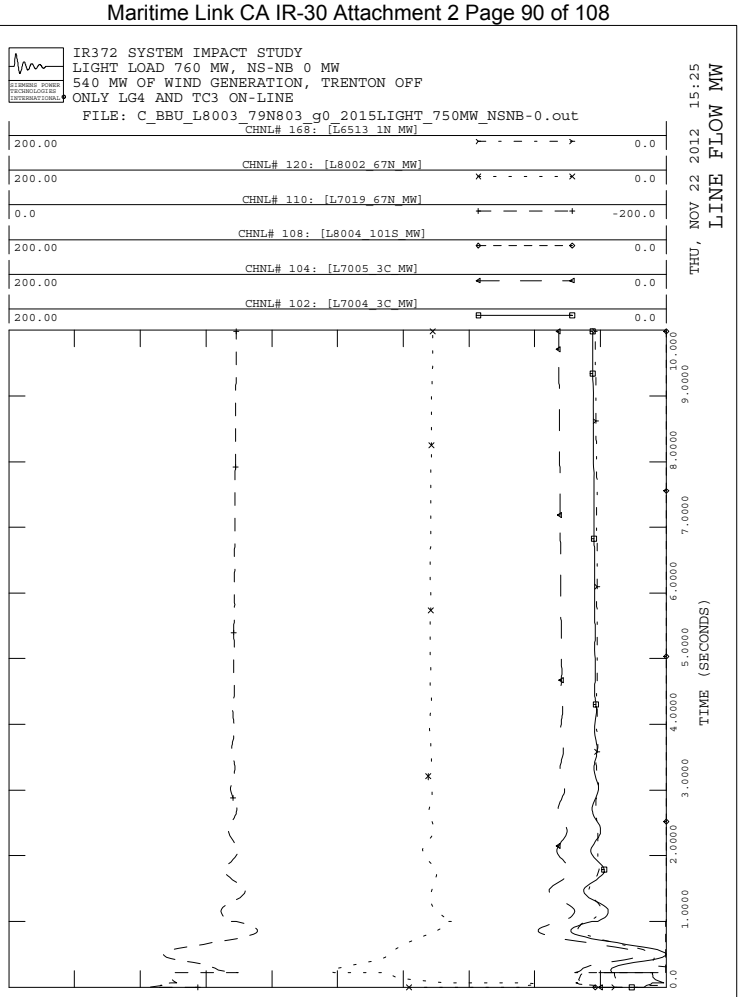

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_79N803_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
MACHINE POWER MW
TIME (SECONDS)
THU, NOV 22 2012 15:25

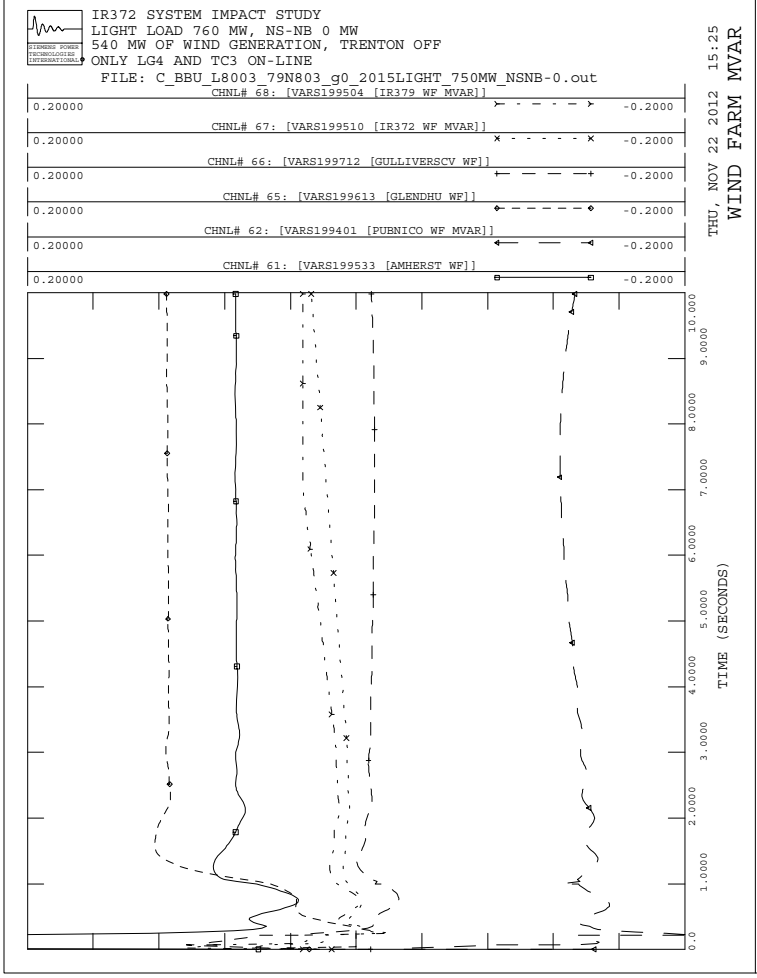

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_79N803_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
WIND FARM MW
TIME (SECONDS)
THU, NOV 22 2012 15:25

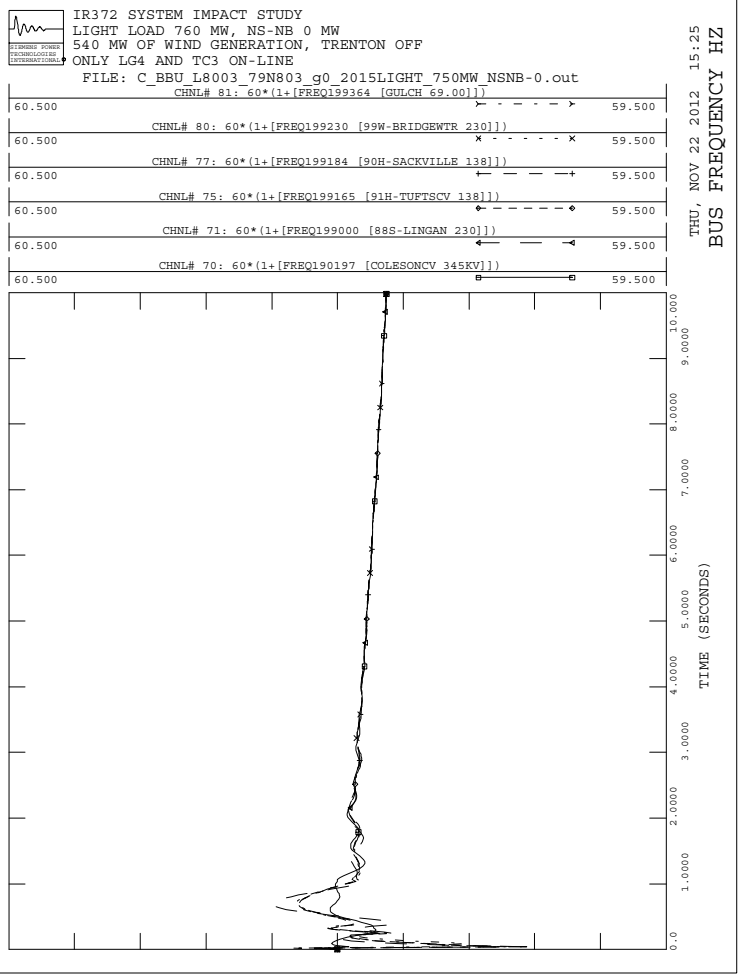

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_79N803_g0_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
MACHINE RELATIVE ANGLE
TIME (SECONDS)
THU, NOV 22 2012 15:25


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_79N803_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
MACHINE REACTIVE MVAR
TIME (SECONDS)
THU, NOV 22 2012 15:25

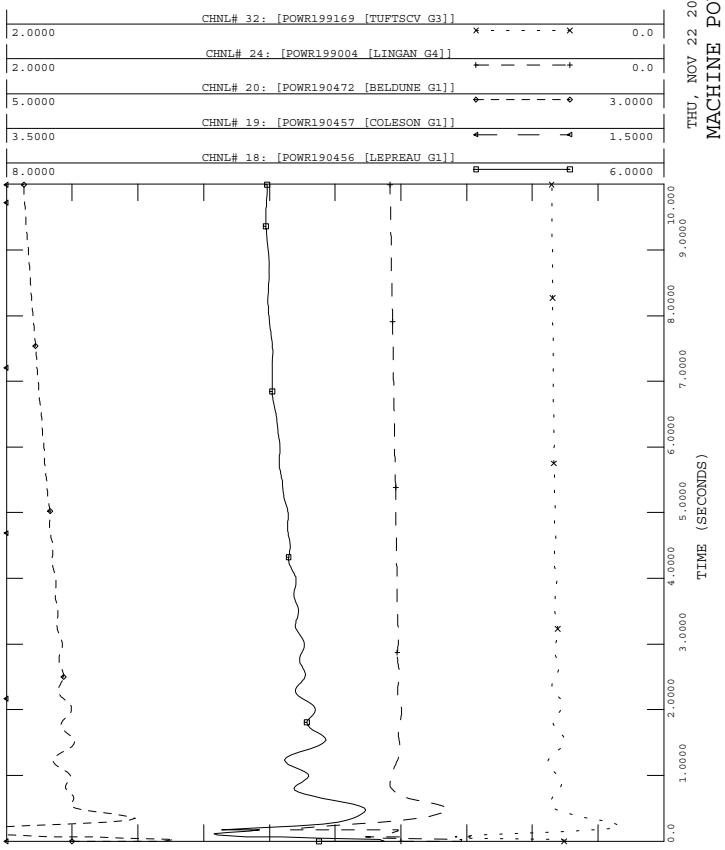

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_79N803_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:25
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_79N803_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005_3C MW]
CHNL# 102: [L7004_3C MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:25
LINE FLOW MW
TIME (SECONDS)

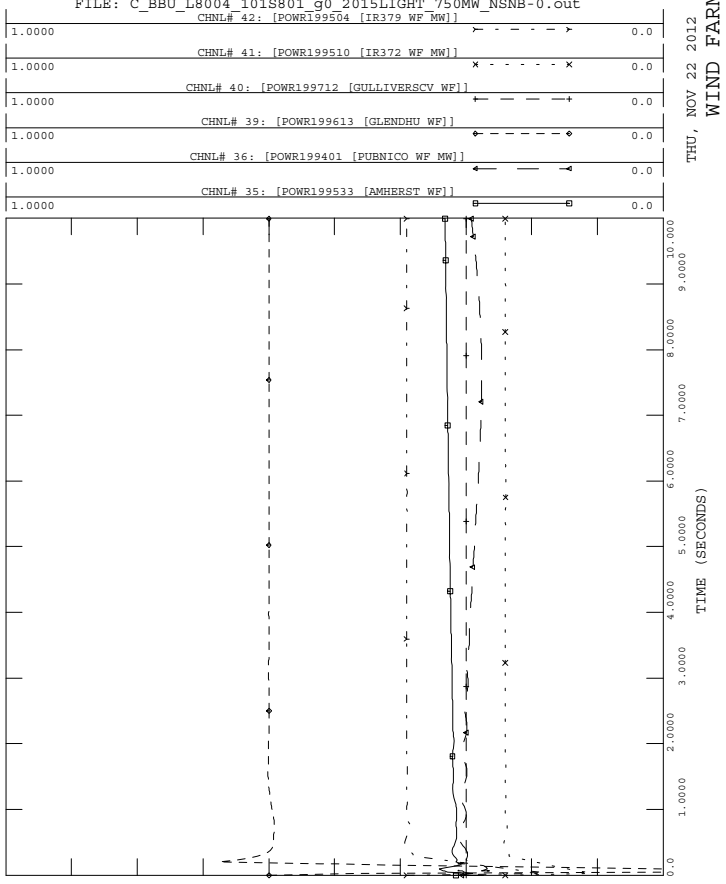

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_79N803_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:25
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8003_79N803_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:25
BUS FREQUENCY HZ
TIME (SECONDS)

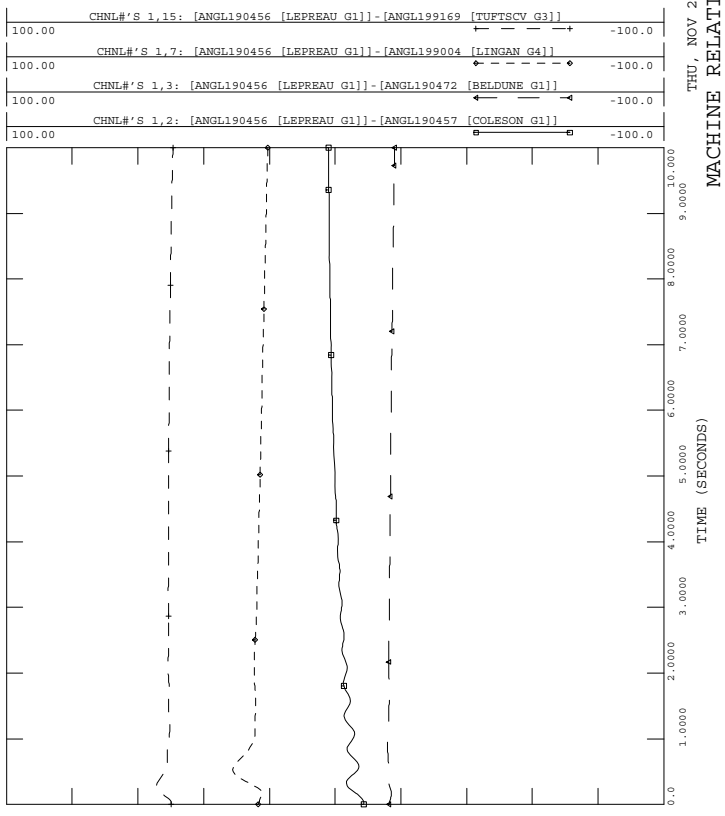
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_101S801_g0_2015LIGHT_750MW_NSNB-0.out



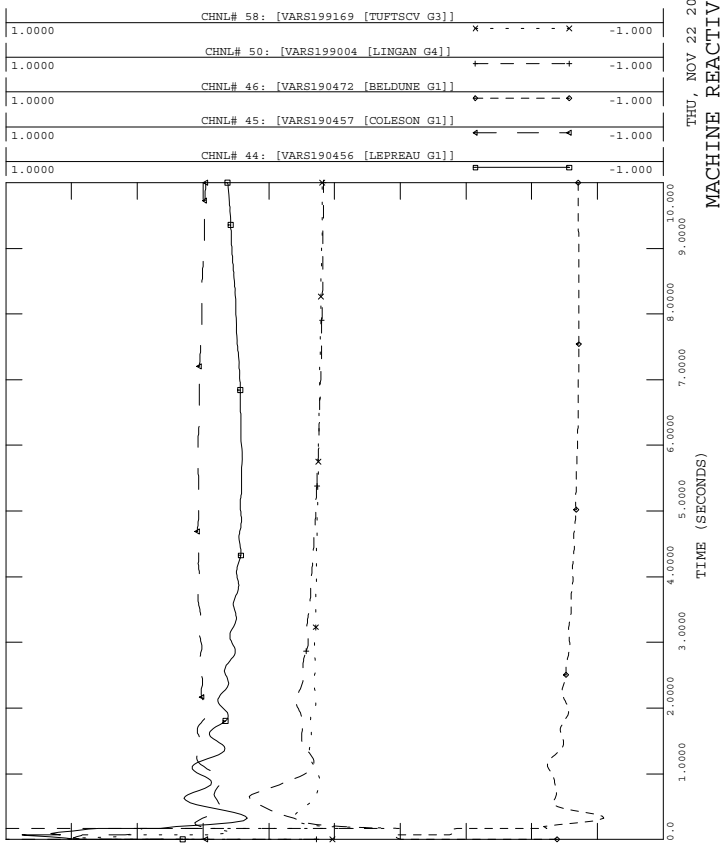
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_101S801_g0_2015LIGHT_750MW_NSNB-0.out



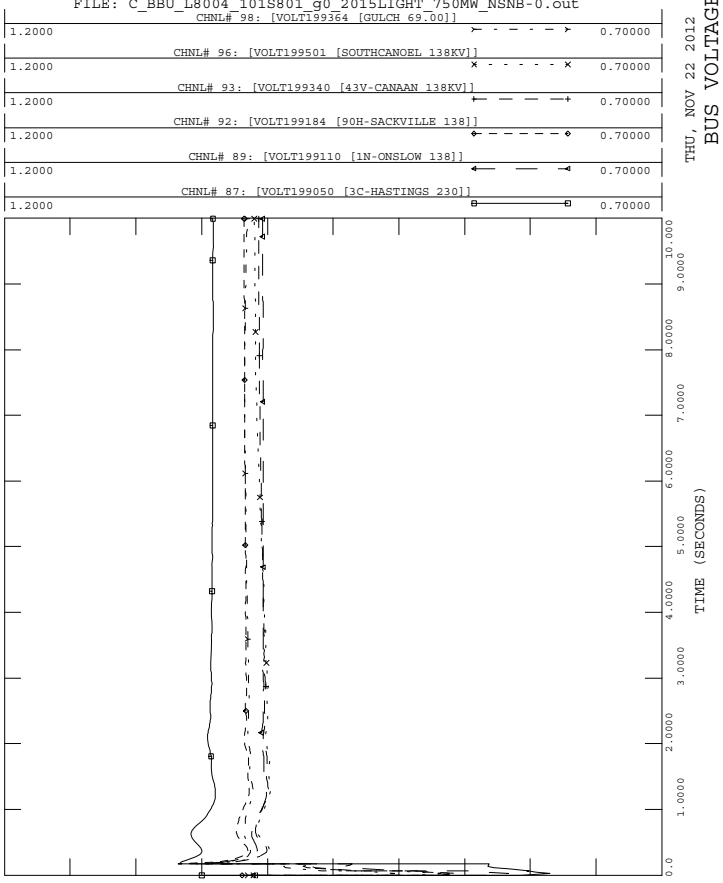
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_101S801_g0_2015LIGHT_750MW_NSNB-0.out



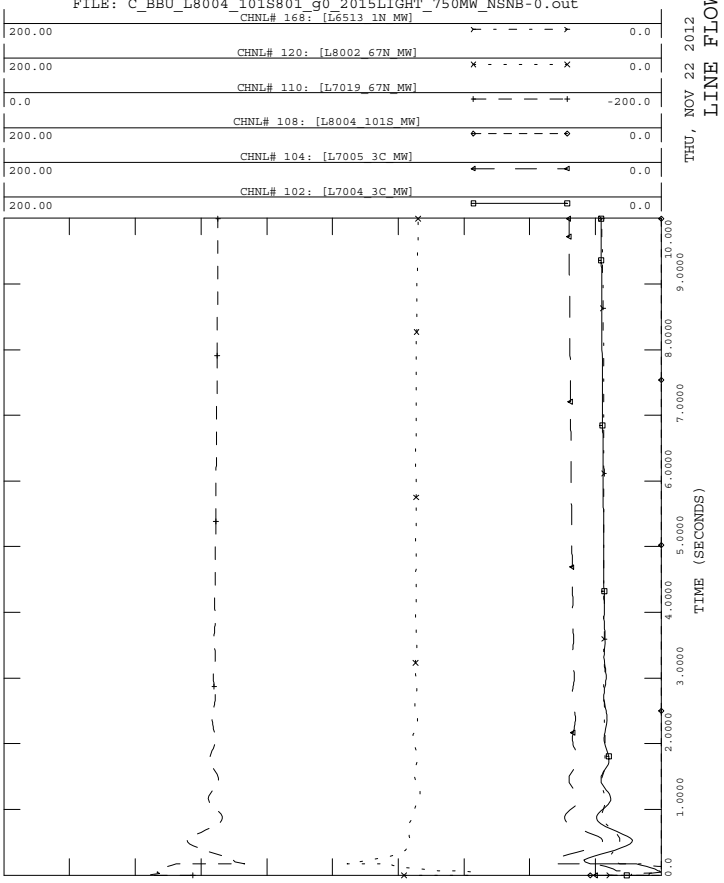
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_101S801_g0_2015LIGHT_750MW_NSNB-0.out



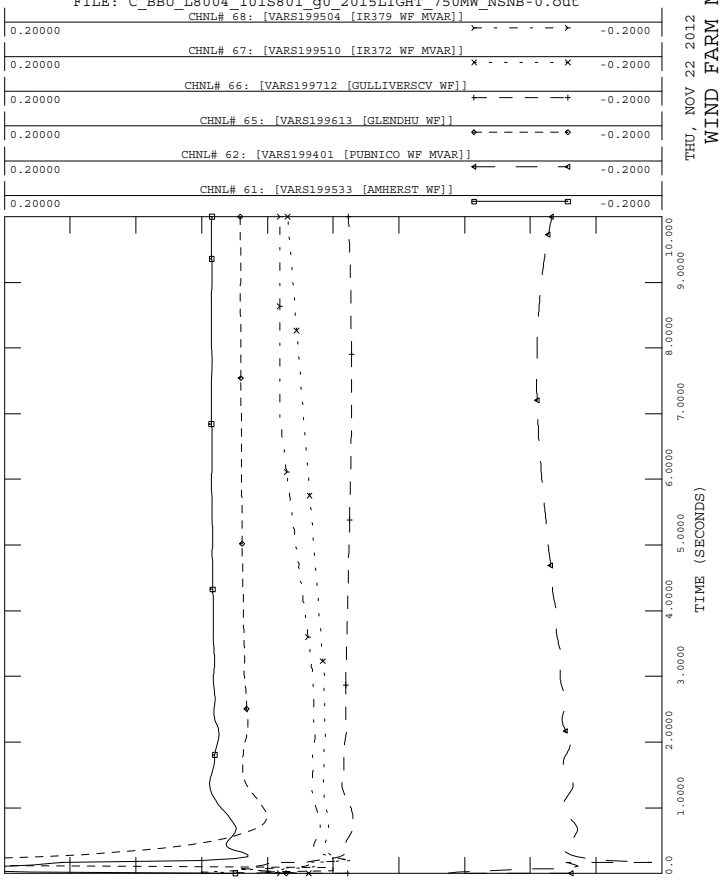
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_101S801_g0_2015LIGHT_750MW_NSNB-0.out



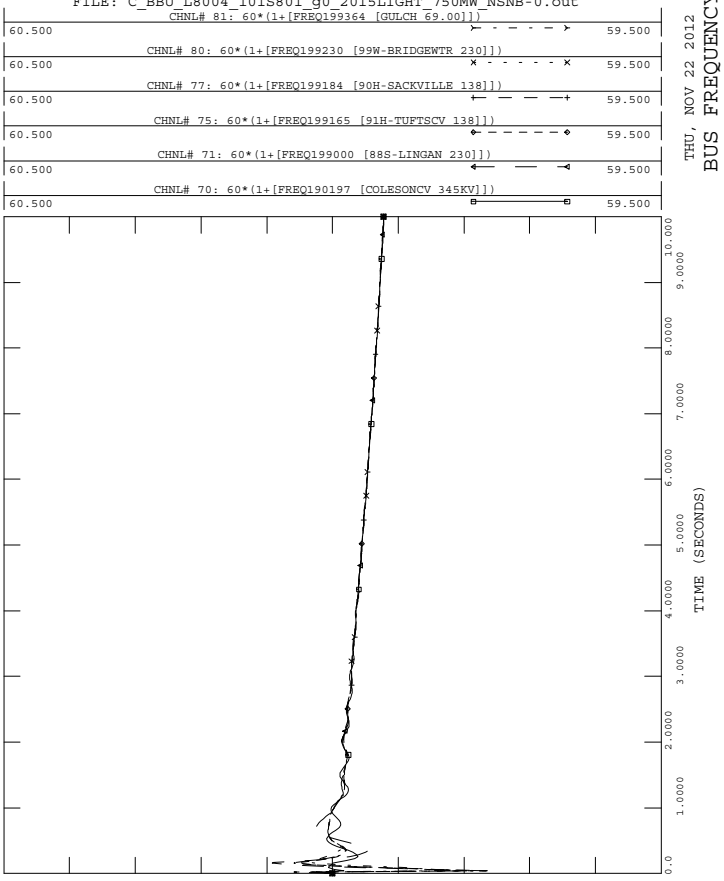
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_101S801_g0_2015LIGHT_750MW_NSNB-0.out



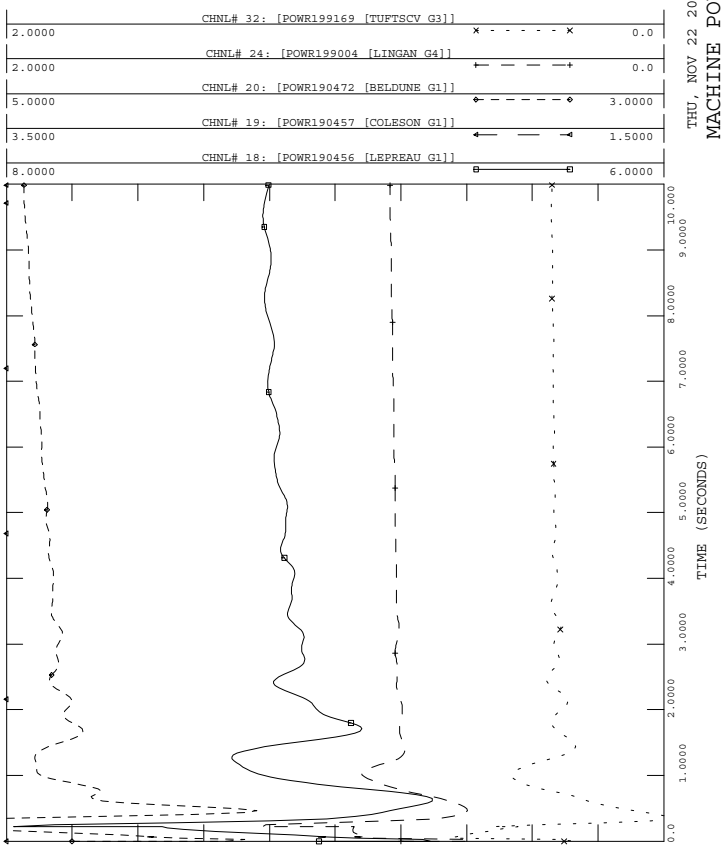
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_101S801_g0_2015LIGHT_750MW_NSNB-0.out



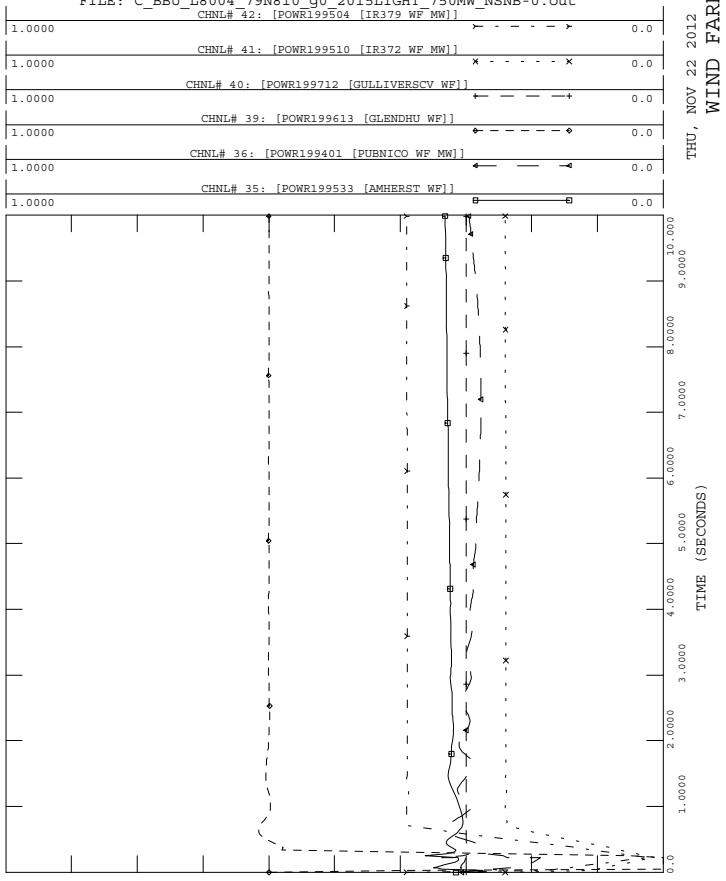
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_101S801_g0_2015LIGHT_750MW_NSNB-0.out



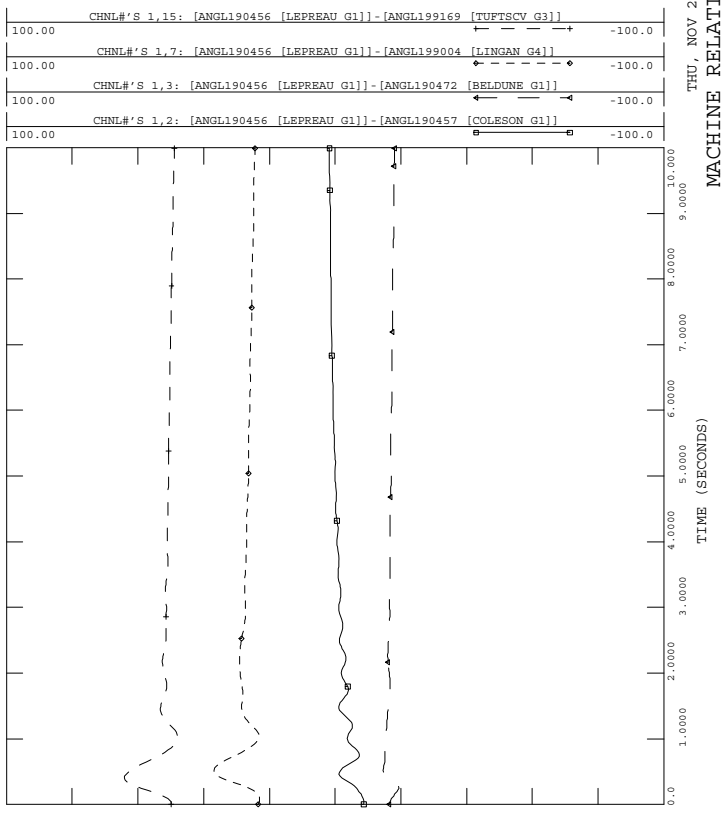
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_79N810_g0_2015LIGHT_750MW_NSNB-0.out



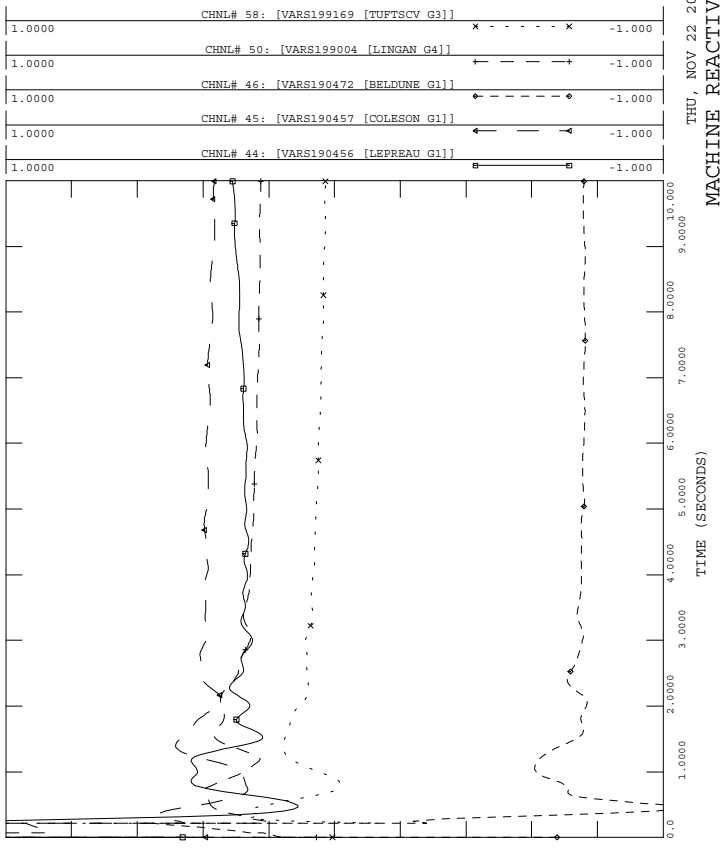
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_79N810_g0_2015LIGHT_750MW_NSNB-0.out

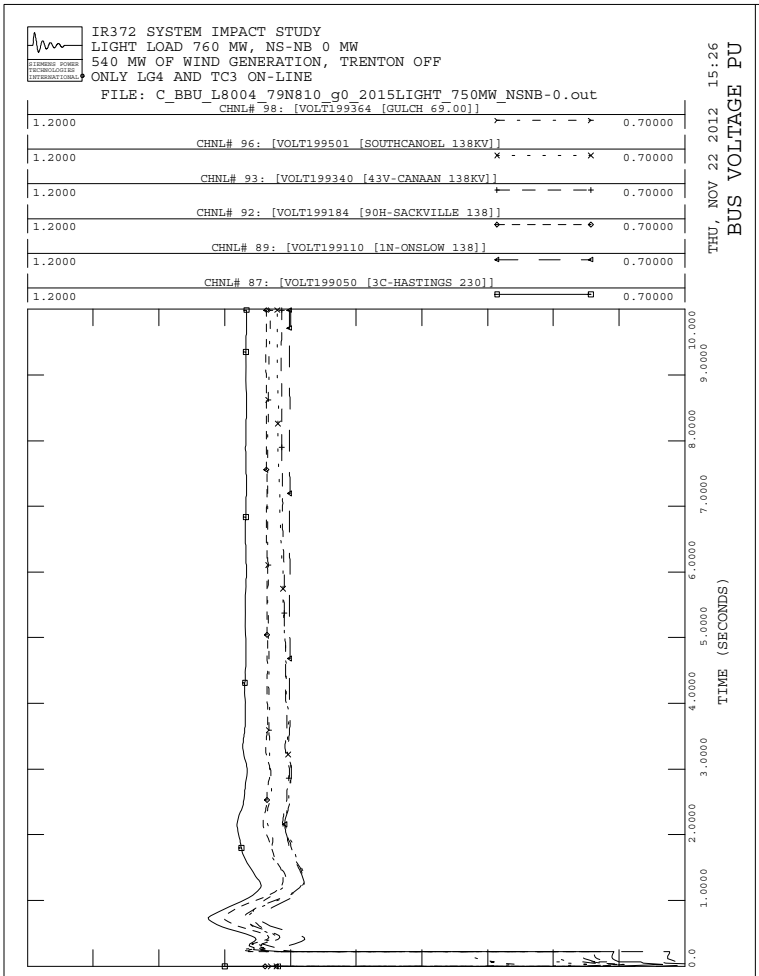


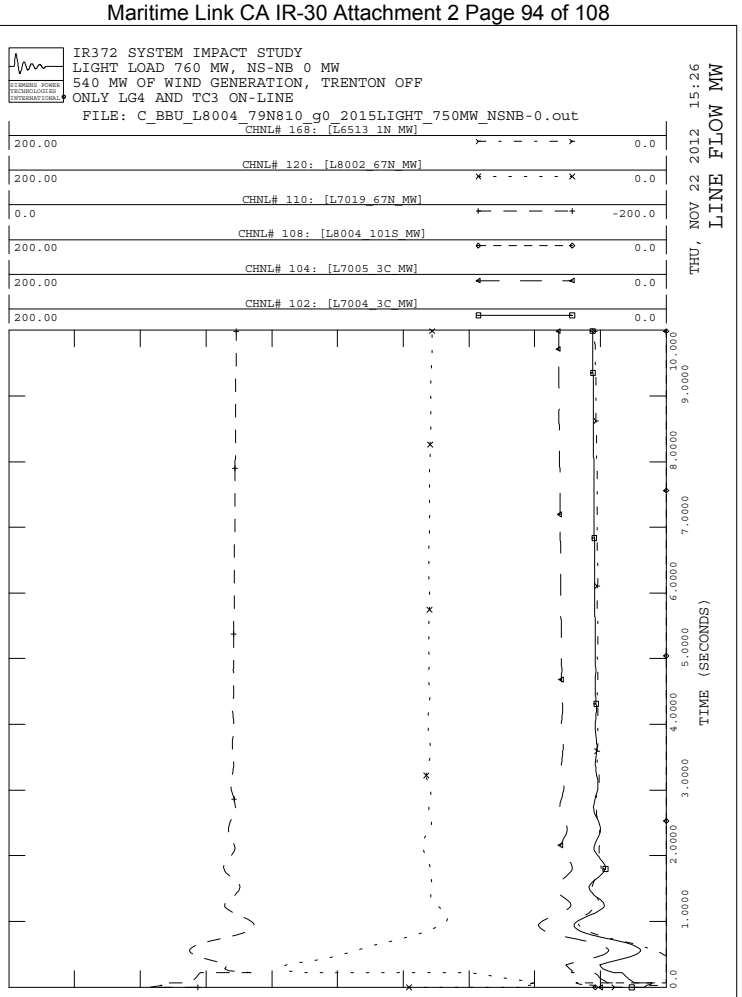
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_79N810_g0_2015LIGHT_750MW_NSNB-0.out

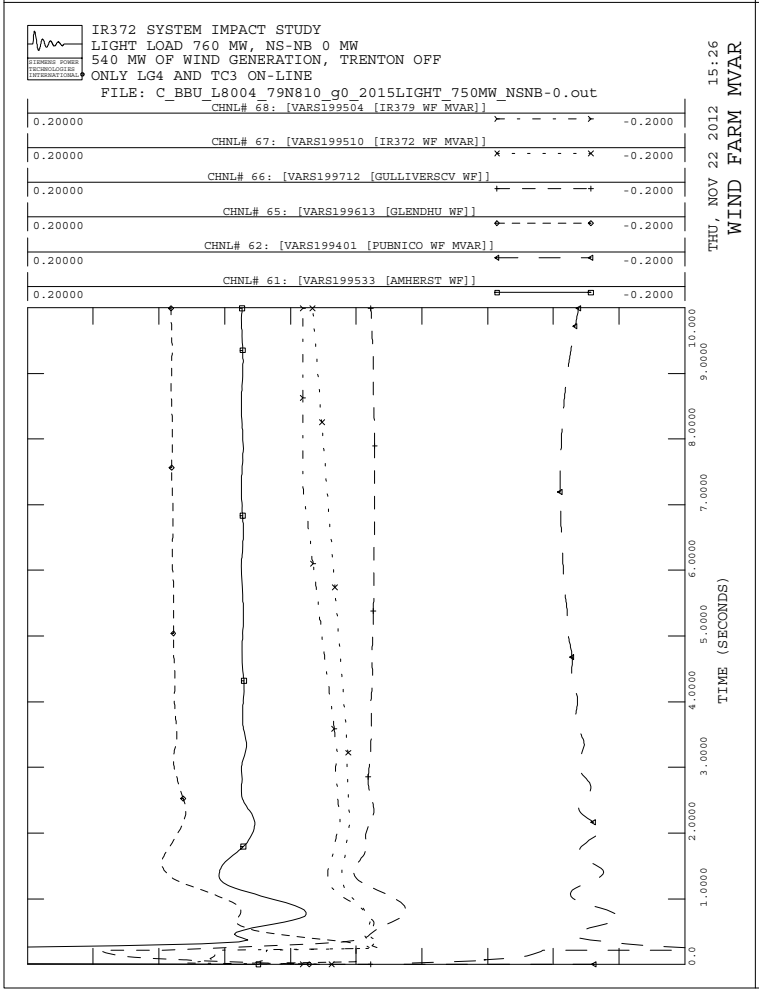


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_79N810_g0_2015LIGHT_750MW_NSNB-0.out




IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_79N810_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:26
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_79N810_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005_3C MW]
CHNL# 102: [L7004_3C MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:26
LINE FLOW MW
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_79N810_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
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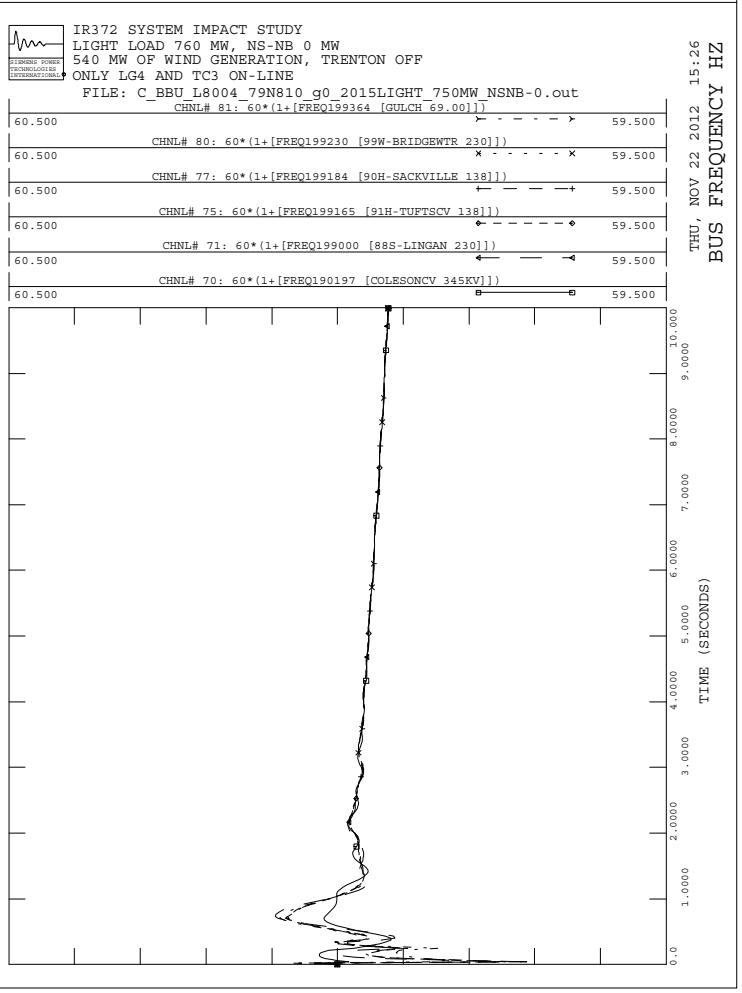
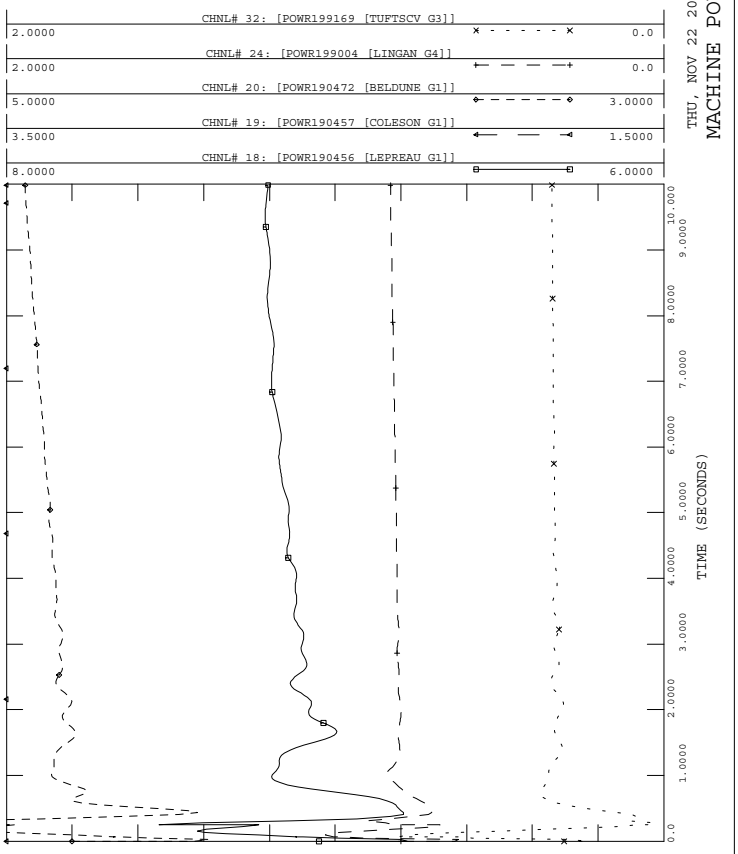
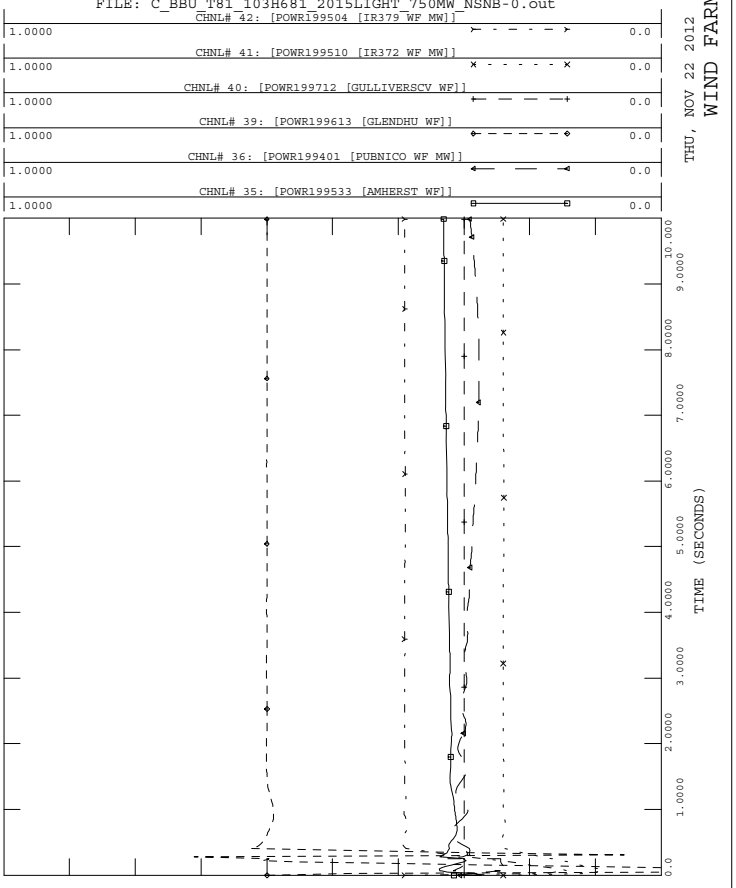
-0.2000
THU, NOV 22 2012 15:26
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_L8004_79N810_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:26
BUS FREQUENCY HZ
TIME (SECONDS)

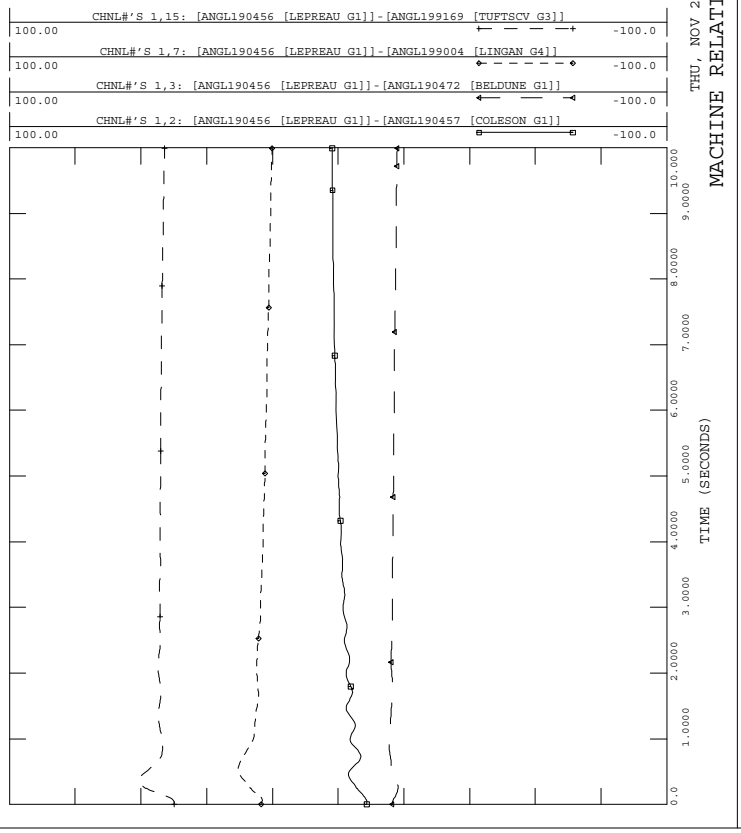
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_T81_103H681_2015LIGHT_750MW_NSNB-0.out



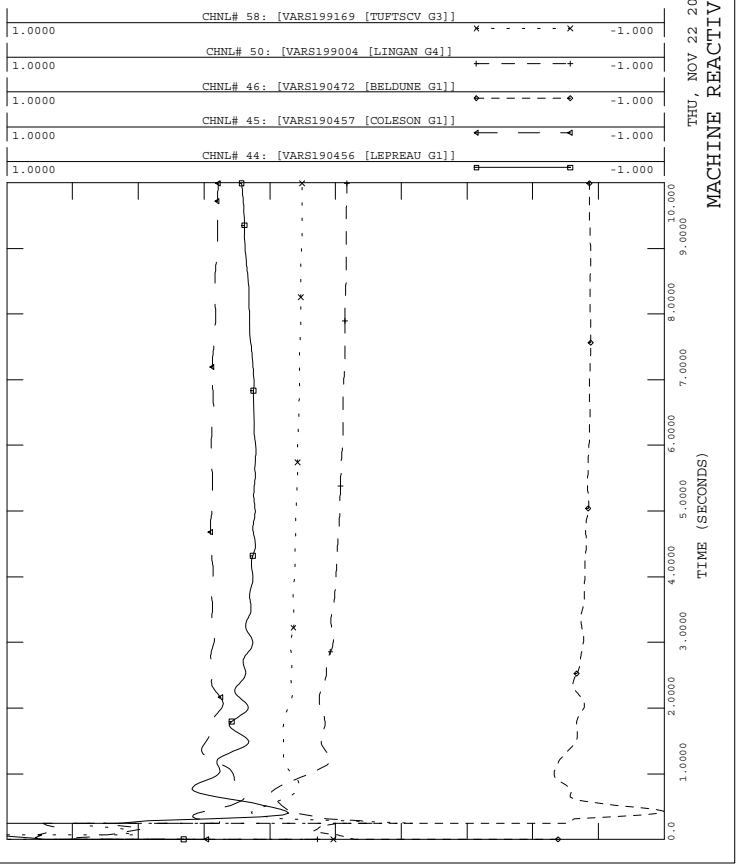
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_T81_103H681_2015LIGHT_750MW_NSNB-0.out

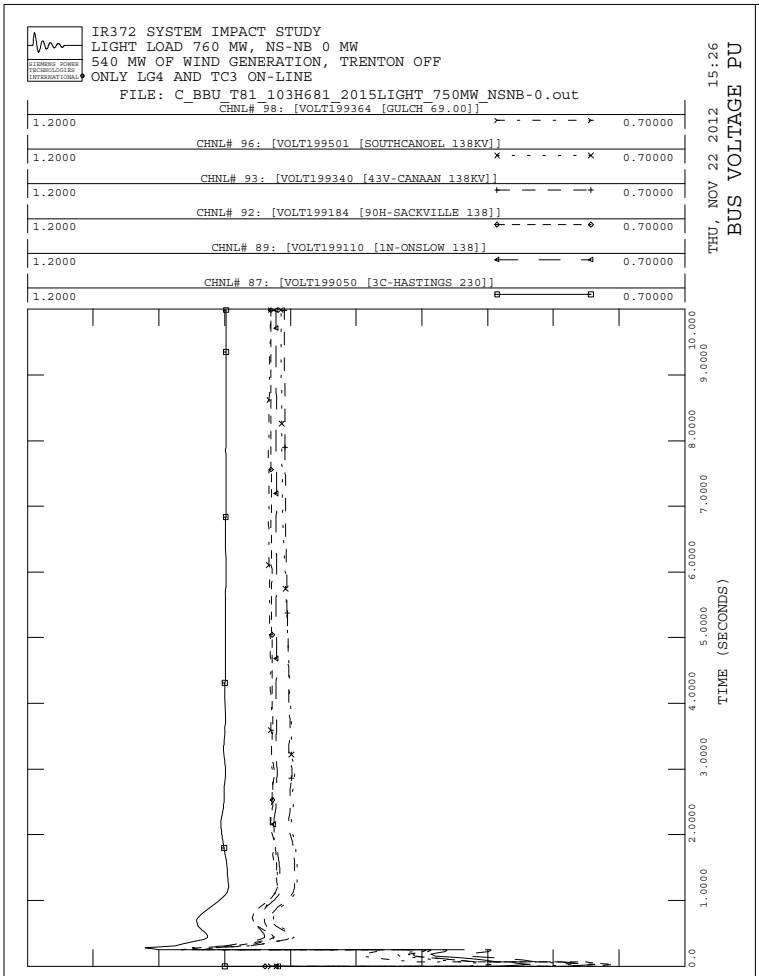


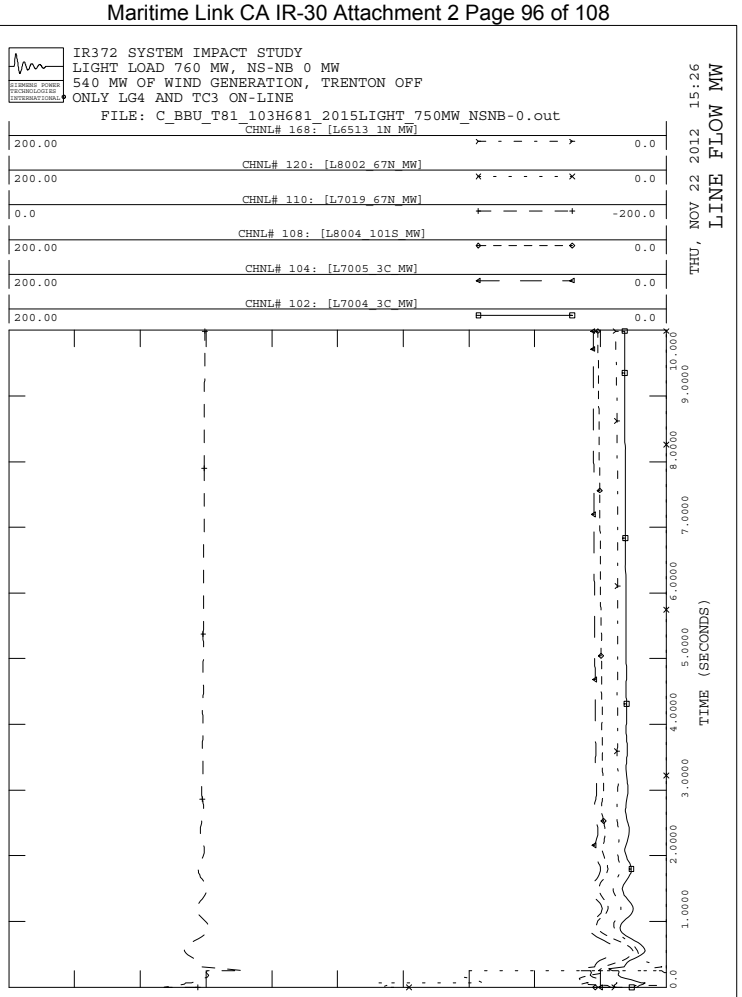
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_T81_103H681_2015LIGHT_750MW_NSNB-0.out

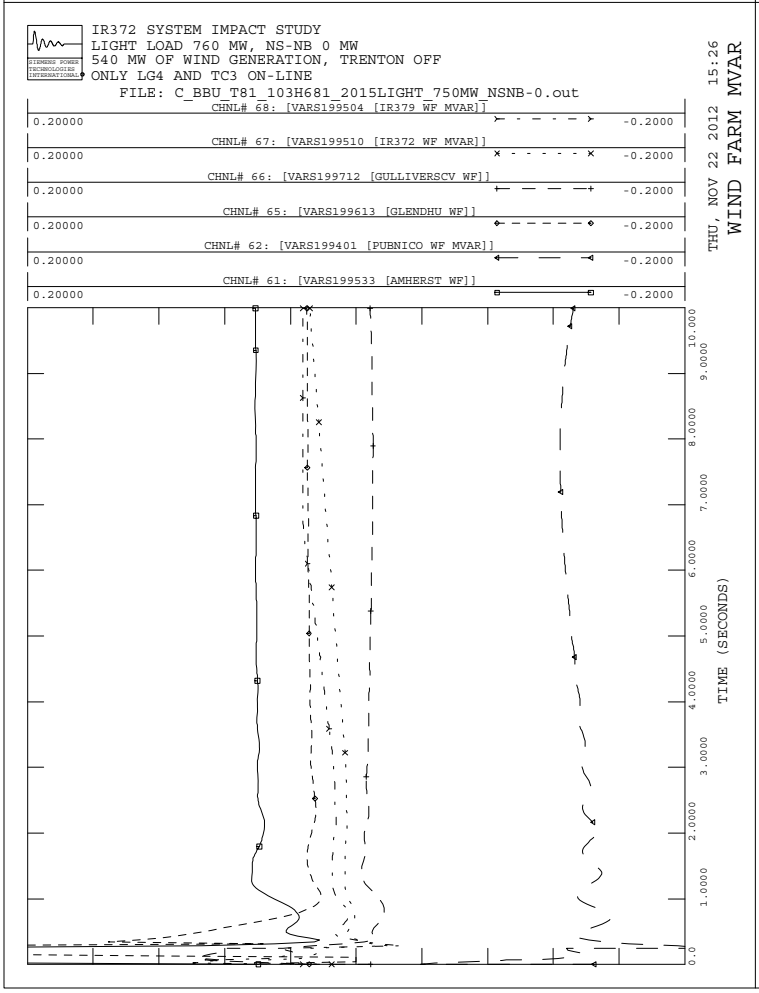


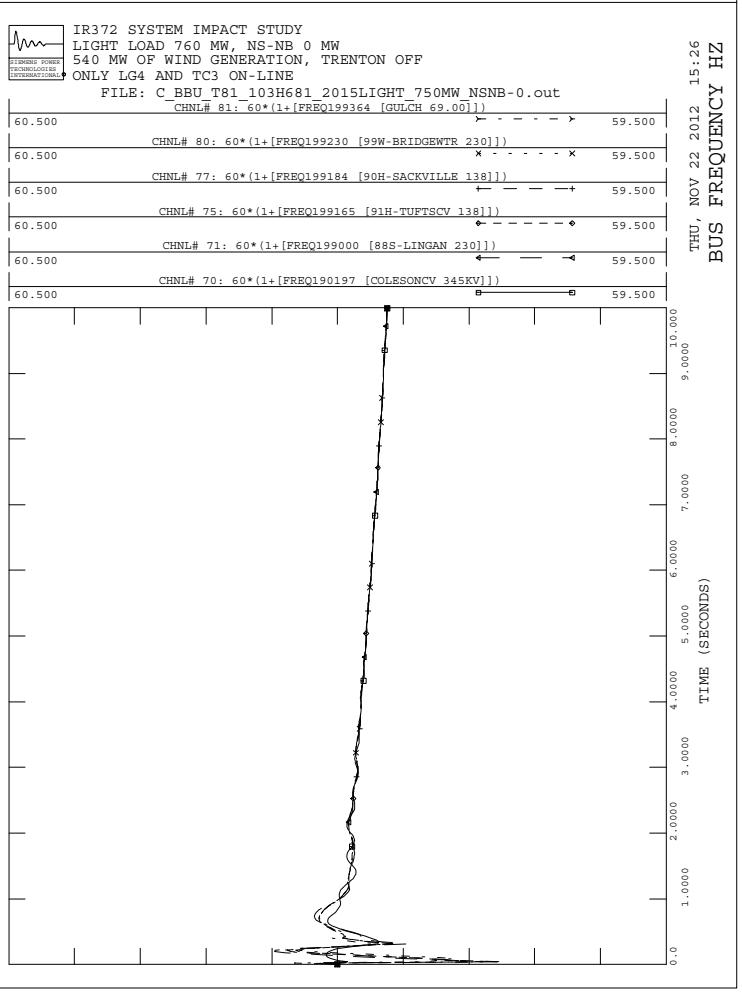
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_T81_103H681_2015LIGHT_750MW_NSNB-0.out

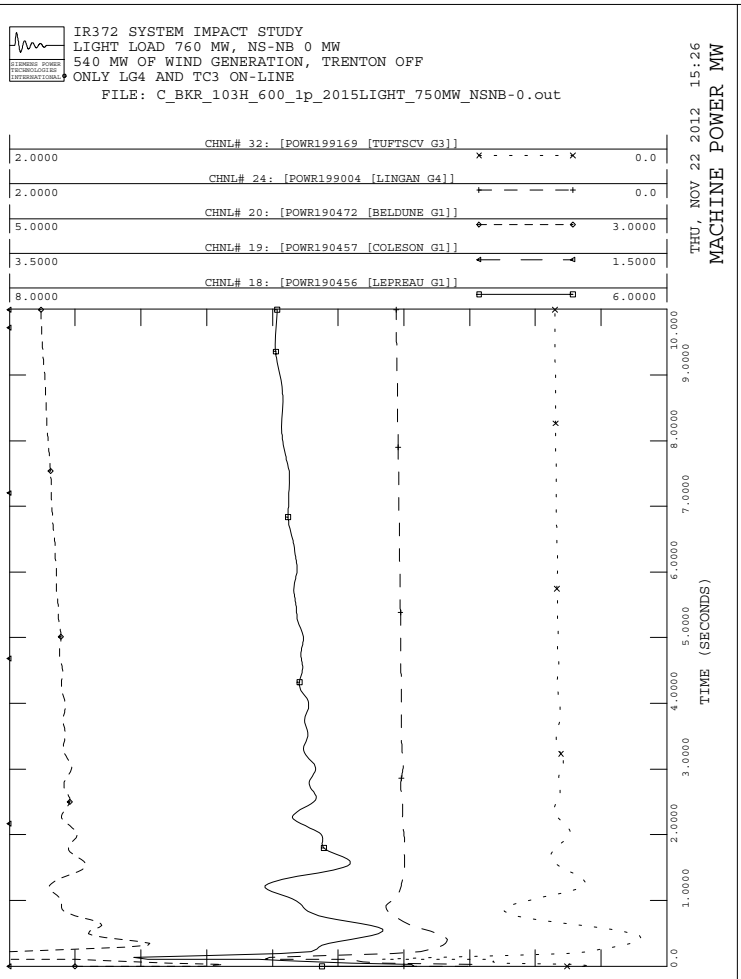


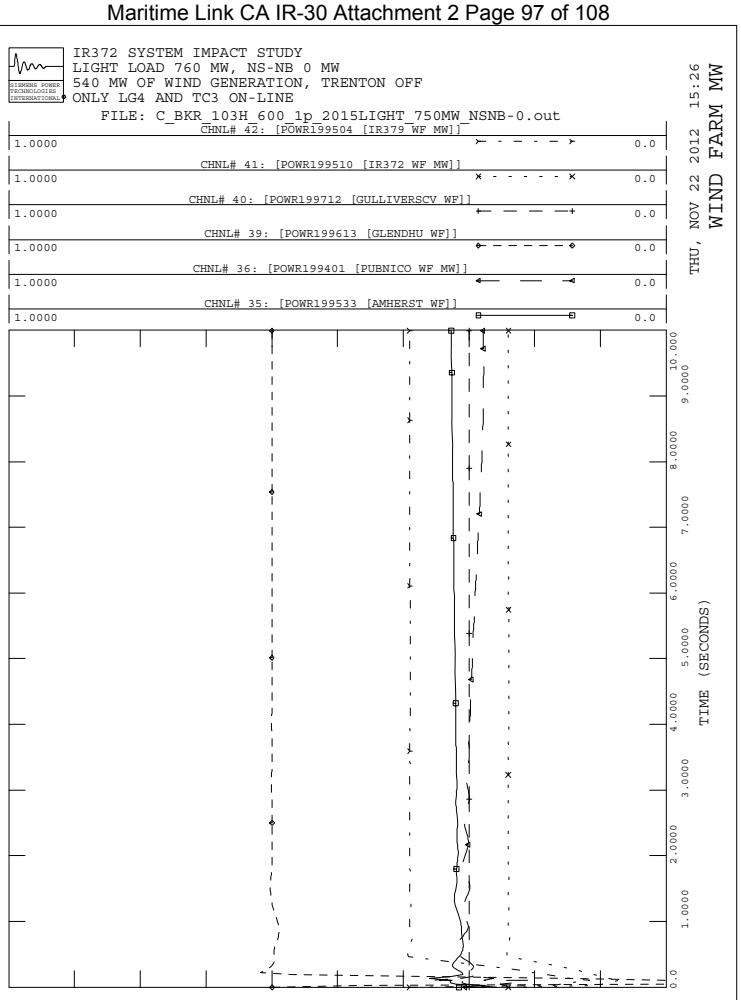

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_T81_103H681_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:26
BUS VOLTAGE PU
TIME (SECONDS)

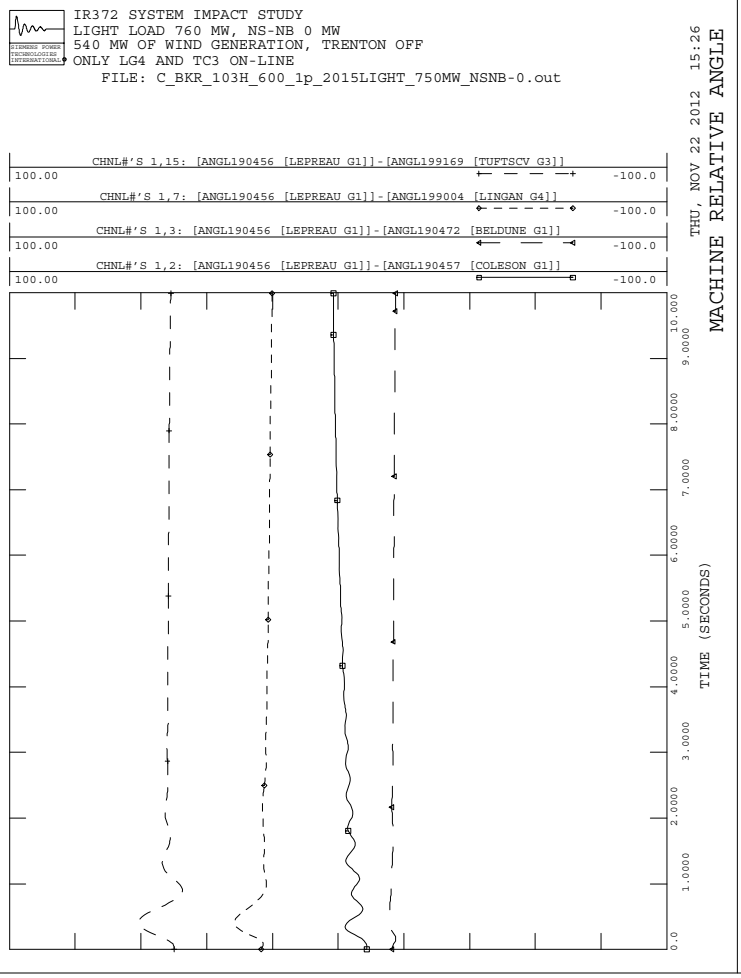

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_T81_103H681_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:26
LINE FLOW MW
TIME (SECONDS)

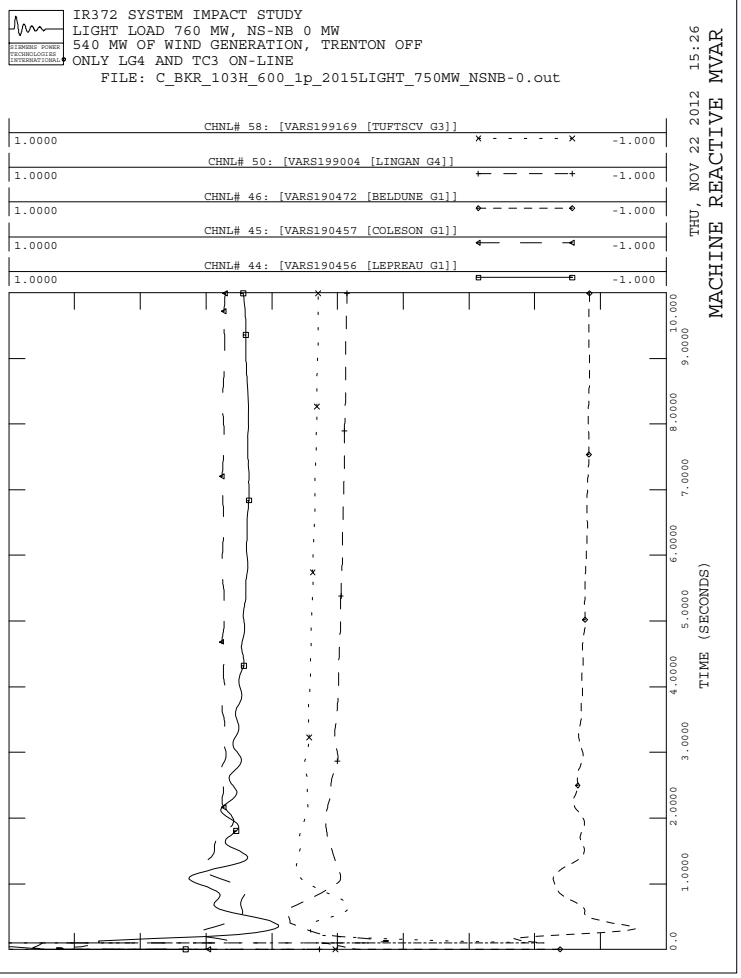

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_T81_103H681_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:26
WIND FARM MVAR
TIME (SECONDS)

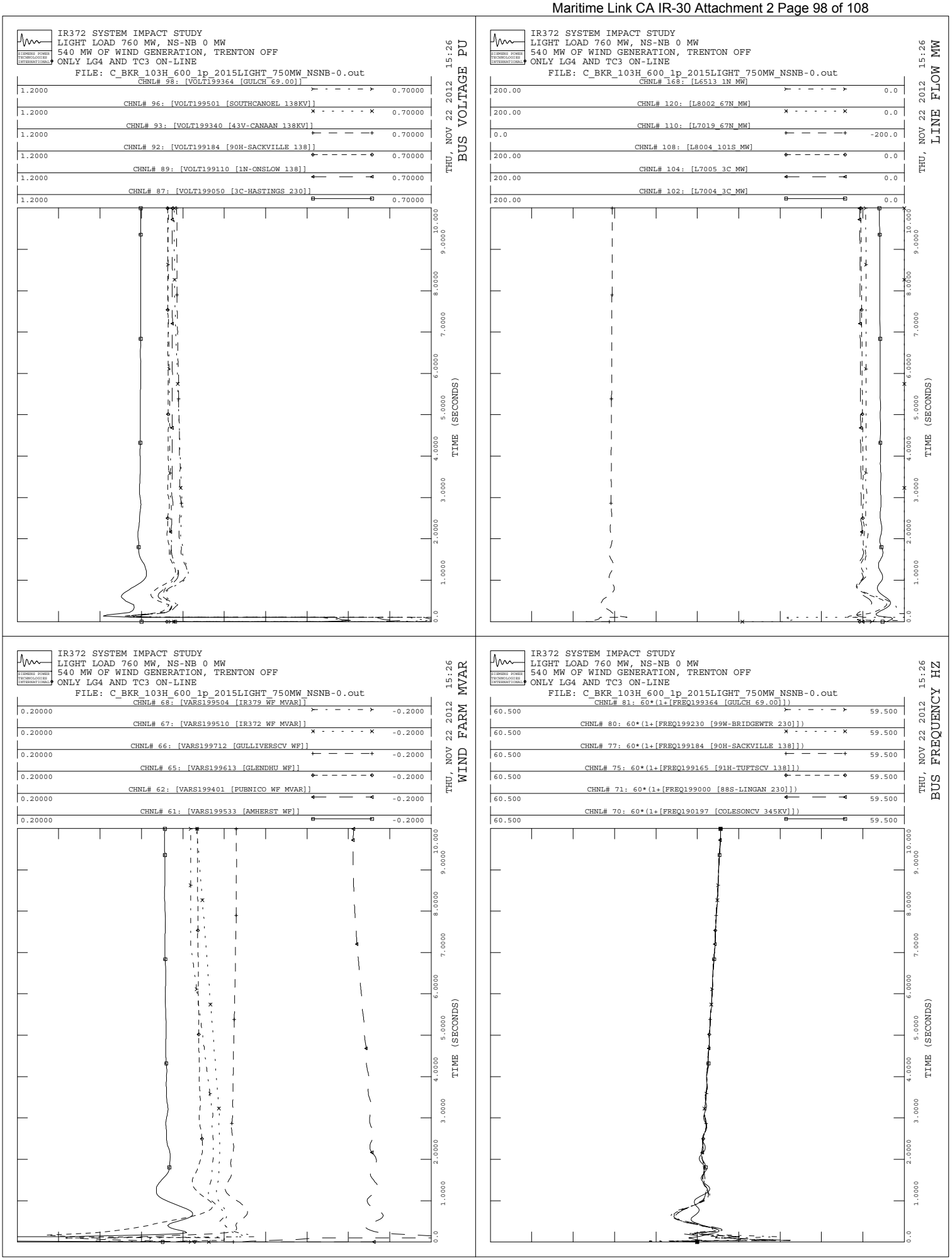

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BBU_T81_103H681_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:26
BUS FREQUENCY HZ
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_103H_600_1p_2015LIGHT_750MW_NSNB-0.out
CHNL# 32: [POWR199169 [TUFTSCV G3]]
CHNL# 24: [POWR199004 [LINGAN G4]]
CHNL# 20: [POWR190472 [BELDUNE G1]]
CHNL# 19: [POWR190457 [COLESON G1]]
CHNL# 18: [POWR190456 [LEPREAU G1]]
THU, NOV 22 2012 15:26
MACHINE POWER MW
TIME (SECONDS)

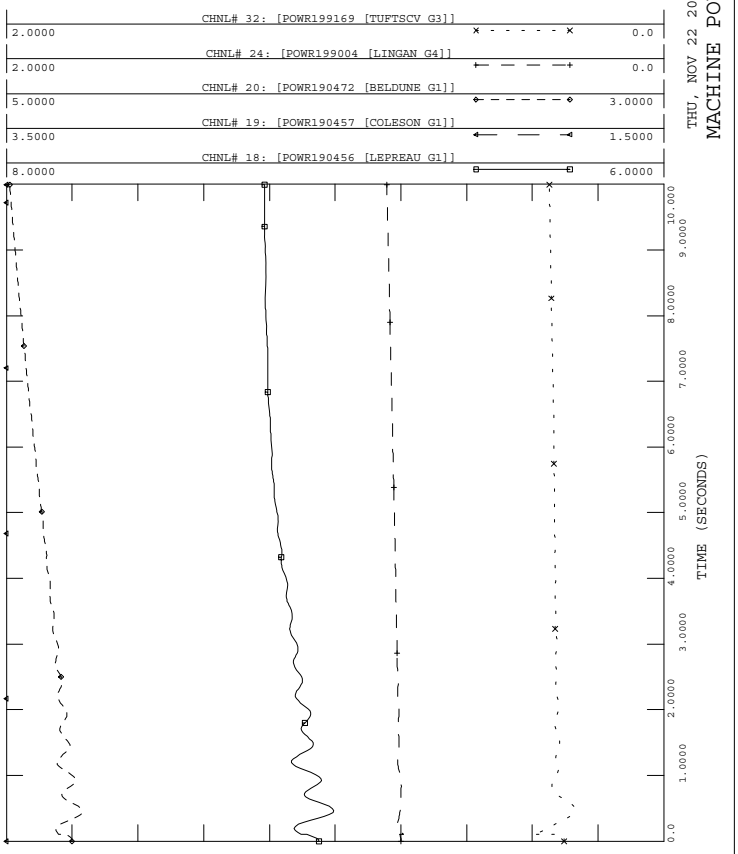

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_103H_600_1p_2015LIGHT_750MW_NSNB-0.out
CHNL# 42: [POWR199504 [IR379 WF MW]]
CHNL# 41: [POWR199510 [IR372 WF MW]]
CHNL# 40: [POWR199712 [GULLIVERSCV WF]]
CHNL# 39: [POWR199613 [GLENDHU WF]]
CHNL# 36: [POWR199401 [PUBNICO WF MW]]
CHNL# 35: [POWR199533 [AMHERST WF]]
THU, NOV 22 2012 15:26
WIND FARM MW
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_103H_600_1p_2015LIGHT_750MW_NSNB-0.out
CHNL#'S 1,15: [ANGL190456 [LEPREAU G1]]-[ANGL199169 [TUFTSCV G3]]
CHNL#'S 1,7: [ANGL190456 [LEPREAU G1]]-[ANGL199004 [LINGAN G4]]
CHNL#'S 1,3: [ANGL190456 [LEPREAU G1]]-[ANGL190472 [BELDUNE G1]]
CHNL#'S 1,2: [ANGL190456 [LEPREAU G1]]-[ANGL190457 [COLESON G1]]
THU, NOV 22 2012 15:26
MACHINE RELATIVE ANGLE
TIME (SECONDS)

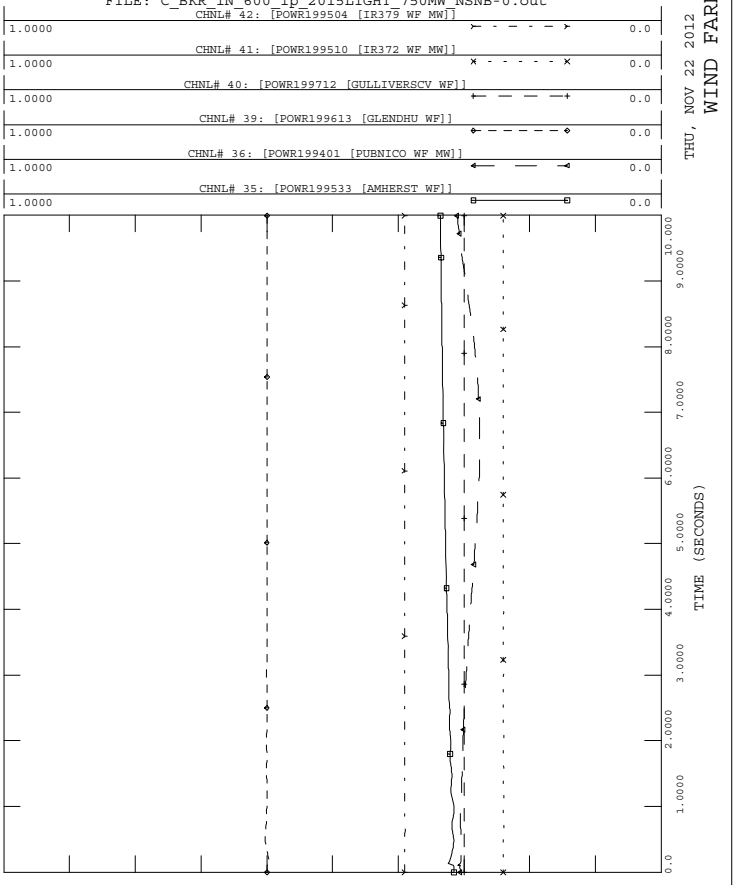

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_103H_600_1p_2015LIGHT_750MW_NSNB-0.out
CHNL# 58: [VARS199169 [TUFTSCV G3]]
CHNL# 50: [VARS199004 [LINGAN G4]]
CHNL# 46: [VARS190472 [BELDUNE G1]]
CHNL# 45: [VARS190457 [COLESON G1]]
CHNL# 44: [VARS190456 [LEPREAU G1]]
THU, NOV 22 2012 15:26
MACHINE REACTIVE MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_103H_600_1p_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:26
BUS VOLTAGE PU
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_103H_600_1p_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:26
LINE FLOW MW
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_103H_600_1p_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:26
WIND FARM MVAR
TIME (SECONDS)
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_103H_600_1p_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:26
BUS FREQUENCY HZ
TIME (SECONDS)

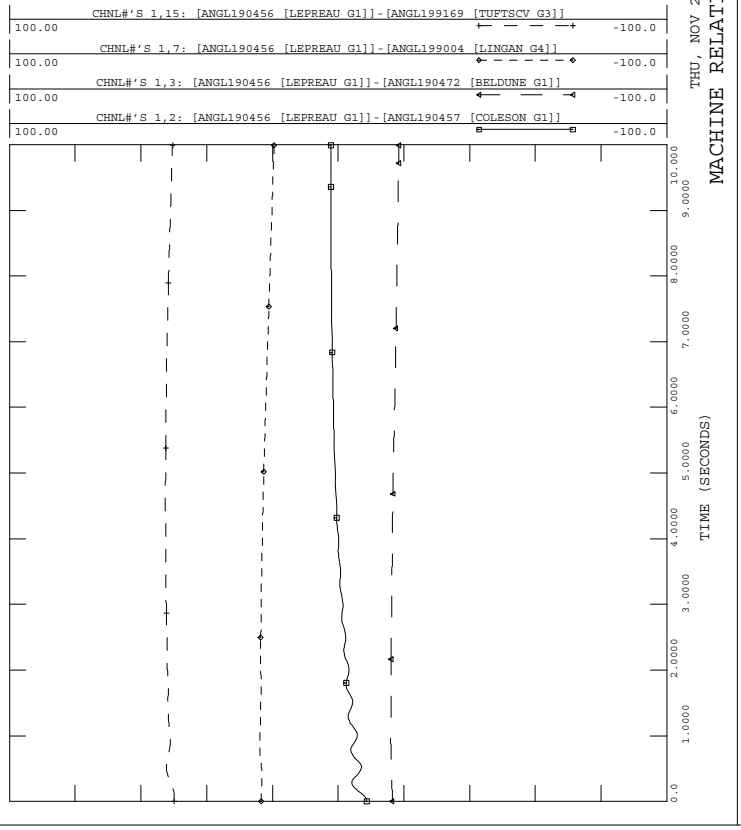
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_1N_600_1p_2015LIGHT_750MW_NSNB-0.out



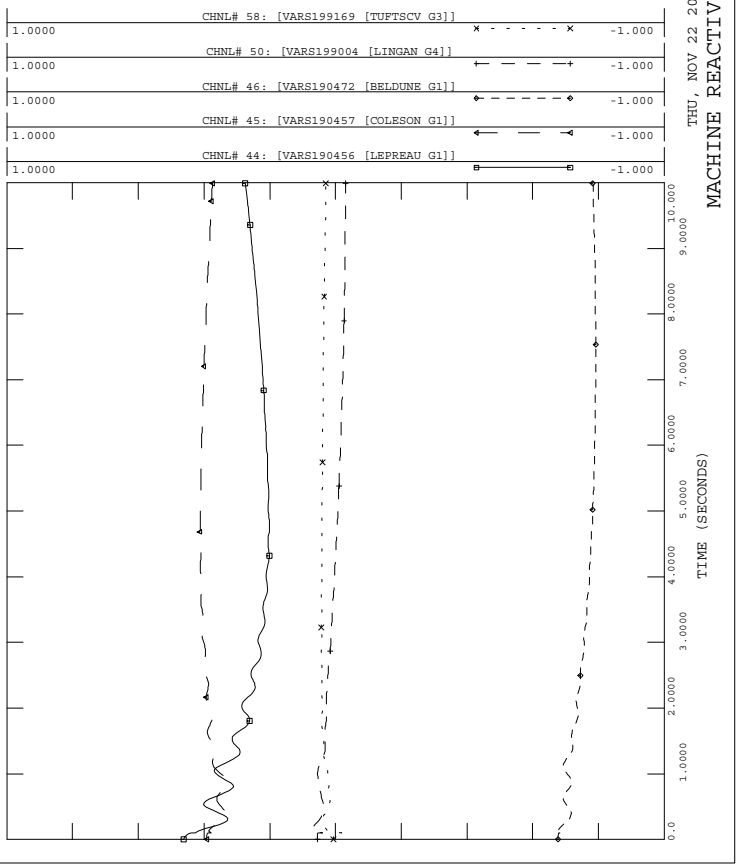
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_1N_600_1p_2015LIGHT_750MW_NSNB-0.out



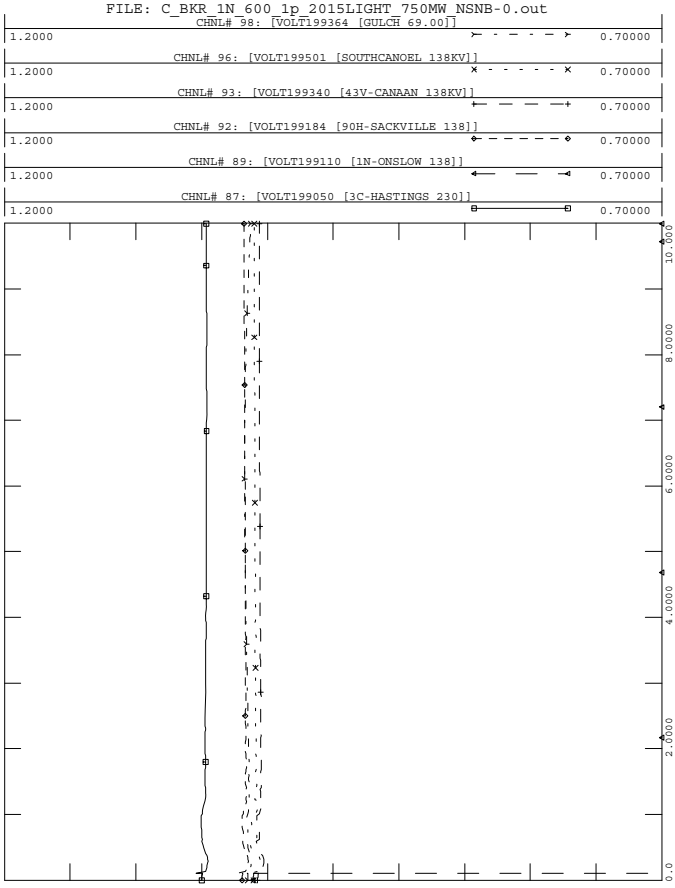
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_1N_600_1p_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_1N_600_1p_2015LIGHT_750MW_NSNB-0.out

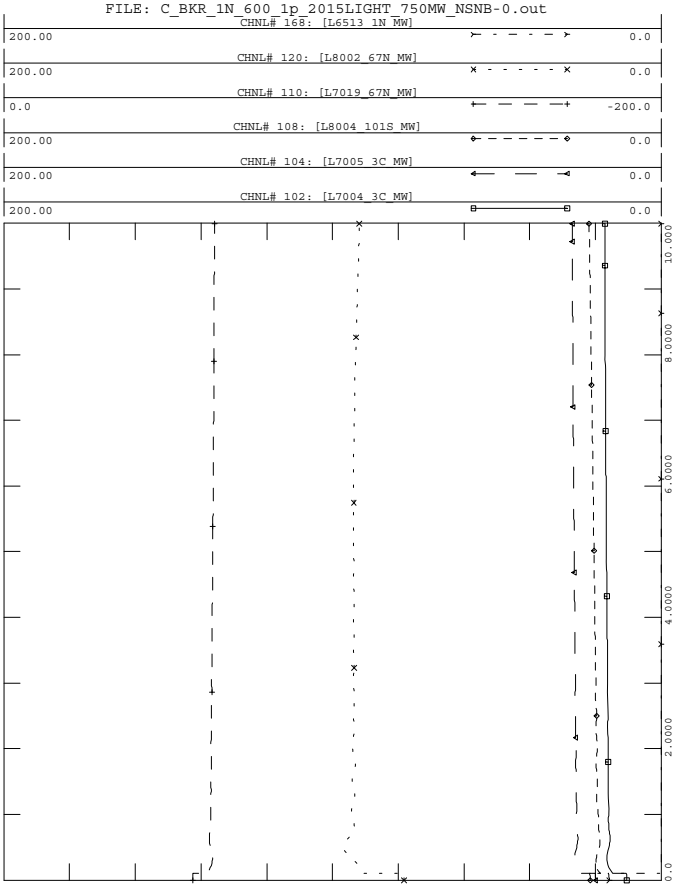


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_1N_600_1p_2015LIGHT_750MW_NSNB-0.out



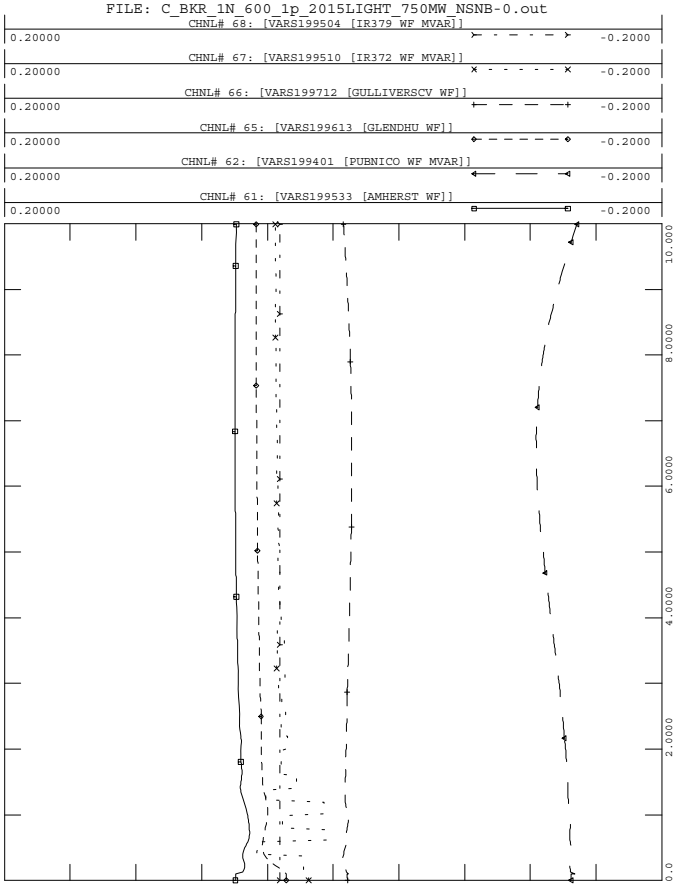
THU, NOV 22 2012 15:26
BUS VOLTAGE PU

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_1N_600_1p_2015LIGHT_750MW_NSNB-0.out



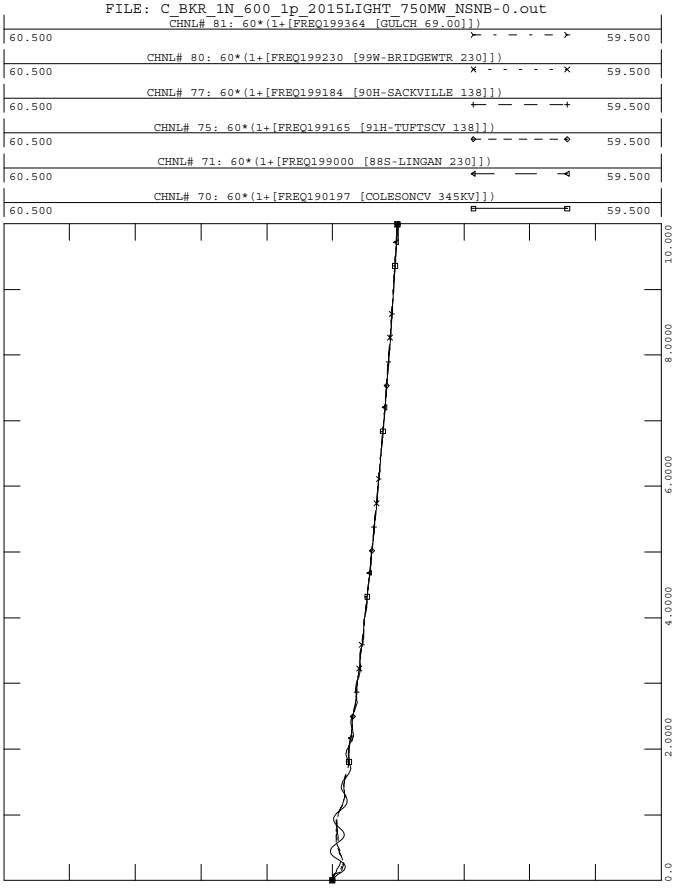
THU, NOV 22 2012 15:26
LINE FLOW MW

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_1N_600_1p_2015LIGHT_750MW_NSNB-0.out



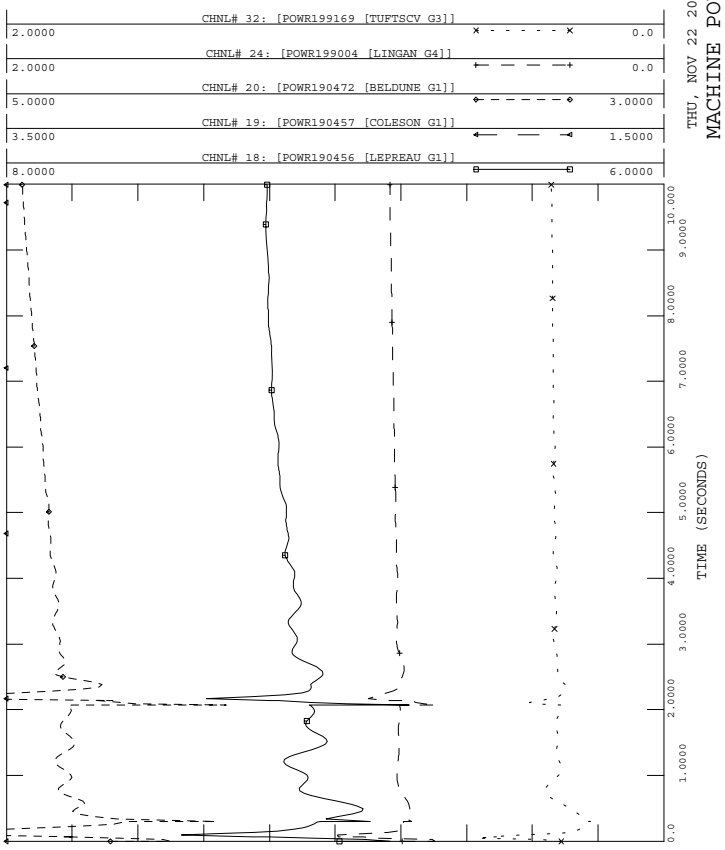
THU, NOV 22 2012 15:26
WIND FARM MVAR

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_BKR_1N_600_1p_2015LIGHT_750MW_NSNB-0.out

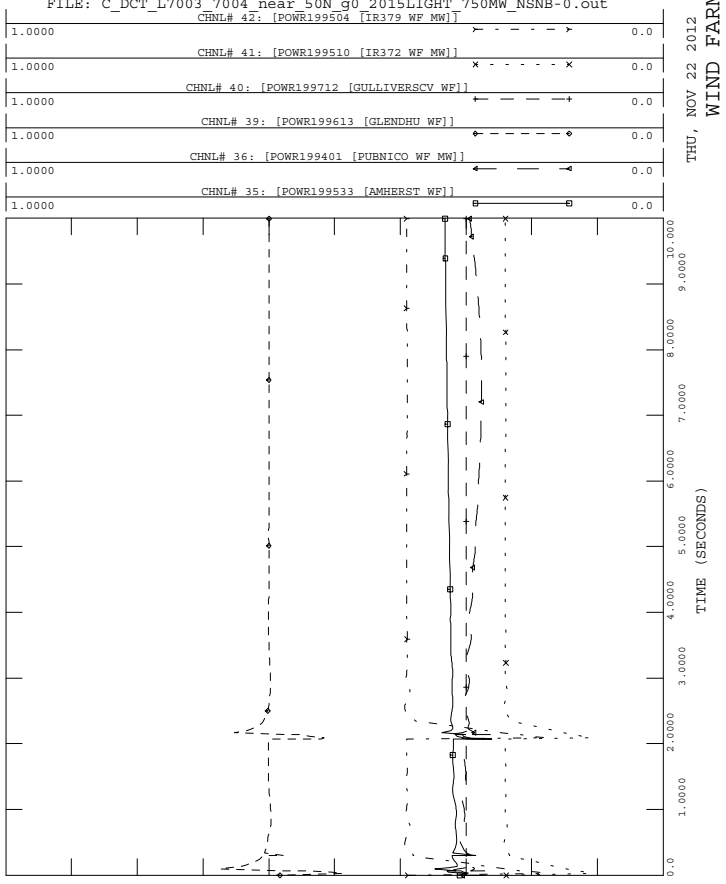


THU, NOV 22 2012 15:26
BUS FREQUENCY HZ

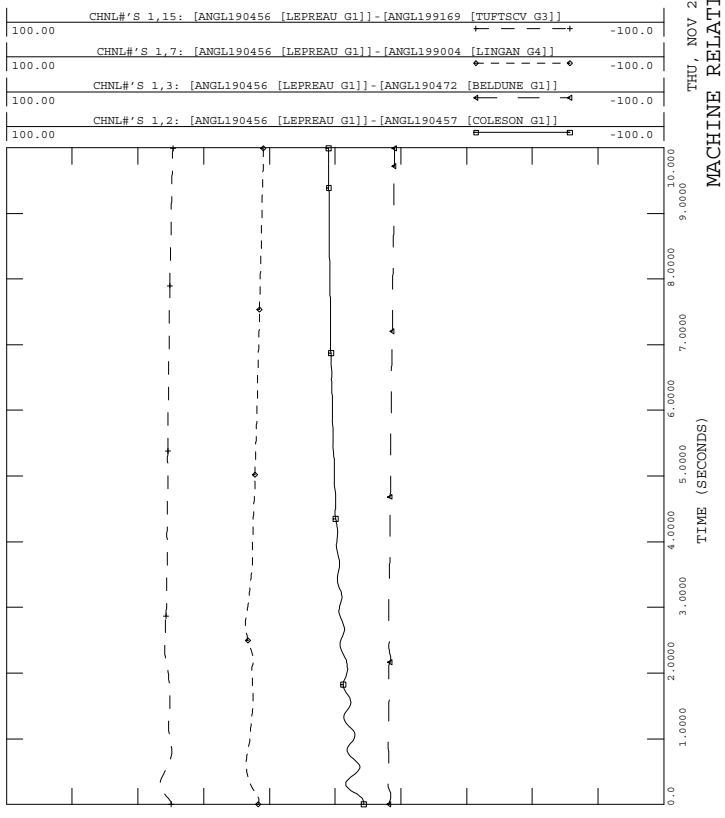
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7003_7004_near_50N_g0_2015LIGHT_750MW_NSNB-0.out



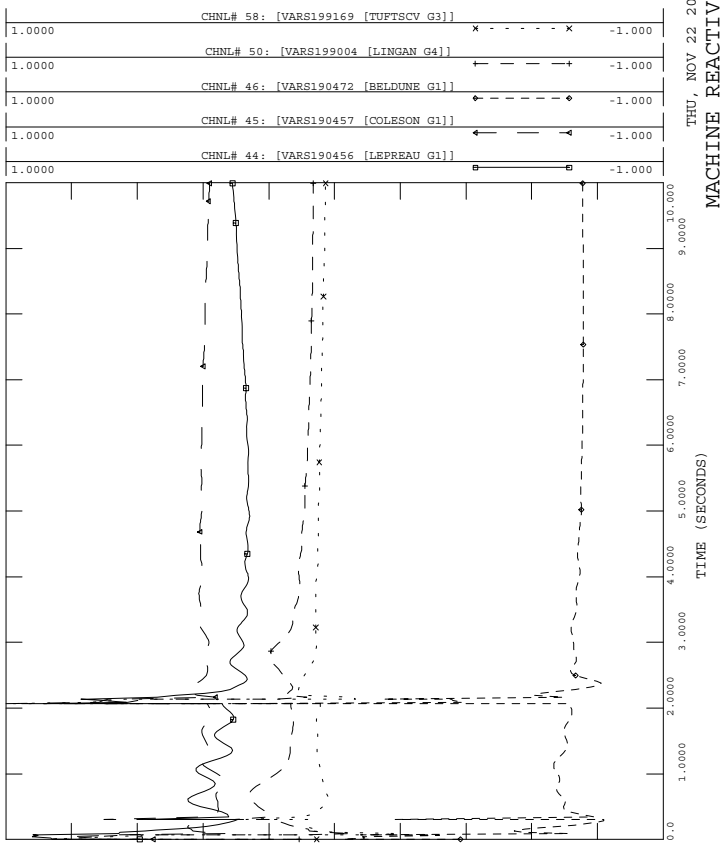
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7003_7004_near_50N_g0_2015LIGHT_750MW_NSNB-0.out

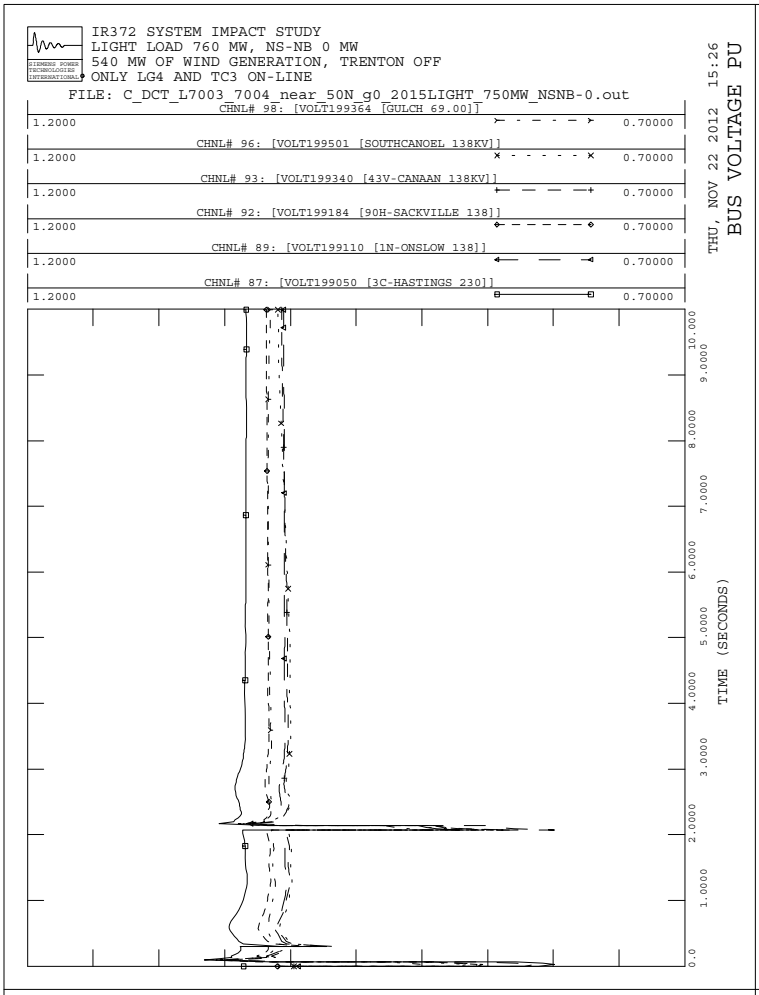


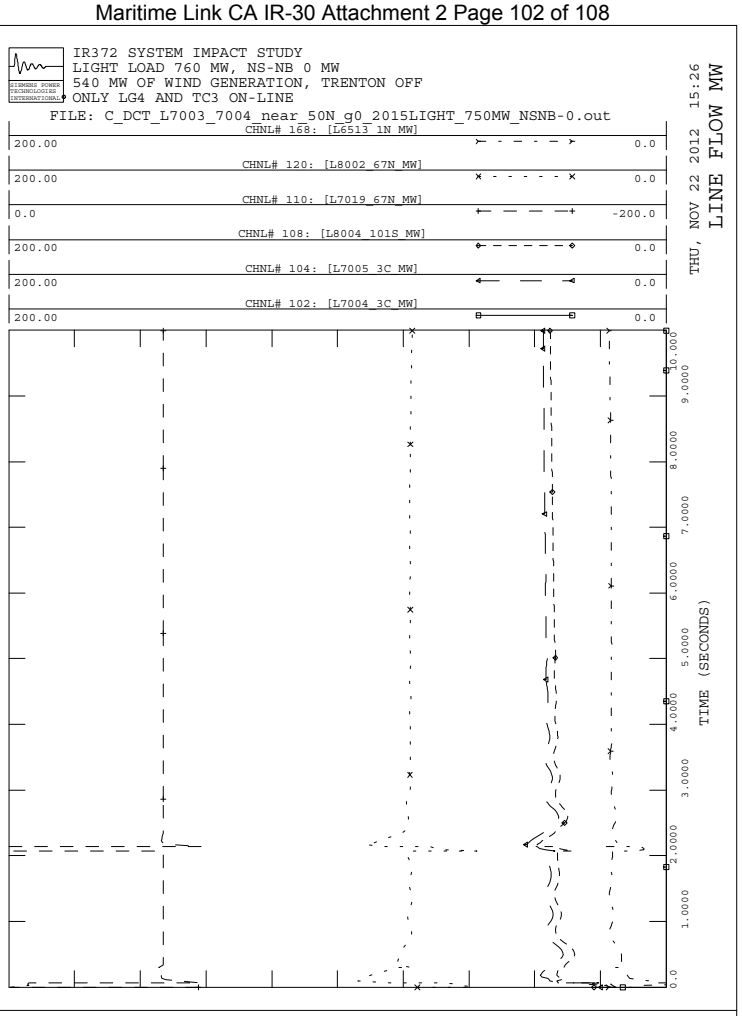
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7003_7004_near_50N_g0_2015LIGHT_750MW_NSNB-0.out

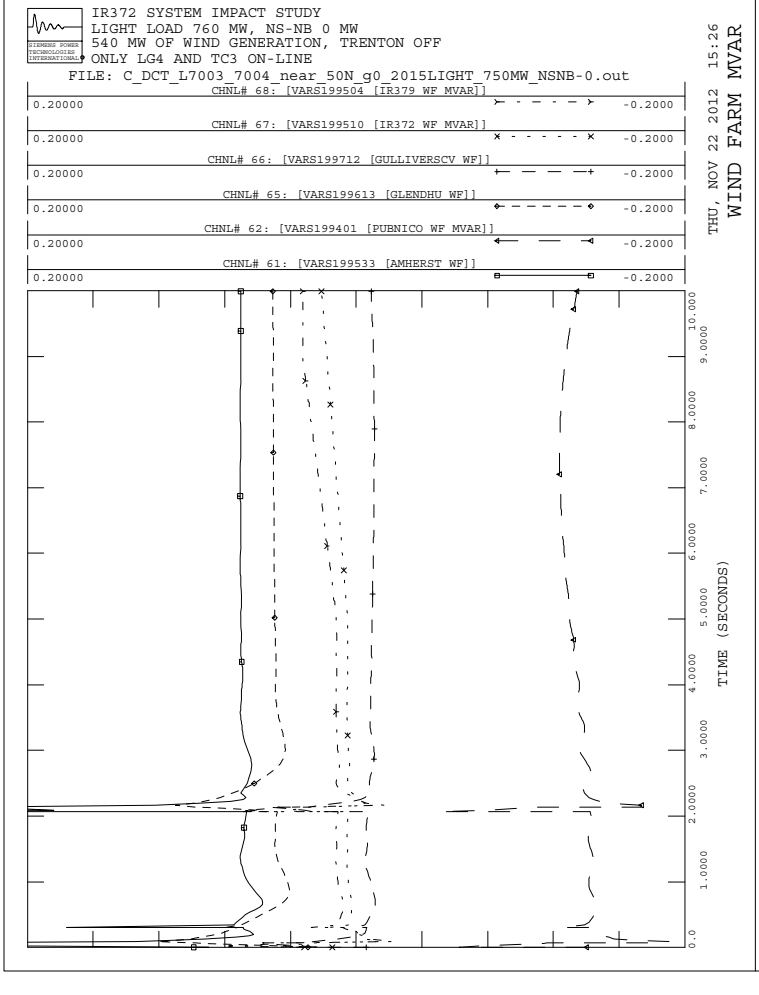


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7003_7004_near_50N_g0_2015LIGHT_750MW_NSNB-0.out




IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7003_7004_near_50N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:26
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7003_7004_near_50N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:26
LINE FLOW MW
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7003_7004_near_50N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
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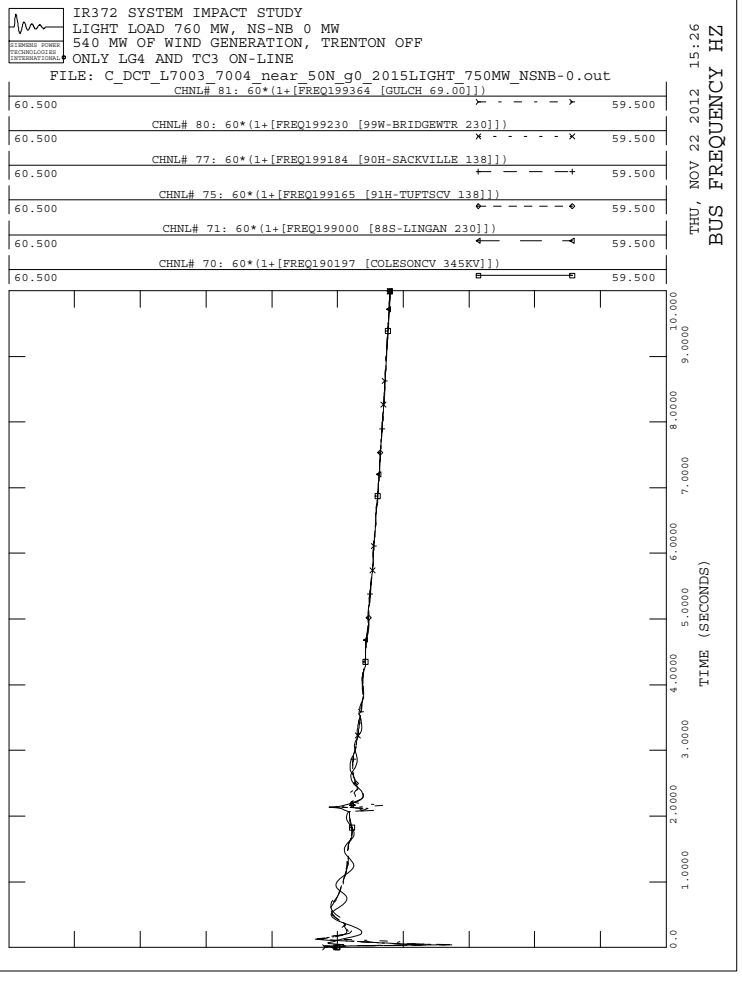
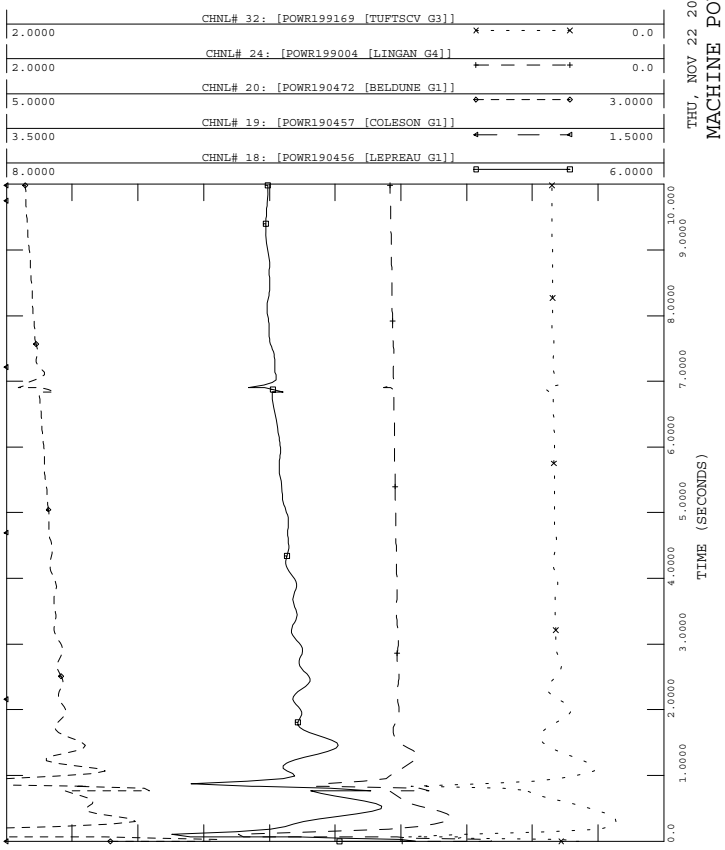
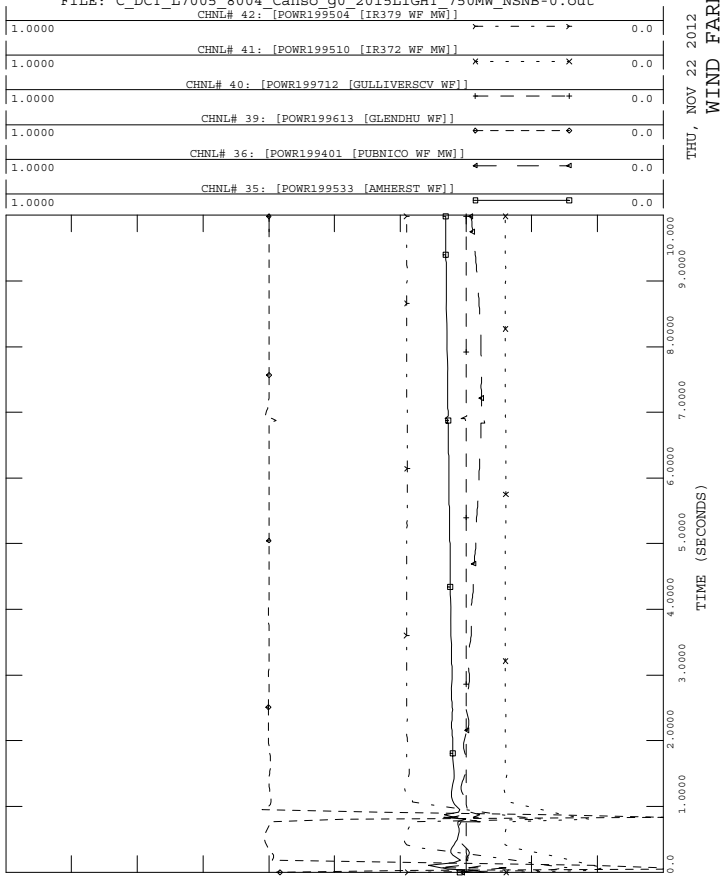
-0.2000
THU, NOV 22 2012 15:26
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7003_7004_near_50N_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:26
BUS FREQUENCY HZ
TIME (SECONDS)

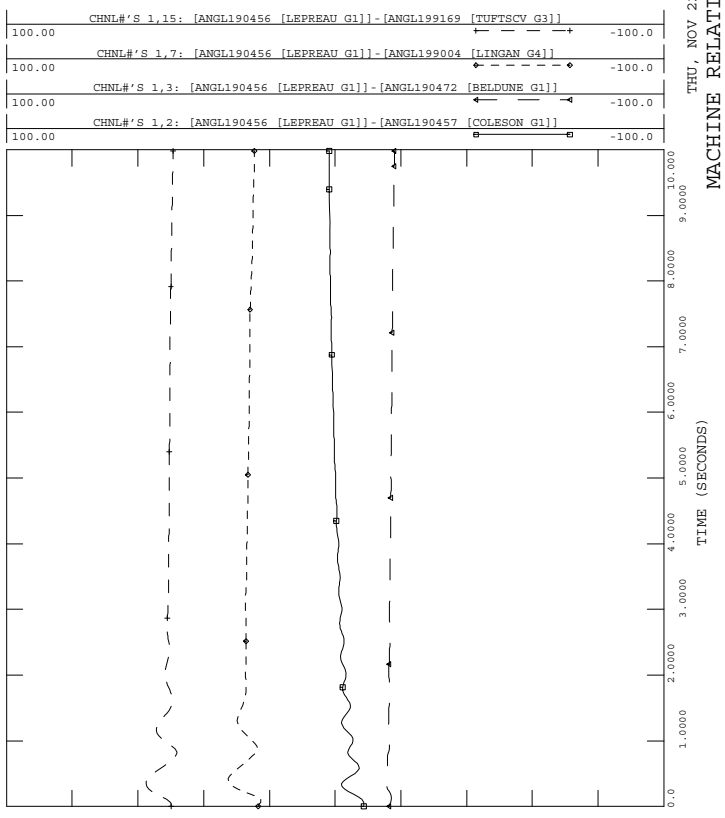
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7005_8004_Canso_g0_2015LIGHT_750MW_NSNB-0.out



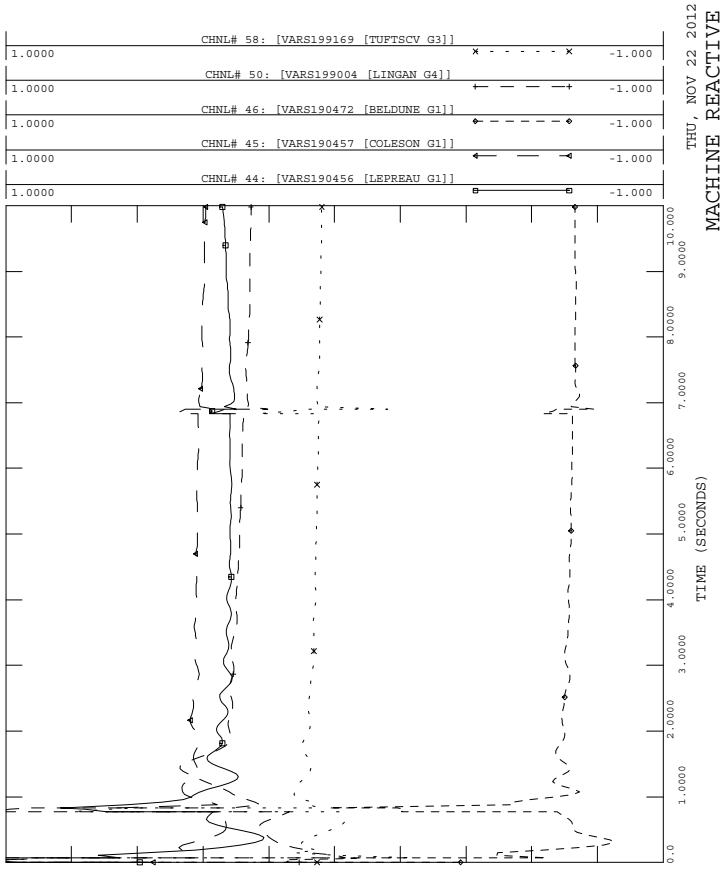
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7005_8004_Canso_g0_2015LIGHT_750MW_NSNB-0.out

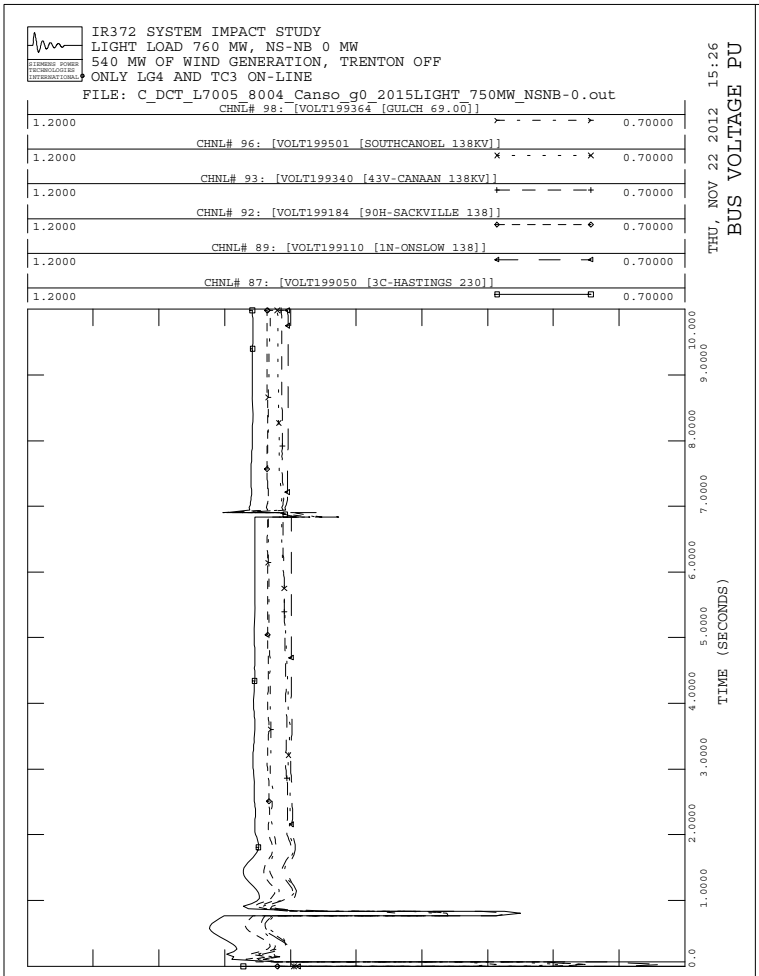


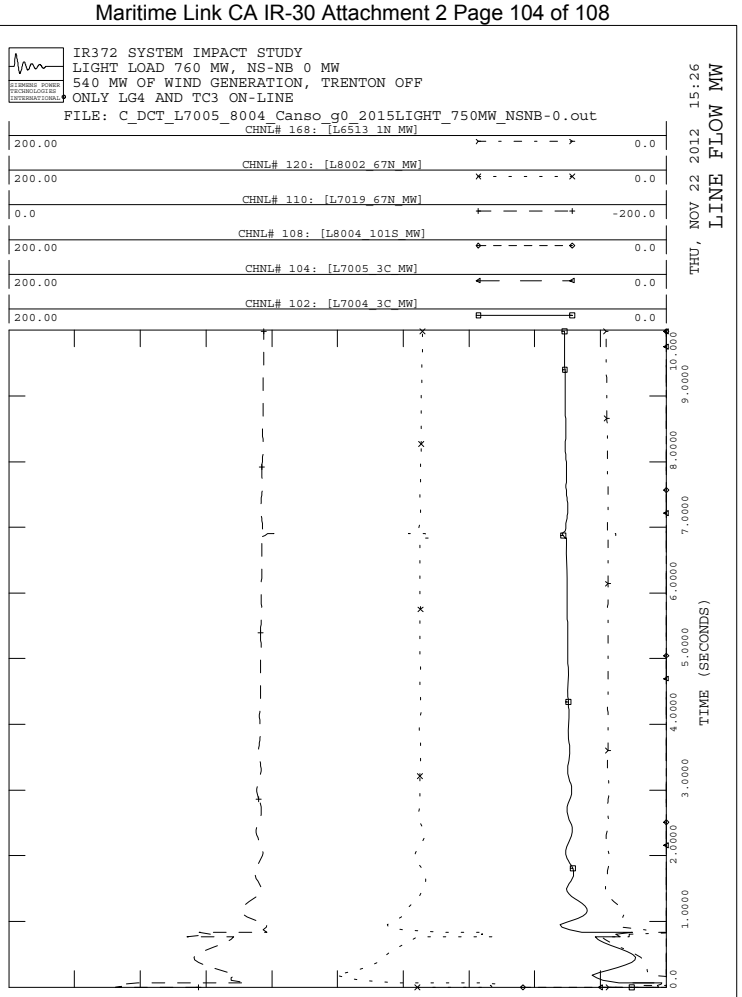
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7005_8004_Canso_g0_2015LIGHT_750MW_NSNB-0.out

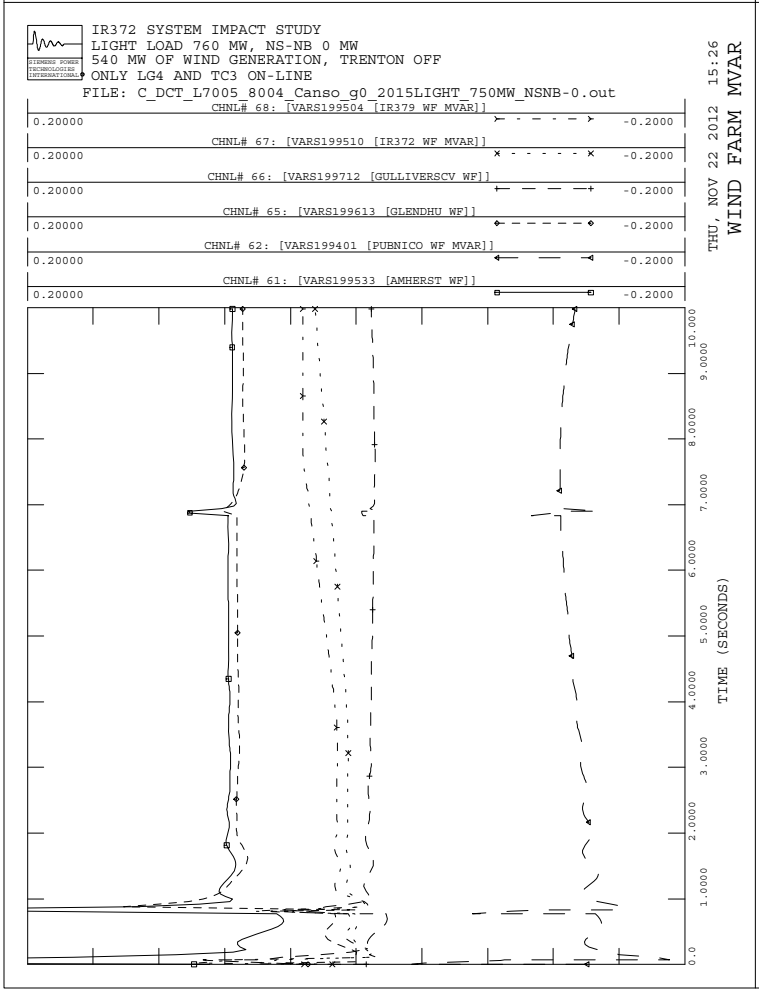


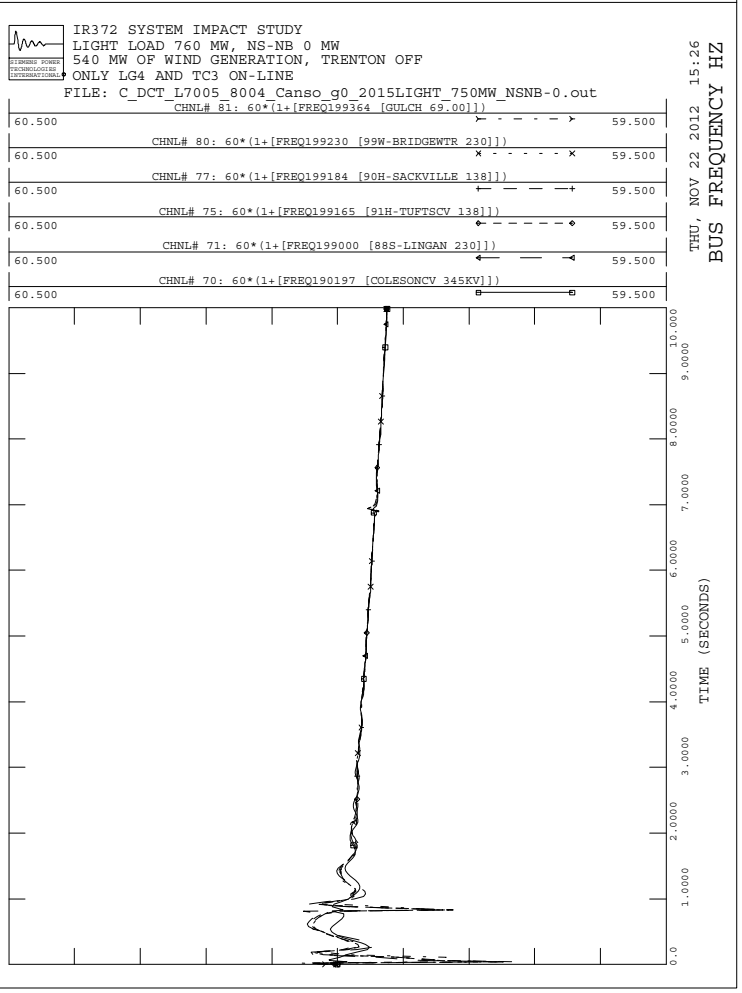
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7005_8004_Canso_g0_2015LIGHT_750MW_NSNB-0.out



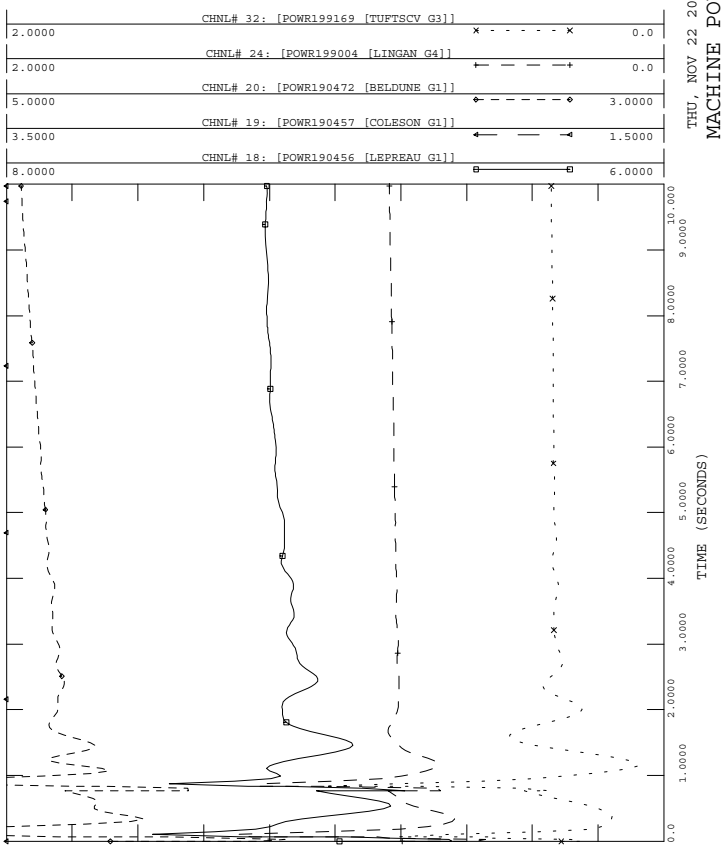

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7005_8004_Canso_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:26
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7005_8004_Canso_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:26
LINE FLOW MW
TIME (SECONDS)

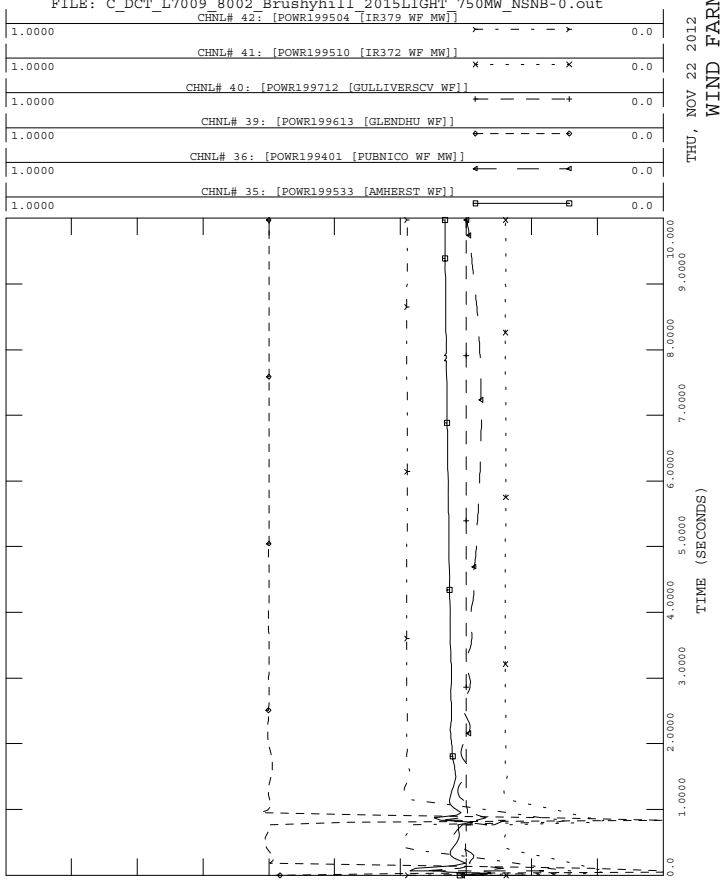

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7005_8004_Canso_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:26
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7005_8004_Canso_g0_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:26
BUS FREQUENCY HZ
TIME (SECONDS)

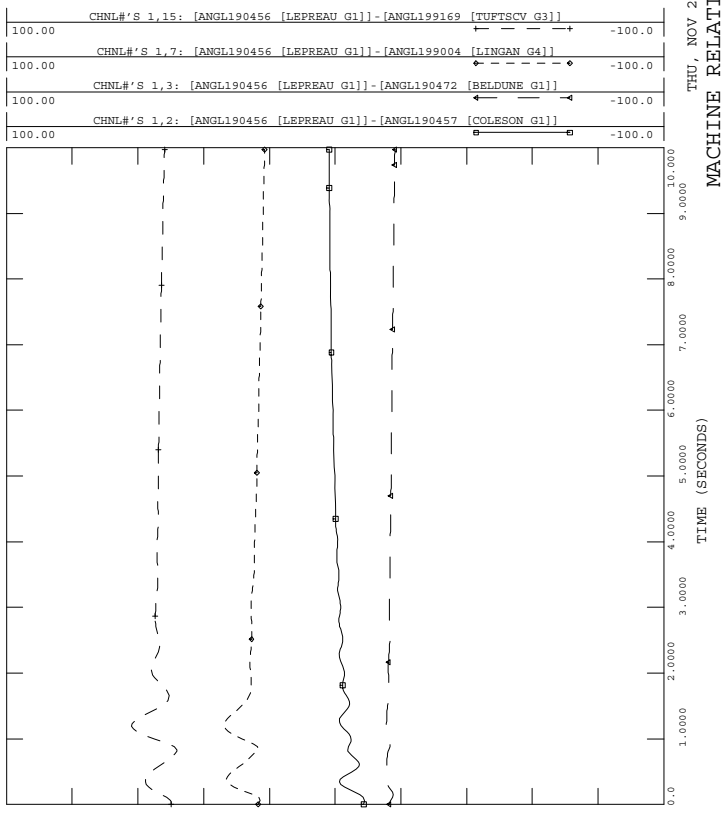
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7009_8002_Brushyhill_2015LIGHT_750MW_NSNB-0.out



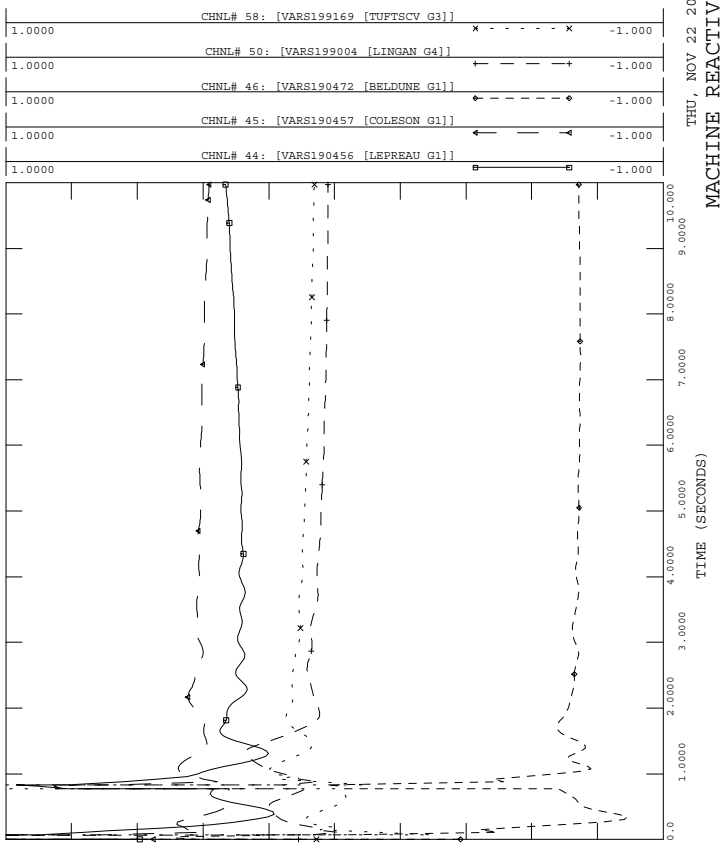
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7009_8002_Brushyhill_2015LIGHT_750MW_NSNB-0.out

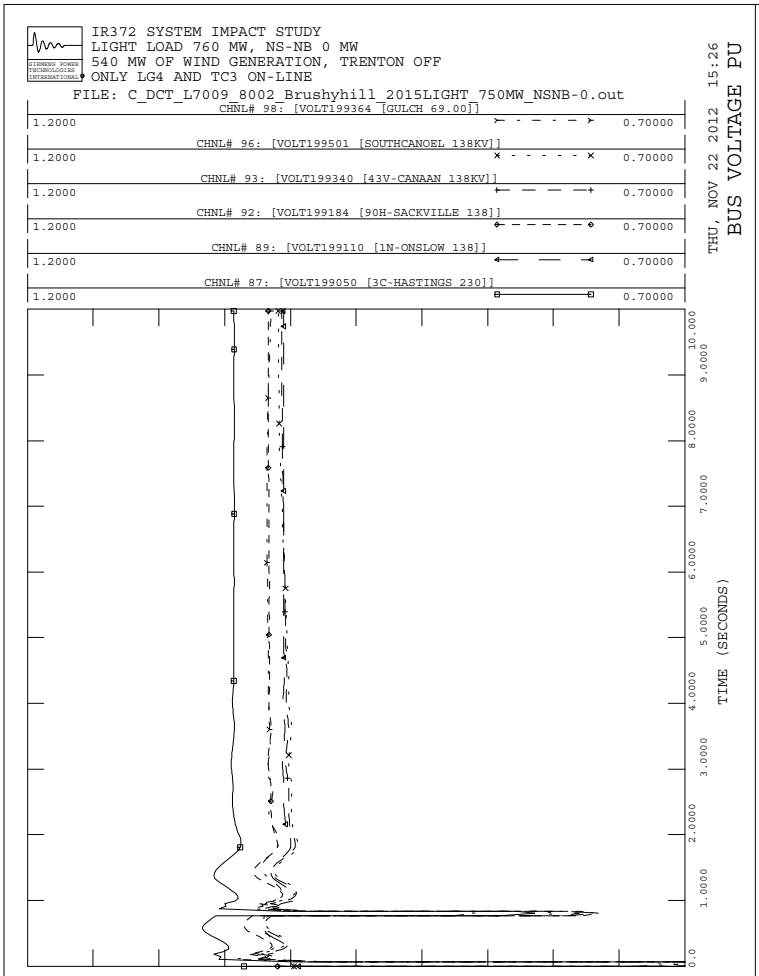


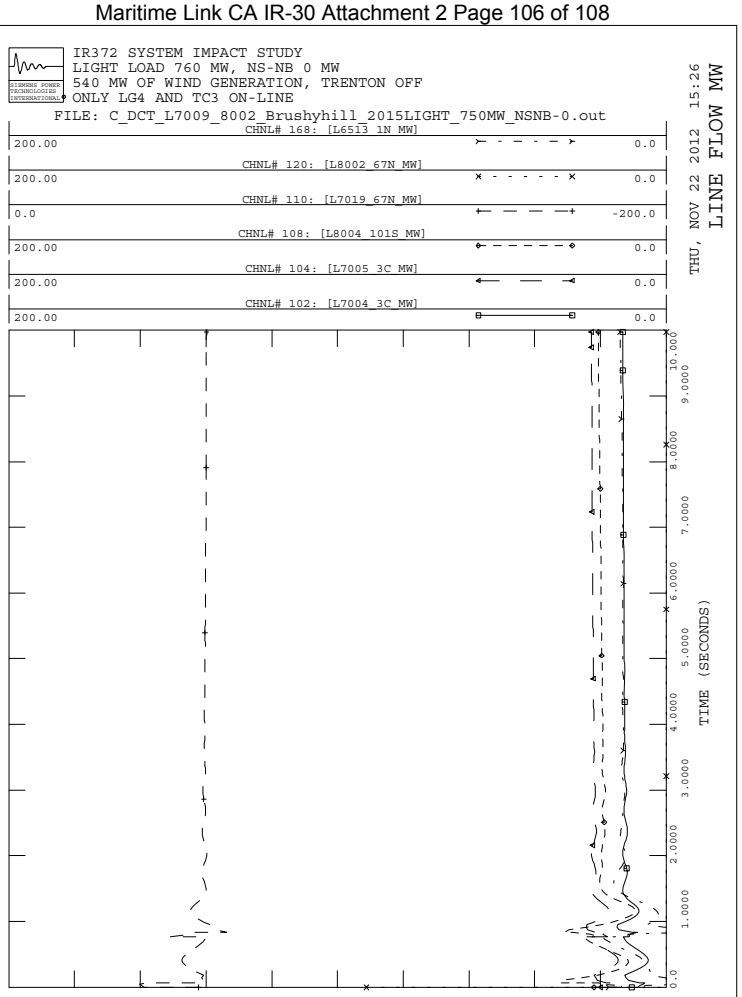
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7009_8002_Brushyhill_2015LIGHT_750MW_NSNB-0.out

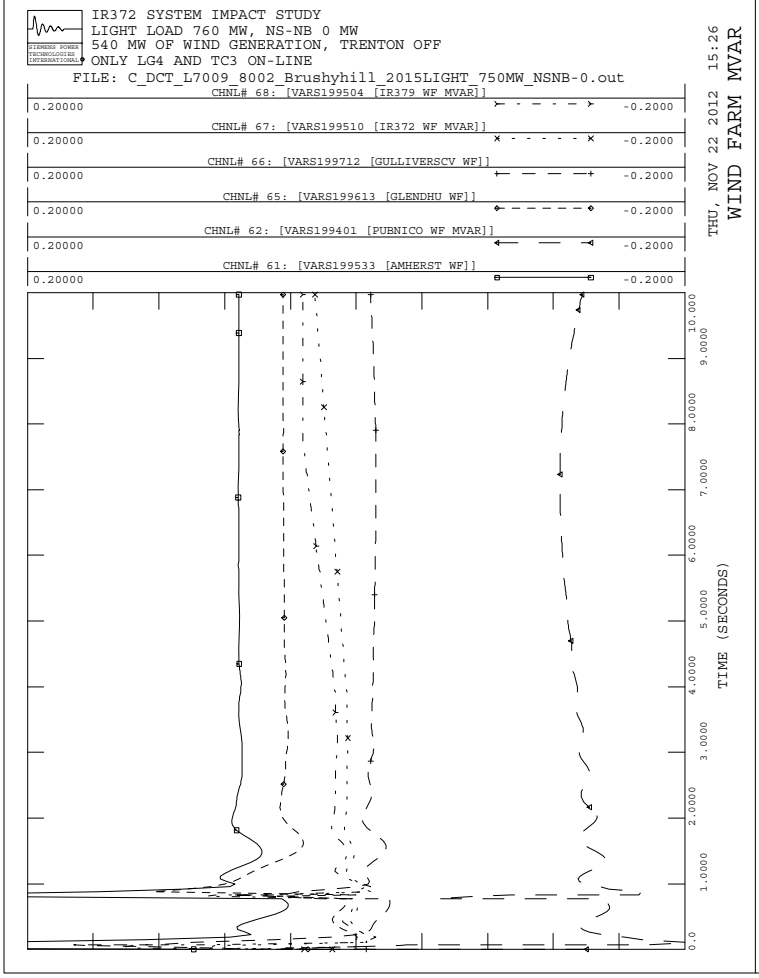


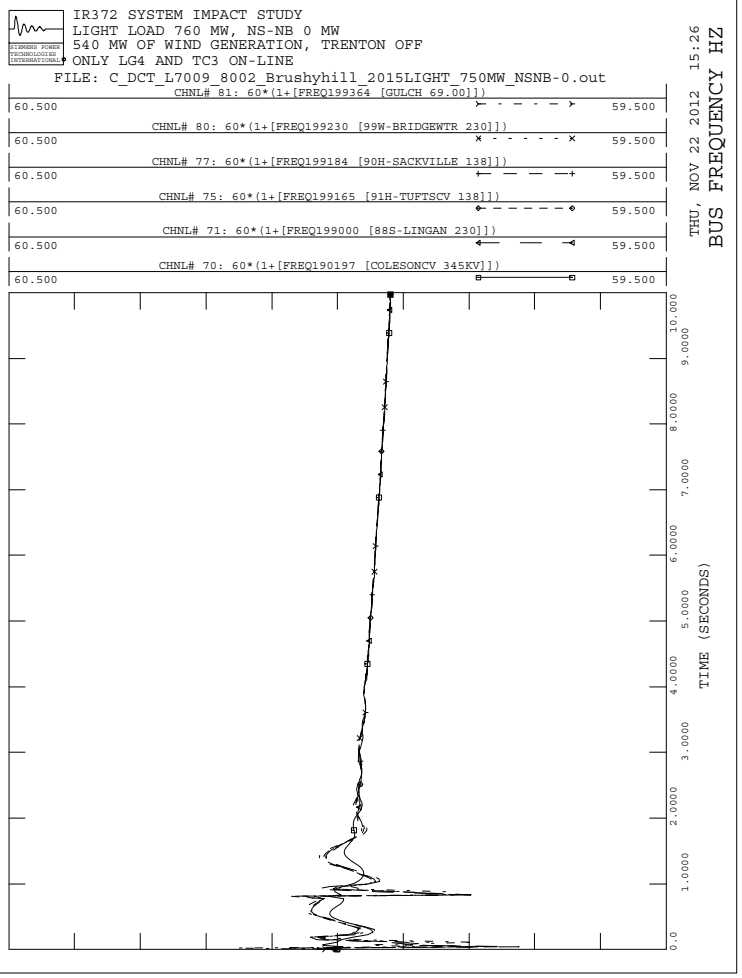
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7009_8002_Brushyhill_2015LIGHT_750MW_NSNB-0.out



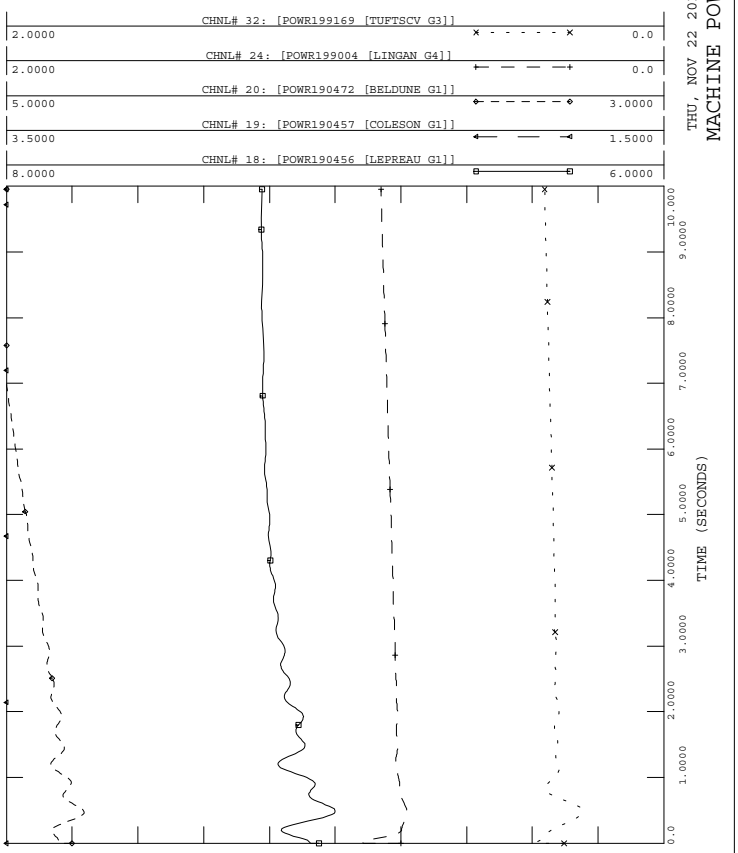

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7009_8002_Brushyhill_2015LIGHT_750MW_NSNB-0.out
CHNL# 98: [VOLT199364 [GULCH 69.00]]
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:26
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7009_8002_Brushyhill_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S_MW]
CHNL# 104: [L7005_3C_MW]
CHNL# 102: [L7004_3C_MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:26
LINE FLOW MW
TIME (SECONDS)

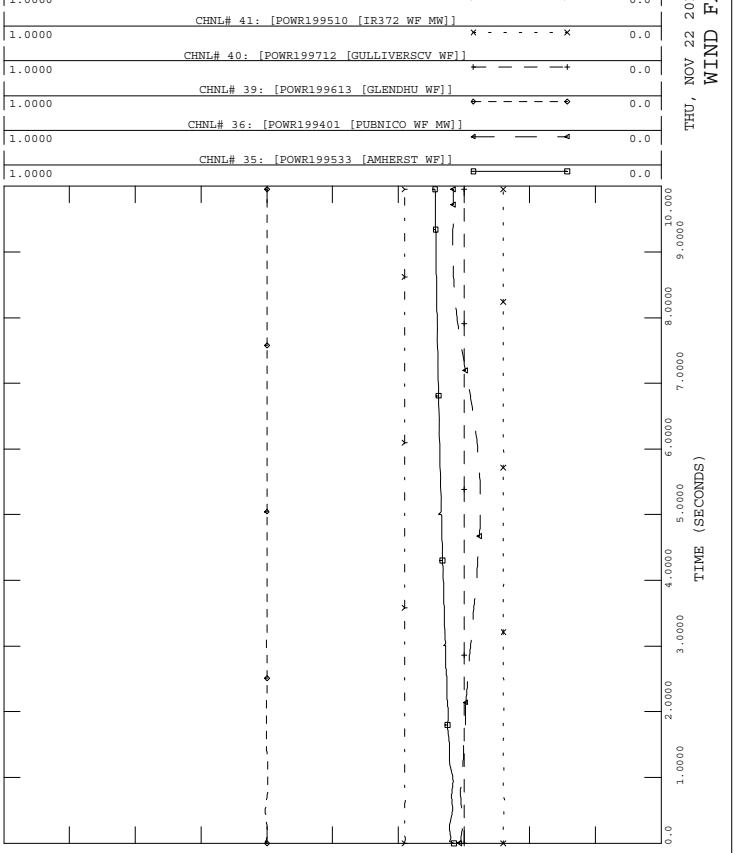

IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7009_8002_Brushyhill_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:26
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_DCT_L7009_8002_Brushyhill_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:26
BUS FREQUENCY HZ
TIME (SECONDS)

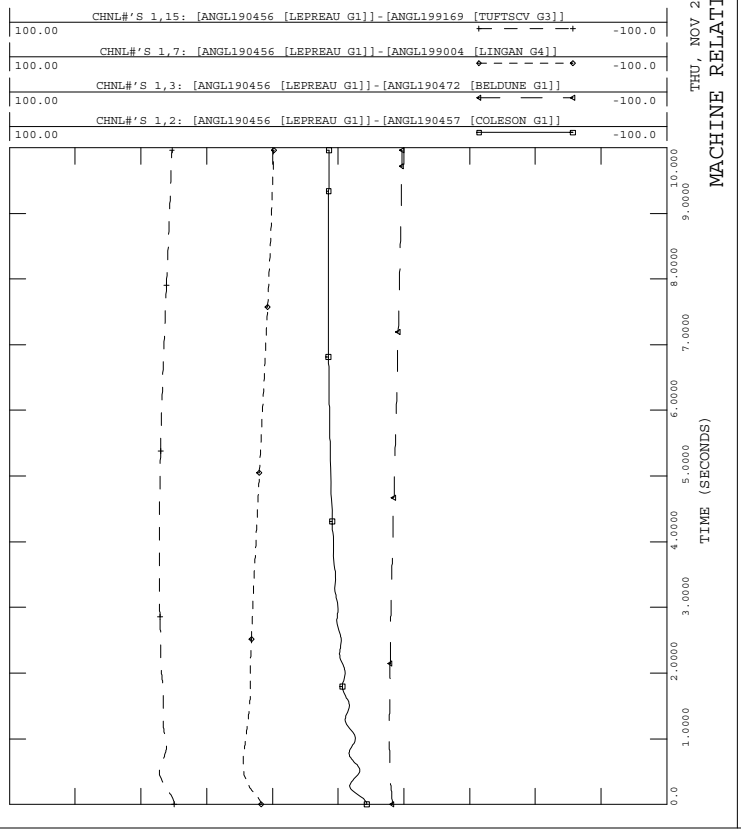
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_Loss_of_PWCC_2015LIGHT_750MW_NSNB-0.out



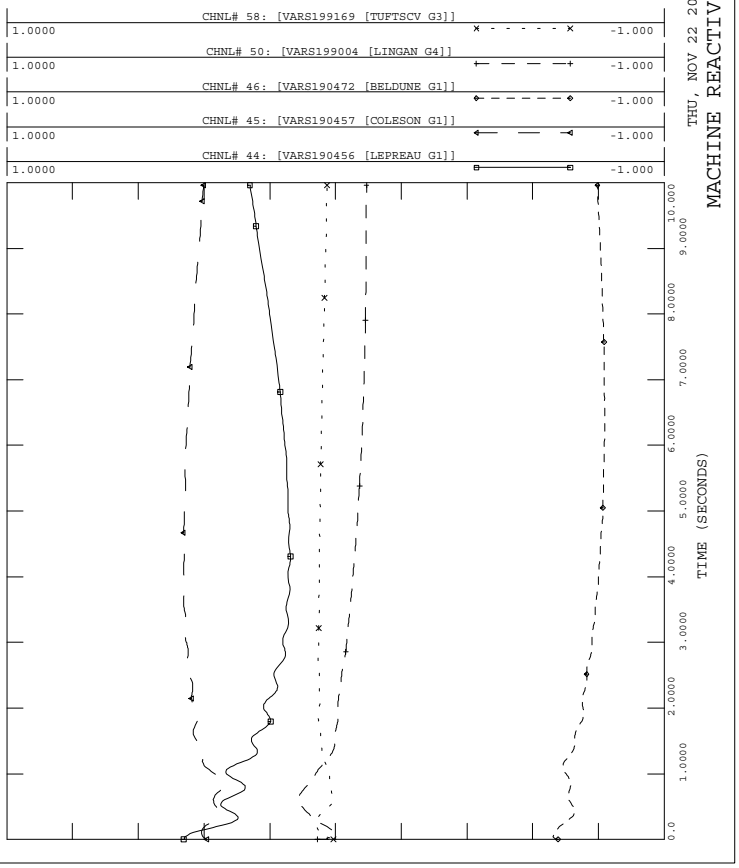
IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_Loss_of_PWCC_2015LIGHT_750MW_NSNB-0.out

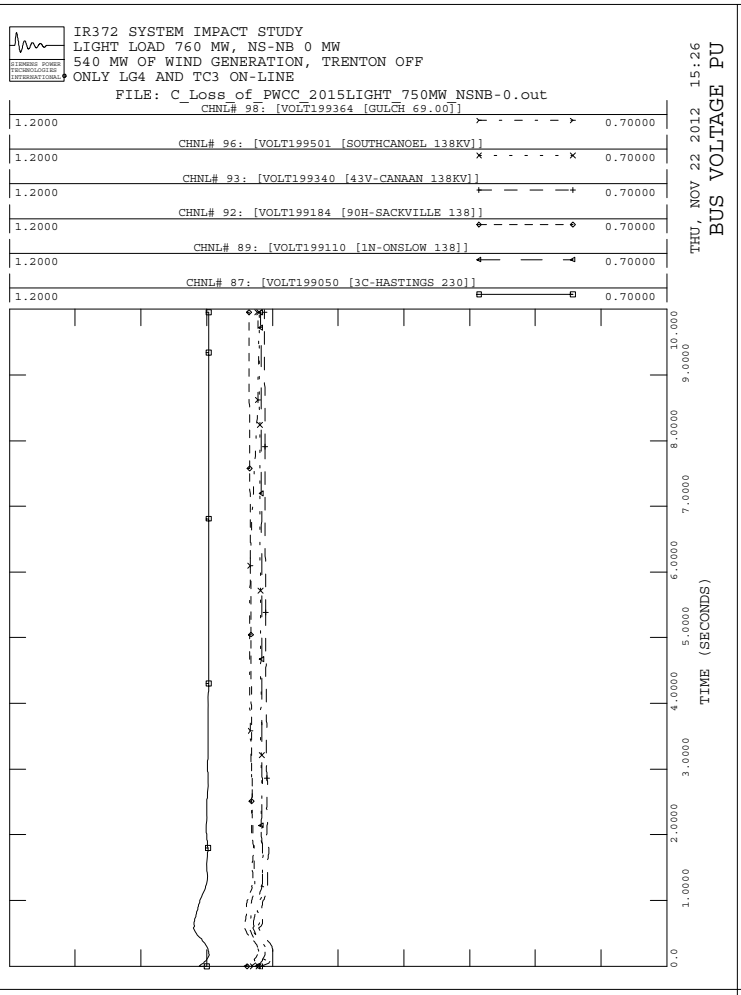


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_Loss_of_PWCC_2015LIGHT_750MW_NSNB-0.out



IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_Loss_of_PWCC_2015LIGHT_750MW_NSNB-0.out




IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
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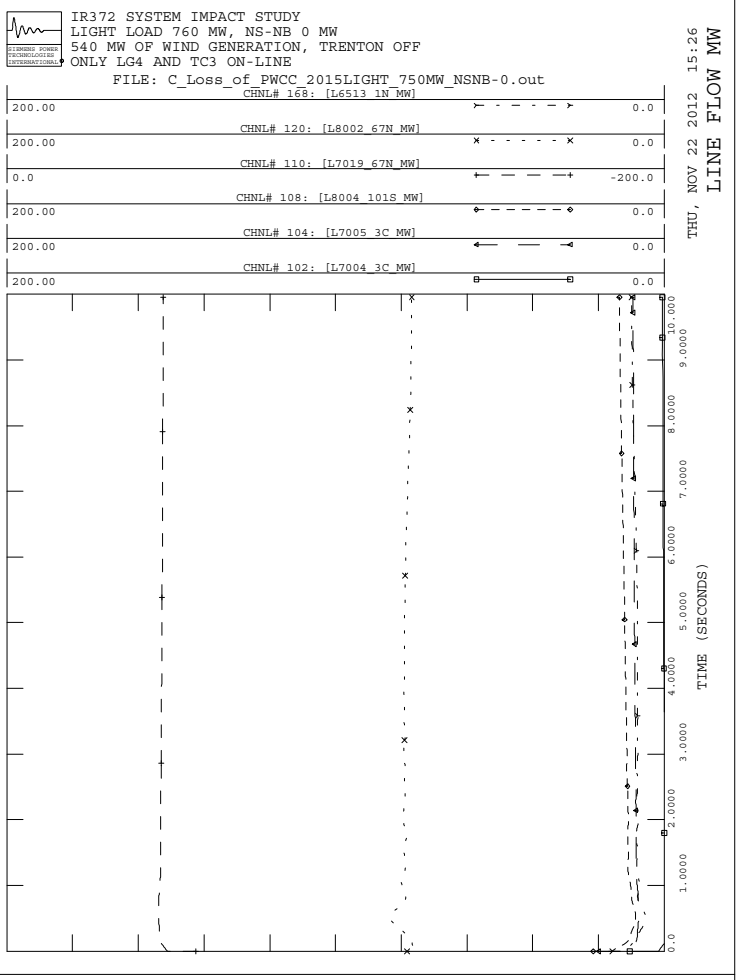
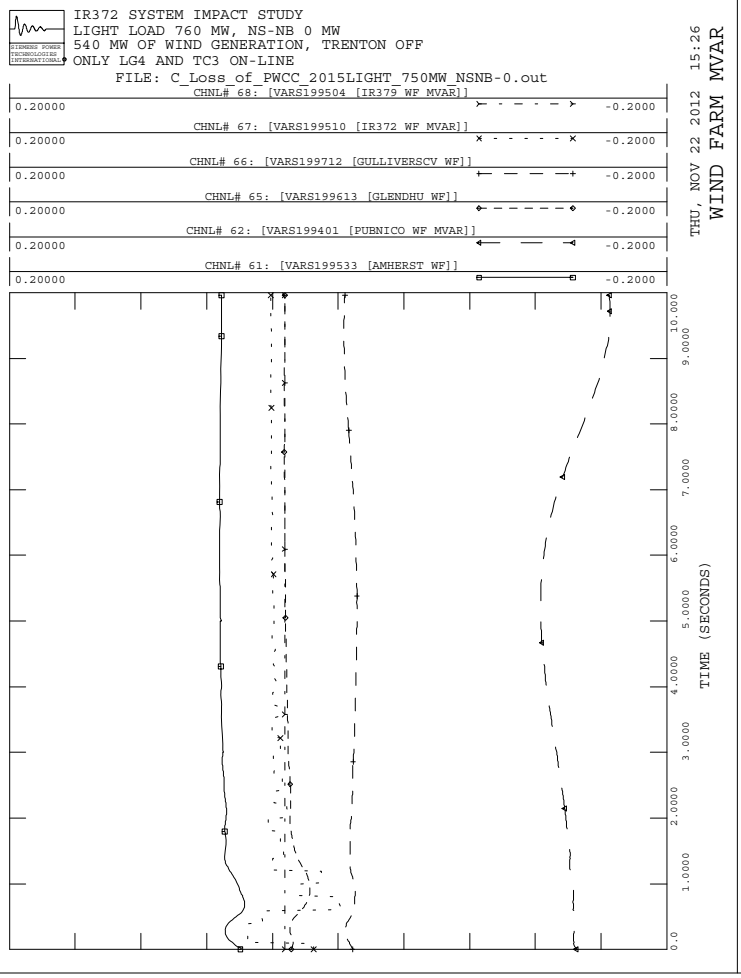
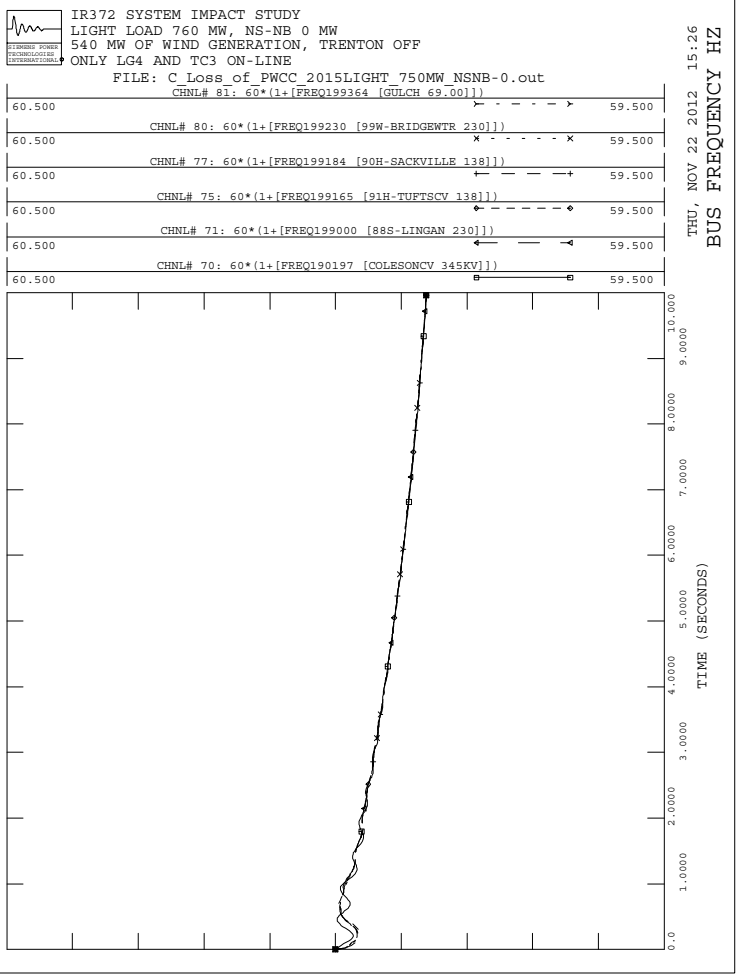
CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.2000
0.70000
THU, NOV 22 2012 15:26
BUS VOLTAGE PU
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_Loss_of_PWCC_2015LIGHT_750MW_NSNB-0.out
CHNL# 168: [L6513 1N MW]
CHNL# 120: [L8002_67N_MW]
CHNL# 110: [L7019_67N_MW]
CHNL# 108: [L8004_101S MW]
CHNL# 104: [L7005_3C MW]
CHNL# 102: [L7004_3C MW]
200.00
0.0
-200.0
THU, NOV 22 2012 15:26
LINE FLOW MW
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_Loss_of_PWCC_2015LIGHT_750MW_NSNB-0.out
CHNL# 68: [VARS199504 [IR379 WF MVAR]]
CHNL# 67: [VARS199510 [IR372 WF MVAR]]
CHNL# 66: [VARS199712 [GULLIVERSCV WF]]
CHNL# 65: [VARS199613 [GLENDHU WF]]
CHNL# 62: [VARS199401 [PUBNICO WF MVAR]]
CHNL# 61: [VARS199533 [AMHERST WF]]
0.20000
-0.2000
THU, NOV 22 2012 15:26
WIND FARM MVAR
TIME (SECONDS)


IR372 SYSTEM IMPACT STUDY
LIGHT LOAD 760 MW, NS-NB 0 MW
540 MW OF WIND GENERATION, TRENTON OFF
ONLY LG4 AND TC3 ON-LINE
FILE: C_Loss_of_PWCC_2015LIGHT_750MW_NSNB-0.out
CHNL# 81: 60*(1+[FREQ199364 [GULCH 69.00]])
CHNL# 80: 60*(1+[FREQ199230 [99W-BRIDGEWTR 230]])
CHNL# 77: 60*(1+[FREQ199184 [90H-SACKVILLE 138]])
CHNL# 75: 60*(1+[FREQ199165 [91H-TUFTSCV 138]])
CHNL# 71: 60*(1+[FREQ199000 [88S-LINGAN 230]])
CHNL# 70: 60*(1+[FREQ190197 [COLESONCV 345KV]])
60.500
59.500
THU, NOV 22 2012 15:26
BUS FREQUENCY HZ
TIME (SECONDS)

SIEMENS POWER TECHNOLOGIES INTERNATIONAL

2015 LIGHT LOAD CASE, 750MW;WIND=540
IR372,IR379 ON AT 105 MW, NS-NB=0, CBX61 ONI200

FILE: P:\p95rc (Bob Creighton)\...\Dynamics\isolate_lose_TC3.out

SAT, MAR 02 2013 10:19

BUS VOLTAGE

CHNL# 87: [VOLT199050 [3C-HASTINGS 230]]
1.1000 0.90000

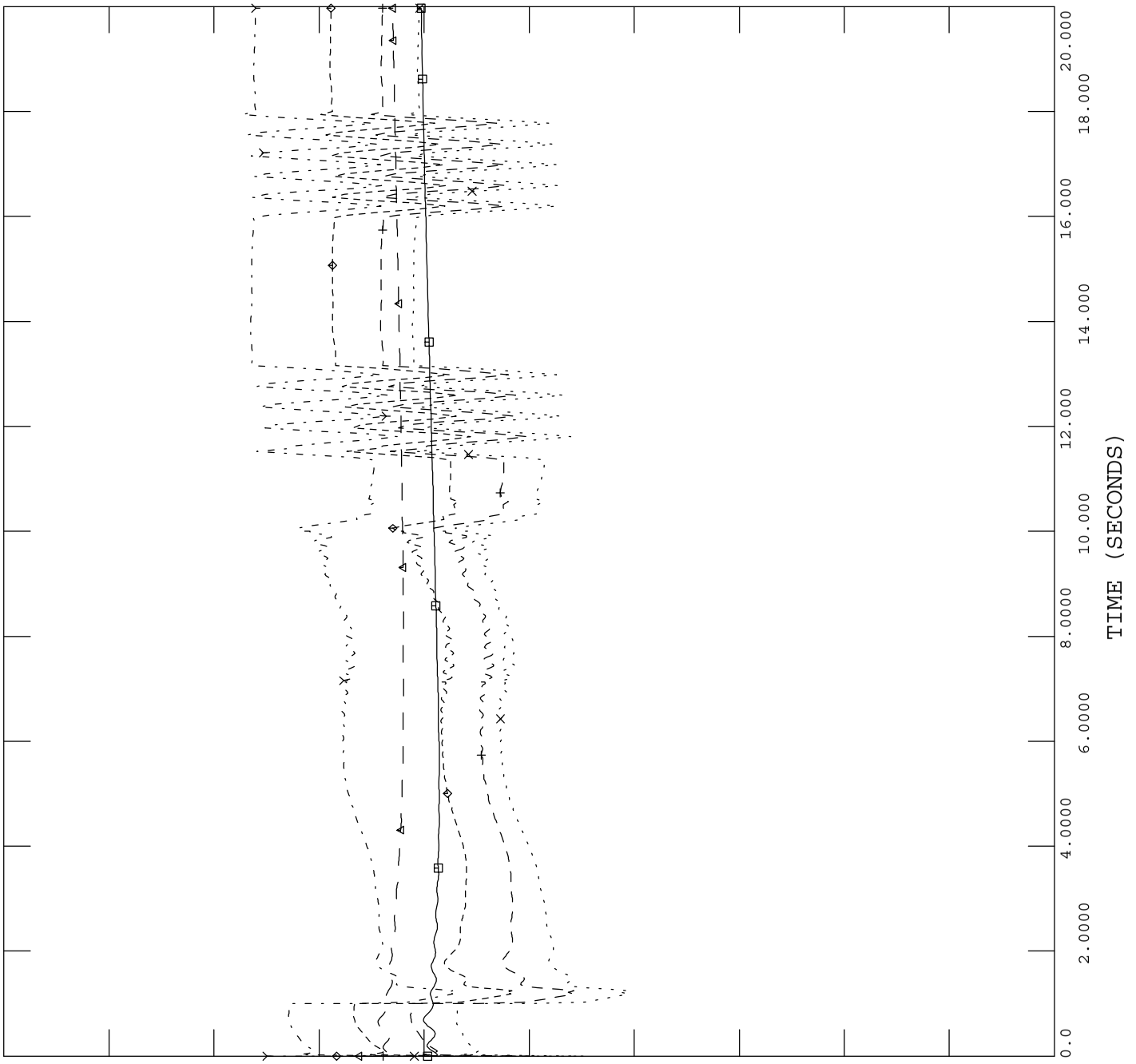
CHNL# 86: [VOLT199120 [79N-HOPEWELL 345]]
1.1000 0.90000

CHNL# 85: [VOLT199045 [101S-WOODBINE 345]]
1.1000 0.90000

CHNL# 84: [VOLT199000 [88S-LINGAN 230]]
1.1000 0.90000

CHNL# 83: [VOLT190320 [SALISBURY 345]]
1.1000 0.90000

CHNL# 82: [VOLT190197 [COLESON CV 345]]
1.1000 0.90000



SIEMENS POWER TECHNOLOGIES INTERNATIONAL

2015 LIGHT LOAD CASE, 750MW;WIND=540
IR372,IR379 ON AT 105 MW, NS-NB=0, CBX61 ONI200

FILE: P:\p95rc (Bob Creighton)\...\Dynamics\isolate_lose_TC3.out

SAT, MAR 02 2013 10:19

BUS VOLTAGE

CHNL# 93: [VOLT199340 [43V-CANAAN 138KV]]
1.1000 0.90000

CHNL# 92: [VOLT199184 [90H-SACKVILLE 138]]
1.1000 0.90000

CHNL# 91: [VOLT199166 [91H-TUFTSCV 69]]
1.1000 0.90000

CHNL# 90: [VOLT199165 [91H-TUFTSCV 138]]
1.1000 0.90000

CHNL# 89: [VOLT199110 [1N-ONSLOW 138]]
1.1000 0.90000

CHNL# 88: [VOLT199125 [67N-ONSLOW 345]]
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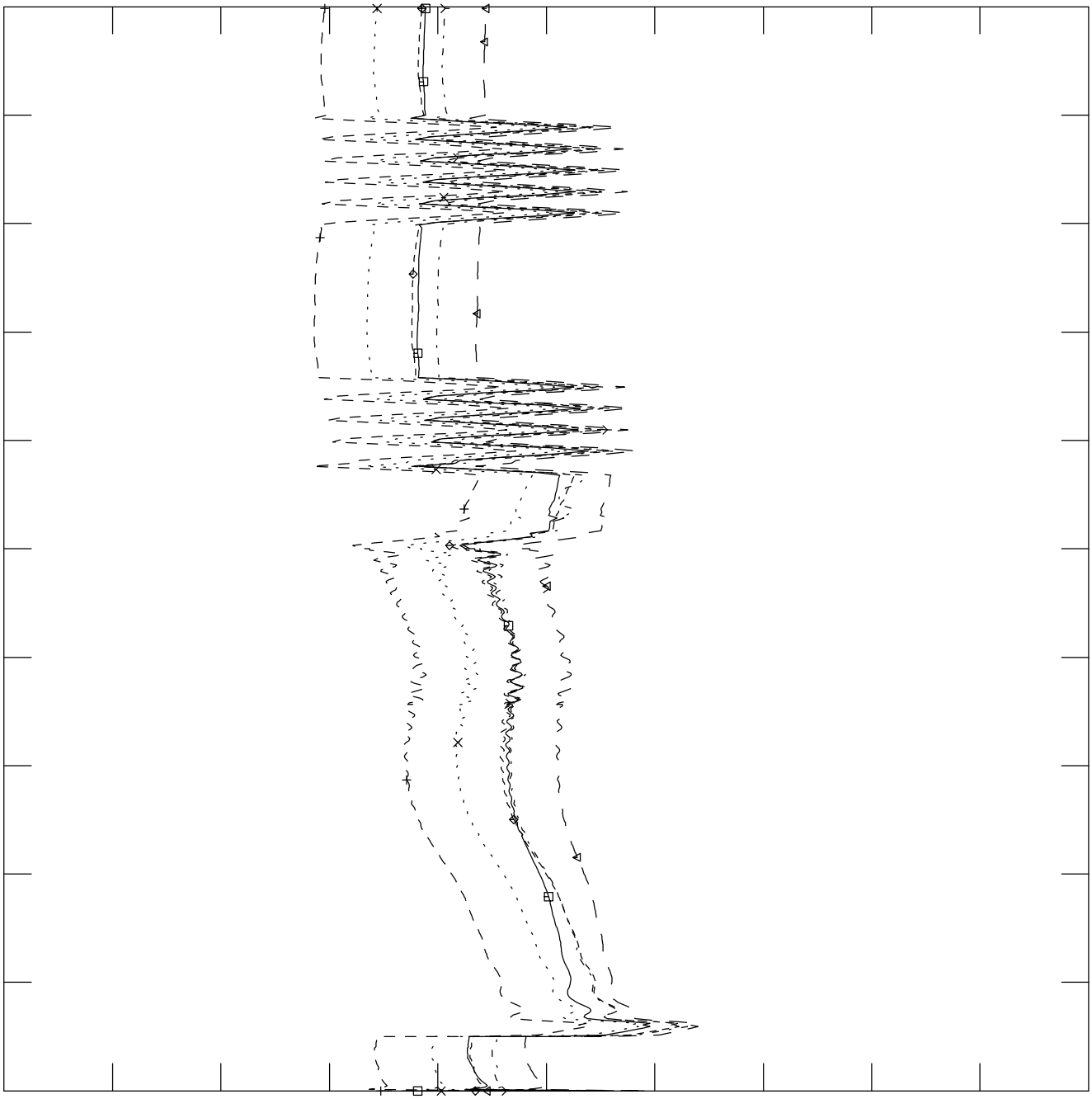

SIEMENS POWER TECHNOLOGIES INTERNATIONAL

2015 LIGHT LOAD CASE, 750MW;WIND=540
IR372,IR379 ON AT 105 MW, NS-NB=0, CBX61 ONI200

FILE: P:\p95rc (Bob Creighton)\...\Dynamics\isolate_lose_TC3.out

SAT, MAR 02 2013 10:19

BUS VOLTAGE

CHNL# 99: [VOLT199275 [PUBNICOPT 69.00]]
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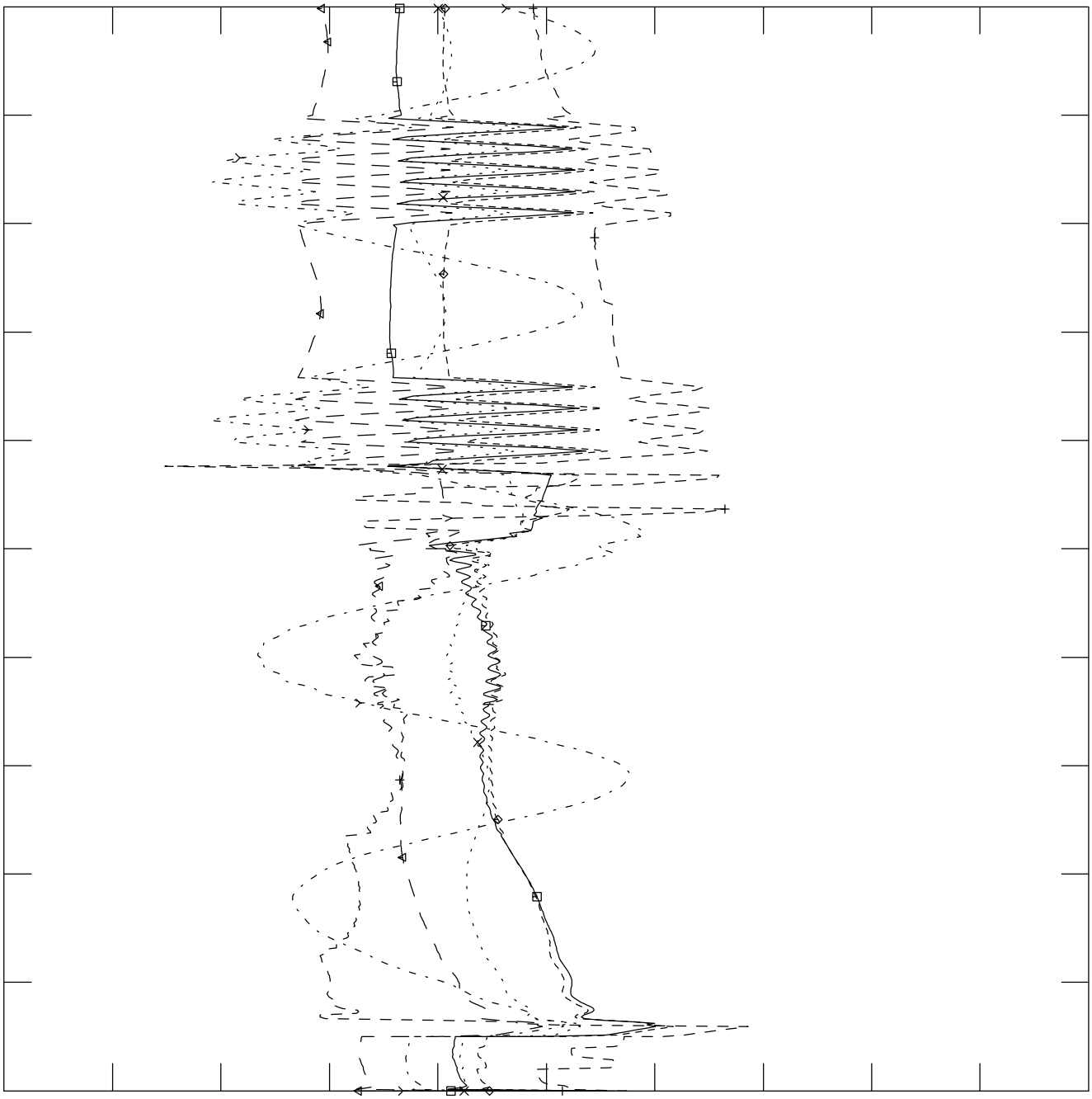
CHNL# 98: [VOLT199364 [GULCH 69.00]]
1.1000 0.90000

CHNL# 97: [VOLT199508 [IR372 34.5]]
1.1000 0.90000

CHNL# 96: [VOLT199501 [SOUTHCANOEL 138KV]]
1.1000 0.90000

CHNL# 95: [VOLT199230 [99W-BRIDGEWTR 230]]
1.1000 0.90000

CHNL# 94: [VOLT199190 [103H-LAKESIDE 138]]
1.1000 0.90000

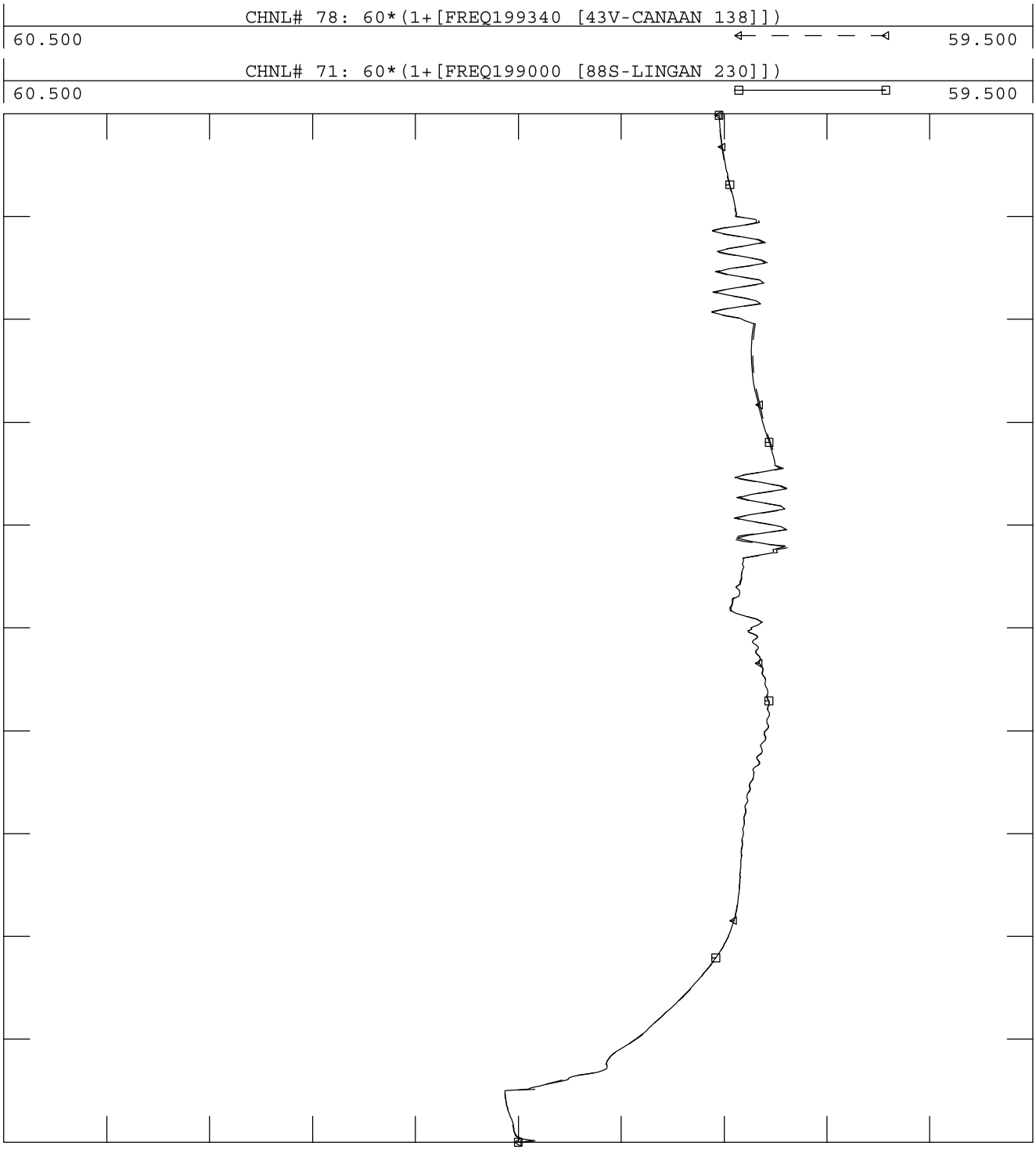


SIEMENS POWER TECHNOLOGIES INTERNATIONAL

2015 LIGHT LOAD CASE, 750MW;WIND=540
IR372,IR379 ON AT 105 MW, NS-NB=0, CBX61 ONI200

FILE: P:\p95rc (Bob Creighton)\...\Dynamics\isolate_lose_TC3.out

SAT, MAR 02 2013 10:21
FREQUENCY



Request IR-31:

Regarding the discussion of the EIRGrid system inertia (Appendix 6.02, pp. 20–21):

(a) Please provide any available data and analysis of the "negative correlation."

(b) Please provide the level of system inertia that EIRGrid considers necessary or safe; if that value varies with load or other variables, please explain.

Response IR-31:

(a-b) The statement "Negative correlation between wind penetration and system inertia is also expected to increase to 0.7 in 2020 from 0.25 in 2010" applies to the EIRgrid system. The information was provided by EIRgrid and is discussed further in the reference:

O'Sullivan, J., Cochlan, Y., Rourke, S., and Kamaluddin, N., "Achieving the Highest Levels of Wind Integration – A System Operator Perspective" *IEEE Transactions on Sustainable Energy*, Vol. 3, No. 4, pp. 819-826, October 2012.

Request IR-32:

Reference Appendix 6.02, p. 21

(a) Would another high-voltage transmission path to New Brunswick tend to increase the ability of Nova Scotia to export energy at times of high wind and low load?

(b) If the second line would be needed "above 500 MW" of wind, might it only be needed above 800 MW or 1,000 MW?

Response IR-32:

(a) Another high-voltage transmission path to New Brunswick would eliminate the need for the Export Power Monitor Special Protection System (SPS) and would therefore increase the transmission capacity for the export of more energy at times of high wind and low load. However, this increase in transmission capacity would not influence the availability of liquid markets to take this excess energy. Given that the Atlantic region is winter peaking and with the return of the largest generator on the system, Pt Lepreau, likely being minimum load constrained, all excess of wind generation in the region will face the same challenge of finding a market during low loads, particularly off peak. If excess wind energy were being over built with expectations of essentially dumping the energy, the market would quickly respond and prices would reflect the circumstances promptly. In NE when generators are forced to stay on line due to minimum load requirements and demand is weak, the market price drops and infrequently to zero.

(b) No, not based on preliminary stability simulations.

Request IR-33:

Reference Appendix 6.02, p. 22

(a) Please explain the nature of the "limitation on the operation of Lingan units for reliability considerations," including the ways on which Lingan operation is restricted.

(b) Please explain whether Lingan is uniquely qualified to provide this service, and

(i) If so, why.

(ii) If not, what other units can fulfill this role.

(c) Please clarify whether the "existing methods of maintaining stability [that] rely on the Lingan units" are different from the "limitation on the operation of Lingan units for reliability considerations" during export conditions. If this is a different issue, please describe in detail

(i) the "methods of maintaining stability,"

(ii) the ways in which the Lingan units are operated to maintain stability, and

(iii) Whether other units can provide similar services.

(d) Please provide the "Special Protection Schemes associated with the Lingan units" and explain the problems that the SPSs deal with.

(e) Please describe the "reinforcement of the backbone 345 kV transmission system" that would be needed to "eliminate the need for" the SPSs.

(f) Please provide any information on any actual problems experienced due to the use of ERIS by wind projects.

Response IR-33:

(a) There is a single 345kV line between Nova Scotia and New Brunswick (L-8001), and a single 138kV line between Onslow and Springhill (L-6513). If Nova Scotia is exporting more than about 80 MW to New Brunswick (the amount varies seasonally), the loss of L-8001 will overload L-6513. To increase export limits, NS Power uses a Special Protection System (SPS) which trips one or two Lingan units depending on export levels. Lingan units have historically operated as base-load units, meaning that the SPS could count on relief of either 150 MW or 300 MW when it operates. The condition described in Appendix 6.02 (light load and high wind) would not have Lingan units operated at full load (because wind generation displaces fossil-fired generation), and therefore the effectiveness of the SPS, and subsequently the export limit, are reduced.

(b-c) NS Power relies on Lingan units for relief of transmission constraints for more SPSs than the export SPS described in part (a). The location of Lingan units on the east end of the Nova Scotia grid, coupled with the base-load nature of the units, makes these units uniquely qualified for this purpose. Use of Point Aconi was considered at the time it was designed but limitations of the Fluidized Bed boiler design introduced operating risks, coupled with the significantly higher cost incurred by tripping it versus Lingan, resulted in the choice of Lingan for SPS operation. For the limited purpose of the SPS function associated with export (not internal transmission relief), NS Power has proposed that all wind farms in NS be equipped with and interface with this SPS. Therefore if NS Power

is exporting "excess wind generation", the loss of L-8001 would trip sufficient wind generation to keep L-6513 within its limits.

(d) The SPSs described above trip one or two Lingan units to avoid system instability for the following contingencies:

(1) Loss of L-8004 (Woodbine – Hopewell 345kV)
(2) Loss of transformer at Woodbine
(3) Loss of bus at Woodbine
(4) Circuit breaker fault or failure to operate at Woodbine
(5) Loss of L-7011 or L-7012 (Lingan – Port Hastings 230kV)
(6) Loss of Strait of Canso double-circuit towers (L-8004 + L-7005)
(7) Loss of bus at Hopewell
(8) Circuit breaker fault or failure to operate at Hopewell
(9) Loss of transformer at Hopewell
(10) Loss of L-8003 (Hopewell – Onslow 345kV)
(11) Circuit breaker fault or failure to operate at Onslow
(12) Loss of one or more 230kV circuits between Onslow and Port Hastings
(13) Circuit breaker fault or failure to operate at Port Hastings
(14) Loss of a major load while islanded
(15) Loss of L-8001 (Onslow – Memramcook 345kV)
(16) Loss of NB Power L-3006 (Memramcook – Salisbury 345kV)

(e) If a new 345kV circuit between Woodbine and Onslow was constructed, all of the listed contingencies except 14, 15, and 16 would be eliminated. A second 345kV line between Onslow and Salisbury would eliminate the need for the SPS for contingencies 15 and 16.

(f) ERIS issues for wind projects east of Onslow are handled by out-of-merit redispatch of thermal generation in Cape Breton. Wind generation in the Digby area has been curtailed

in periods of transmission line outages or high hydro generation availability in the western Annapolis Valley.

Request IR-34:

Reference Appendix 6.02, pp. 22–23

(a) Please provide any data available to NSPI regarding the frequency and magnitude of anticipated curtailments in California and Texas without the TRTP and CREZ projects.

(b) Please compare the frequency and magnitude of anticipated wind curtailments in Nova Scotia due to reliance on ERIS to the frequency and magnitude of anticipated curtailments in California and Texas without the TRTP and CREZ projects.

Response IR-34:

(a) Please refer to the Bibliography of Appendix 6.02.

(b) This comparison has not been performed in preparing the Application.

NON-CONFIDENTIAL

Request IR-35:

Please provide the data and work papers supporting Figures 3.2, 3.3. 3.4 and 3.5.

Response IR-35:

Please see Attachment 1, filed electronically, for data used to generate Figure 3.2.

Please see Attachment 2, filed electronically, for data used to generate Figure 3.3.

Please refer to SBA IR-225 Attachment 1, filed electronically, for data used to generate Figures 3.4 and 3.5.

	Wind	Load
2012-09-07 00:00	93.1	855.3
2012-09-07 00:05	98.8	842.3
2012-09-07 00:10	105.2	834.8
2012-09-07 00:15	98.6	832.4
2012-09-07 00:20	102.8	824.3
2012-09-07 00:25	102.7	819.0
2012-09-07 00:30	107.3	810.9
2012-09-07 00:35	113.2	806.5
2012-09-07 00:40	111.9	808.5
2012-09-07 00:45	113.2	801.0
2012-09-07 00:50	108.8	794.0
2012-09-07 00:55	105.9	790.2
2012-09-07 01:00	103.3	786.1
2012-09-07 01:05	104.1	782.8
2012-09-07 01:10	107.0	782.2
2012-09-07 01:15	100.4	780.5
2012-09-07 01:20	96.4	778.0
2012-09-07 01:25	96.4	774.9
2012-09-07 01:30	95.9	772.3
2012-09-07 01:35	99.8	768.4
2012-09-07 01:40	96.4	765.3
2012-09-07 01:45	101.0	764.1
2012-09-07 01:50	97.8	762.7
2012-09-07 01:55	94.1	763.0
2012-09-07 02:00	96.0	756.3
2012-09-07 02:05	101.2	755.4
2012-09-07 02:10	103.5	755.8
2012-09-07 02:15	106.6	759.2
2012-09-07 02:20	109.0	754.7
2012-09-07 02:25	113.1	753.2
2012-09-07 02:30	114.4	758.5
2012-09-07 02:35	106.9	758.9
2012-09-07 02:40	106.8	755.2
2012-09-07 02:45	106.0	751.2
2012-09-07 02:50	109.1	746.8
2012-09-07 02:55	105.2	752.8
2012-09-07 03:00	101.9	746.2
2012-09-07 03:05	104.8	750.2
2012-09-07 03:10	108.2	744.2
2012-09-07 03:15	105.7	745.7
2012-09-07 03:20	104.8	744.9
2012-09-07 03:25	104.6	747.3
2012-09-07 03:30	100.4	745.1
2012-09-07 03:35	96.2	744.0
2012-09-07 03:40	88.5	744.0
2012-09-07 03:45	93.8	743.8
2012-09-07 03:50	91.8	740.6
2012-09-07 03:55	87.6	743.9

	Wind	Load
2012-09-07 04:00	93.4	743.9
2012-09-07 04:05	94.3	745.5
2012-09-07 04:10	93.4	742.4
2012-09-07 04:15	96.7	743.5
2012-09-07 04:20	98.0	745.0
2012-09-07 04:25	95.1	746.9
2012-09-07 04:30	95.2	746.9
2012-09-07 04:35	94.0	744.0
2012-09-07 04:40	87.7	746.8
2012-09-07 04:45	91.1	752.8
2012-09-07 04:50	89.8	752.6
2012-09-07 04:55	92.9	752.9
2012-09-07 05:00	102.4	757.0
2012-09-07 05:05	99.6	760.1
2012-09-07 05:10	103.4	762.2
2012-09-07 05:15	98.0	768.7
2012-09-07 05:20	99.0	768.9
2012-09-07 05:25	104.7	778.6
2012-09-07 05:30	113.5	779.0
2012-09-07 05:35	109.8	786.2
2012-09-07 05:40	106.3	787.2
2012-09-07 05:45	109.3	798.5
2012-09-07 05:50	111.8	800.1
2012-09-07 05:55	107.1	808.2
2012-09-07 06:00	111.8	817.1
2012-09-07 06:05	114.6	832.1
2012-09-07 06:10	122.5	851.3
2012-09-07 06:15	124.1	862.4
2012-09-07 06:20	131.3	874.6
2012-09-07 06:25	121.0	890.7
2012-09-07 06:30	124.3	894.7
2012-09-07 06:35	132.0	901.1
2012-09-07 06:40	118.2	910.3
2012-09-07 06:45	120.0	916.4
2012-09-07 06:50	131.0	933.3
2012-09-07 06:55	126.9	941.0
2012-09-07 07:00	127.9	959.8
2012-09-07 07:05	116.8	971.1
2012-09-07 07:10	122.9	993.6
2012-09-07 07:15	117.3	1,002.2
2012-09-07 07:20	108.8	1,014.8
2012-09-07 07:25	108.9	1,019.6
2012-09-07 07:30	105.0	1,025.8
2012-09-07 07:35	96.2	1,037.5
2012-09-07 07:40	102.5	1,037.8
2012-09-07 07:45	100.4	1,045.4
2012-09-07 07:50	91.6	1,049.4
2012-09-07 07:55	90.7	1,050.6

	Wind	Load
2012-09-07 08:00	90.6	1,051.7
2012-09-07 08:05	93.6	1,060.1
2012-09-07 08:10	102.9	1,062.5
2012-09-07 08:15	98.8	1,068.9
2012-09-07 08:20	99.1	1,068.9
2012-09-07 08:25	98.6	1,067.9
2012-09-07 08:30	95.7	1,068.7
2012-09-07 08:35	98.0	1,067.2
2012-09-07 08:40	100.5	1,069.2
2012-09-07 08:45	97.5	1,068.2
2012-09-07 08:50	97.6	1,075.9
2012-09-07 08:55	86.6	1,078.0
2012-09-07 09:00	82.6	1,076.7
2012-09-07 09:05	82.0	1,079.9
2012-09-07 09:10	76.8	1,085.2
2012-09-07 09:15	75.3	1,088.1
2012-09-07 09:20	72.0	1,090.9
2012-09-07 09:25	64.9	1,095.1
2012-09-07 09:30	70.7	1,097.1
2012-09-07 09:35	68.4	1,092.7
2012-09-07 09:40	63.3	1,100.2
2012-09-07 09:45	63.4	1,102.8
2012-09-07 09:50	61.1	1,104.2
2012-09-07 09:55	54.0	1,105.1
2012-09-07 10:00	51.7	1,101.1
2012-09-07 10:05	50.6	1,103.6
2012-09-07 10:10	52.3	1,102.9
2012-09-07 10:15	50.2	1,104.6
2012-09-07 10:20	57.5	1,106.6
2012-09-07 10:25	54.4	1,112.8
2012-09-07 10:30	49.5	1,113.3
2012-09-07 10:35	47.4	1,114.1
2012-09-07 10:40	50.0	1,109.2
2012-09-07 10:45	46.3	1,116.5
2012-09-07 10:50	42.2	1,113.2
2012-09-07 10:55	38.8	1,120.8
2012-09-07 11:00	36.2	1,115.8
2012-09-07 11:05	35.9	1,120.8
2012-09-07 11:10	31.8	1,120.5
2012-09-07 11:15	33.6	1,125.5
2012-09-07 11:20	36.3	1,123.4
2012-09-07 11:25	34.6	1,129.9
2012-09-07 11:30	34.8	1,126.9
2012-09-07 11:35	33.1	1,128.9
2012-09-07 11:40	25.8	1,124.4
2012-09-07 11:45	24.6	1,127.8
2012-09-07 11:50	26.7	1,128.6
2012-09-07 11:55	24.7	1,130.2

	Wind	Load
2012-09-07 12:00	20.4	1,124.0
2012-09-07 12:05	20.4	1,126.4
2012-09-07 12:10	20.8	1,127.1
2012-09-07 12:15	20.5	1,124.0
2012-09-07 12:20	21.8	1,126.0
2012-09-07 12:25	21.5	1,122.8
2012-09-07 12:30	22.4	1,119.9
2012-09-07 12:35	29.5	1,122.2
2012-09-07 12:40	24.1	1,125.5
2012-09-07 12:45	22.4	1,123.5
2012-09-07 12:50	22.8	1,128.2
2012-09-07 12:55	19.0	1,124.8
2012-09-07 13:00	23.0	1,126.3
2012-09-07 13:05	24.5	1,124.8
2012-09-07 13:10	23.6	1,127.6
2012-09-07 13:15	23.8	1,124.6
2012-09-07 13:20	25.1	1,124.1
2012-09-07 13:25	25.1	1,126.1
2012-09-07 13:30	25.3	1,121.0
2012-09-07 13:35	25.9	1,119.8
2012-09-07 13:40	27.0	1,119.6
2012-09-07 13:45	27.2	1,120.9
2012-09-07 13:50	25.2	1,116.9
2012-09-07 13:55	23.0	1,113.8
2012-09-07 14:00	26.4	1,112.7
2012-09-07 14:05	25.1	1,108.1
2012-09-07 14:10	22.4	1,114.7
2012-09-07 14:15	23.4	1,110.8
2012-09-07 14:20	26.3	1,112.9
2012-09-07 14:25	23.9	1,114.1
2012-09-07 14:30	23.0	1,110.5
2012-09-07 14:35	21.0	1,113.9
2012-09-07 14:40	22.9	1,115.4
2012-09-07 14:45	17.8	1,112.2
2012-09-07 14:50	22.8	1,111.3
2012-09-07 14:55	23.6	1,115.3
2012-09-07 15:00	24.5	1,113.6
2012-09-07 15:05	23.7	1,111.1
2012-09-07 15:10	24.4	1,120.1
2012-09-07 15:15	23.0	1,117.6
2012-09-07 15:20	21.4	1,119.9
2012-09-07 15:25	19.4	1,120.2
2012-09-07 15:30	17.9	1,121.6
2012-09-07 15:35	19.1	1,124.3
2012-09-07 15:40	19.3	1,126.6
2012-09-07 15:45	19.0	1,123.7
2012-09-07 15:50	19.9	1,125.4
2012-09-07 15:55	21.3	1,128.4

	Wind	Load
2012-09-07 16:00	20.0	1,122.7
2012-09-07 16:05	19.0	1,121.9
2012-09-07 16:10	18.8	1,123.5
2012-09-07 16:15	18.6	1,127.4
2012-09-07 16:20	22.7	1,127.4
2012-09-07 16:25	25.5	1,126.8
2012-09-07 16:30	24.8	1,125.3
2012-09-07 16:35	26.1	1,126.8
2012-09-07 16:40	27.9	1,125.2
2012-09-07 16:45	32.5	1,125.9
2012-09-07 16:50	32.6	1,133.9
2012-09-07 16:55	37.6	1,126.8
2012-09-07 17:00	29.1	1,125.7
2012-09-07 17:05	25.9	1,124.0
2012-09-07 17:10	29.2	1,122.2
2012-09-07 17:15	28.3	1,122.4
2012-09-07 17:20	24.6	1,125.8
2012-09-07 17:25	26.4	1,119.8
2012-09-07 17:30	27.3	1,119.9
2012-09-07 17:35	28.3	1,114.7
2012-09-07 17:40	25.0	1,112.9
2012-09-07 17:45	24.0	1,113.7
2012-09-07 17:50	23.1	1,106.8
2012-09-07 17:55	21.1	1,102.4
2012-09-07 18:00	20.4	1,100.6
2012-09-07 18:05	17.3	1,090.6
2012-09-07 18:10	16.3	1,090.3
2012-09-07 18:15	16.5	1,084.6
2012-09-07 18:20	20.2	1,087.1
2012-09-07 18:25	19.7	1,085.0
2012-09-07 18:30	21.7	1,083.2
2012-09-07 18:35	21.0	1,079.7
2012-09-07 18:40	20.7	1,079.9
2012-09-07 18:45	24.2	1,073.2
2012-09-07 18:50	28.2	1,067.9
2012-09-07 18:55	29.6	1,064.8
2012-09-07 19:00	27.8	1,066.9
2012-09-07 19:05	25.0	1,063.2
2012-09-07 19:10	20.9	1,063.5
2012-09-07 19:15	18.2	1,065.3
2012-09-07 19:20	17.9	1,064.7
2012-09-07 19:25	15.8	1,065.1
2012-09-07 19:30	17.2	1,064.8
2012-09-07 19:35	18.7	1,072.3
2012-09-07 19:40	19.3	1,074.7
2012-09-07 19:45	18.2	1,080.8
2012-09-07 19:50	18.2	1,092.1
2012-09-07 19:55	20.8	1,097.5

	Wind	Load
2012-09-07 20:00	21.3	1,104.6
2012-09-07 20:05	24.2	1,101.8
2012-09-07 20:10	23.7	1,109.0
2012-09-07 20:15	26.7	1,103.7
2012-09-07 20:20	24.0	1,106.7
2012-09-07 20:25	22.1	1,103.8
2012-09-07 20:30	21.4	1,100.6
2012-09-07 20:35	24.4	1,097.7
2012-09-07 20:40	20.9	1,096.6
2012-09-07 20:45	19.6	1,095.7
2012-09-07 20:50	18.7	1,089.3
2012-09-07 20:55	14.9	1,084.0
2012-09-07 21:00	16.4	1,079.0
2012-09-07 21:05	15.2	1,072.5
2012-09-07 21:10	15.2	1,067.3
2012-09-07 21:15	15.2	1,063.6
2012-09-07 21:20	18.4	1,062.7
2012-09-07 21:25	18.9	1,054.5
2012-09-07 21:30	23.4	1,050.4
2012-09-07 21:35	25.5	1,043.7
2012-09-07 21:40	27.8	1,033.6
2012-09-07 21:45	33.1	1,030.0
2012-09-07 21:50	34.8	1,022.8
2012-09-07 21:55	37.6	1,019.8
2012-09-07 22:00	39.5	1,009.8
2012-09-07 22:05	43.6	1,004.2
2012-09-07 22:10	51.3	999.6
2012-09-07 22:15	53.4	993.0
2012-09-07 22:20	53.8	986.8
2012-09-07 22:25	55.0	976.1
2012-09-07 22:30	53.8	969.0
2012-09-07 22:35	54.8	962.3
2012-09-07 22:40	59.1	956.1
2012-09-07 22:45	60.7	947.7
2012-09-07 22:50	62.7	940.7
2012-09-07 22:55	57.9	933.4
2012-09-07 23:00	60.1	932.2
2012-09-07 23:05	58.2	935.5
2012-09-07 23:10	61.6	935.0
2012-09-07 23:15	57.8	922.5
2012-09-07 23:20	57.7	912.9
2012-09-07 23:25	54.2	903.5
2012-09-07 23:30	52.1	897.6
2012-09-07 23:35	49.6	889.5
2012-09-07 23:40	48.9	880.6
2012-09-07 23:45	49.6	874.8
2012-09-07 23:50	50.7	867.0
2012-09-07 23:55	49.9	863.0

	Wind	Load
2012-09-08 00:00	47.7	854.2
2012-09-08 00:05	46.7	847.3
2012-09-08 00:10	47.1	842.9
2012-09-08 00:15	47.3	836.1
2012-09-08 00:20	42.4	830.8
2012-09-08 00:25	43.5	826.7
2012-09-08 00:30	43.7	821.7
2012-09-08 00:35	46.9	815.6
2012-09-08 00:40	46.9	813.7
2012-09-08 00:45	46.9	808.4
2012-09-08 00:50	47.5	804.7
2012-09-08 00:55	44.6	798.2
2012-09-08 01:00	43.5	792.5
2012-09-08 01:05	42.9	787.8
2012-09-08 01:10	40.5	787.5
2012-09-08 01:15	39.5	784.1
2012-09-08 01:20	40.8	782.1
2012-09-08 01:25	39.9	776.6
2012-09-08 01:30	38.7	777.4
2012-09-08 01:35	38.6	775.2
2012-09-08 01:40	41.6	772.7
2012-09-08 01:45	40.3	768.4
2012-09-08 01:50	42.2	770.3
2012-09-08 01:55	43.2	761.9
2012-09-08 02:00	41.3	766.4
2012-09-08 02:05	42.0	760.1
2012-09-08 02:10	41.1	758.2
2012-09-08 02:15	39.6	759.5
2012-09-08 02:20	40.5	756.6
2012-09-08 02:25	39.8	754.8
2012-09-08 02:30	36.0	749.6
2012-09-08 02:35	34.6	746.6
2012-09-08 02:40	33.6	744.7
2012-09-08 02:45	34.5	747.0
2012-09-08 02:50	35.1	740.5
2012-09-08 02:55	36.9	741.9
2012-09-08 03:00	37.9	738.7
2012-09-08 03:05	42.0	740.4
2012-09-08 03:10	42.0	736.5
2012-09-08 03:15	35.2	740.3
2012-09-08 03:20	36.2	737.3
2012-09-08 03:25	36.1	738.8
2012-09-08 03:30	37.1	737.5
2012-09-08 03:35	37.0	736.4
2012-09-08 03:40	39.0	736.3
2012-09-08 03:45	39.3	733.0
2012-09-08 03:50	39.7	732.3
2012-09-08 03:55	45.3	730.2

	Wind	Load
2012-09-08 04:00	43.5	732.2
2012-09-08 04:05	40.0	731.0
2012-09-08 04:10	38.7	732.5
2012-09-08 04:15	36.5	730.5
2012-09-08 04:20	37.0	734.7
2012-09-08 04:25	35.2	733.6
2012-09-08 04:30	33.7	729.4
2012-09-08 04:35	31.7	736.4
2012-09-08 04:40	31.3	739.0
2012-09-08 04:45	35.0	734.8
2012-09-08 04:50	38.1	743.5
2012-09-08 04:55	38.1	744.5
2012-09-08 05:00	37.6	739.8
2012-09-08 05:05	37.4	745.9
2012-09-08 05:10	32.9	745.0
2012-09-08 05:15	33.5	746.5
2012-09-08 05:20	37.6	752.2
2012-09-08 05:25	37.0	755.2
2012-09-08 05:30	36.6	752.7
2012-09-08 05:35	33.5	752.7
2012-09-08 05:40	32.7	757.8
2012-09-08 05:45	36.2	758.9
2012-09-08 05:50	39.2	762.4
2012-09-08 05:55	39.4	770.0
2012-09-08 06:00	44.8	769.4
2012-09-08 06:05	46.4	777.6
2012-09-08 06:10	46.3	776.5
2012-09-08 06:15	49.9	781.8
2012-09-08 06:20	49.7	786.1
2012-09-08 06:25	52.7	786.1
2012-09-08 06:30	49.7	788.8
2012-09-08 06:35	50.8	788.3
2012-09-08 06:40	56.0	789.3
2012-09-08 06:45	53.1	791.6
2012-09-08 06:50	57.9	794.5
2012-09-08 06:55	55.0	800.7
2012-09-08 07:00	49.3	801.2
2012-09-08 07:05	51.3	805.9
2012-09-08 07:10	51.9	808.9
2012-09-08 07:15	54.2	814.6
2012-09-08 07:20	54.0	821.1
2012-09-08 07:25	54.8	826.7
2012-09-08 07:30	55.5	832.8
2012-09-08 07:35	54.2	843.4
2012-09-08 07:40	48.4	849.6
2012-09-08 07:45	47.2	858.1
2012-09-08 07:50	49.8	864.3
2012-09-08 07:55	50.1	877.3

	Wind	Load
2012-09-08 08:00	46.9	882.0
2012-09-08 08:05	43.0	894.4
2012-09-08 08:10	44.9	903.0
2012-09-08 08:15	47.9	909.3
2012-09-08 08:20	48.7	920.3
2012-09-08 08:25	48.8	922.7
2012-09-08 08:30	47.9	928.2
2012-09-08 08:35	52.1	936.8
2012-09-08 08:40	49.5	944.1
2012-09-08 08:45	47.1	950.8
2012-09-08 08:50	46.4	958.2
2012-09-08 08:55	45.8	963.4
2012-09-08 09:00	44.9	976.2
2012-09-08 09:05	50.4	982.7
2012-09-08 09:10	48.5	989.0
2012-09-08 09:15	44.3	998.0
2012-09-08 09:20	47.6	1,004.4
2012-09-08 09:25	45.7	1,006.5
2012-09-08 09:30	45.8	1,010.0
2012-09-08 09:35	49.7	1,014.1
2012-09-08 09:40	52.6	1,017.5
2012-09-08 09:45	49.4	1,019.4
2012-09-08 09:50	51.6	1,025.4
2012-09-08 09:55	52.2	1,026.7
2012-09-08 10:00	46.6	1,031.8
2012-09-08 10:05	45.8	1,032.4
2012-09-08 10:10	50.2	1,036.4
2012-09-08 10:15	51.0	1,045.7
2012-09-08 10:20	53.6	1,047.0
2012-09-08 10:25	52.8	1,048.5
2012-09-08 10:30	47.9	1,055.1
2012-09-08 10:35	47.4	1,055.5
2012-09-08 10:40	43.6	1,056.7
2012-09-08 10:45	44.4	1,057.2
2012-09-08 10:50	45.4	1,059.4
2012-09-08 10:55	50.8	1,059.4
2012-09-08 11:00	50.9	1,062.2
2012-09-08 11:05	50.9	1,066.0
2012-09-08 11:10	47.0	1,065.1
2012-09-08 11:15	46.5	1,072.8
2012-09-08 11:20	47.6	1,071.8
2012-09-08 11:25	49.0	1,070.6
2012-09-08 11:30	45.7	1,072.9
2012-09-08 11:35	43.9	1,076.7
2012-09-08 11:40	41.4	1,078.0
2012-09-08 11:45	42.9	1,076.7
2012-09-08 11:50	39.3	1,079.3
2012-09-08 11:55	39.9	1,081.7

	Wind	Load
2012-09-08 12:00	43.7	1,081.4
2012-09-08 12:05	41.7	1,076.8
2012-09-08 12:10	38.8	1,078.0
2012-09-08 12:15	42.8	1,079.5
2012-09-08 12:20	49.6	1,079.3
2012-09-08 12:25	47.8	1,081.7
2012-09-08 12:30	44.4	1,079.0
2012-09-08 12:35	44.0	1,076.9
2012-09-08 12:40	39.5	1,074.9
2012-09-08 12:45	39.9	1,077.1
2012-09-08 12:50	44.5	1,070.4
2012-09-08 12:55	49.6	1,070.6
2012-09-08 13:00	54.9	1,070.6
2012-09-08 13:05	51.4	1,068.0
2012-09-08 13:10	57.9	1,065.6
2012-09-08 13:15	65.7	1,069.8
2012-09-08 13:20	63.6	1,060.3
2012-09-08 13:25	61.3	1,060.7
2012-09-08 13:30	64.7	1,057.2
2012-09-08 13:35	65.8	1,061.2
2012-09-08 13:40	66.1	1,055.1
2012-09-08 13:45	72.9	1,056.6
2012-09-08 13:50	71.5	1,049.6
2012-09-08 13:55	66.3	1,049.7
2012-09-08 14:00	68.8	1,048.3
2012-09-08 14:05	70.1	1,049.4
2012-09-08 14:10	74.2	1,049.6
2012-09-08 14:15	78.4	1,044.2
2012-09-08 14:20	79.1	1,043.6
2012-09-08 14:25	76.2	1,037.9
2012-09-08 14:30	72.6	1,038.0
2012-09-08 14:35	73.0	1,039.2
2012-09-08 14:40	71.5	1,039.2
2012-09-08 14:45	71.4	1,035.7
2012-09-08 14:50	75.1	1,040.2
2012-09-08 14:55	80.1	1,037.7
2012-09-08 15:00	79.6	1,035.4
2012-09-08 15:05	85.0	1,033.2
2012-09-08 15:10	88.2	1,034.7
2012-09-08 15:15	85.5	1,032.1
2012-09-08 15:20	89.9	1,033.8
2012-09-08 15:25	96.8	1,030.9
2012-09-08 15:30	95.5	1,029.1
2012-09-08 15:35	96.1	1,034.1
2012-09-08 15:40	89.7	1,028.6
2012-09-08 15:45	97.8	1,029.3
2012-09-08 15:50	98.1	1,033.7
2012-09-08 15:55	104.4	1,033.2

	Wind	Load
2012-09-08 16:00	106.2	1,036.5
2012-09-08 16:05	108.9	1,037.7
2012-09-08 16:10	109.1	1,041.0
2012-09-08 16:15	118.2	1,039.4
2012-09-08 16:20	123.0	1,041.5
2012-09-08 16:25	123.1	1,043.5
2012-09-08 16:30	124.7	1,050.8
2012-09-08 16:35	131.4	1,051.9
2012-09-08 16:40	126.8	1,054.7
2012-09-08 16:45	136.2	1,051.4
2012-09-08 16:50	139.1	1,051.2
2012-09-08 16:55	140.6	1,054.5
2012-09-08 17:00	135.1	1,052.9
2012-09-08 17:05	144.8	1,060.3
2012-09-08 17:10	154.8	1,056.1
2012-09-08 17:15	150.8	1,054.6
2012-09-08 17:20	156.4	1,058.6
2012-09-08 17:25	160.6	1,056.7
2012-09-08 17:30	170.8	1,055.1
2012-09-08 17:35	161.4	1,052.0
2012-09-08 17:40	158.2	1,056.9
2012-09-08 17:45	162.0	1,053.1
2012-09-08 17:50	162.7	1,048.2
2012-09-08 17:55	159.7	1,046.7
2012-09-08 18:00	161.3	1,038.3
2012-09-08 18:05	165.9	1,036.0
2012-09-08 18:10	169.5	1,036.9
2012-09-08 18:15	167.6	1,029.1
2012-09-08 18:20	168.0	1,028.1
2012-09-08 18:25	167.3	1,026.4
2012-09-08 18:30	183.6	1,021.2
2012-09-08 18:35	184.2	1,025.2
2012-09-08 18:40	192.8	1,020.0
2012-09-08 18:45	197.4	1,016.5
2012-09-08 18:50	191.3	1,015.8
2012-09-08 18:55	190.8	1,013.9
2012-09-08 19:00	182.9	1,012.5
2012-09-08 19:05	178.1	1,010.7
2012-09-08 19:10	178.7	1,013.1
2012-09-08 19:15	174.0	1,016.7
2012-09-08 19:20	162.6	1,014.4
2012-09-08 19:25	159.2	1,019.6
2012-09-08 19:30	157.0	1,023.0
2012-09-08 19:35	161.6	1,026.8
2012-09-08 19:40	164.3	1,029.0
2012-09-08 19:45	162.0	1,038.4
2012-09-08 19:50	167.9	1,046.6
2012-09-08 19:55	159.4	1,052.5

	Wind	Load
2012-09-08 20:00	154.3	1,058.0
2012-09-08 20:05	151.0	1,064.3
2012-09-08 20:10	156.7	1,069.2
2012-09-08 20:15	158.7	1,066.5
2012-09-08 20:20	157.9	1,064.8
2012-09-08 20:25	153.6	1,063.7
2012-09-08 20:30	160.1	1,056.2
2012-09-08 20:35	167.5	1,054.7
2012-09-08 20:40	176.5	1,051.6
2012-09-08 20:45	182.8	1,048.1
2012-09-08 20:50	184.9	1,048.3
2012-09-08 20:55	183.8	1,043.8
2012-09-08 21:00	184.8	1,041.0
2012-09-08 21:05	192.7	1,036.3
2012-09-08 21:10	192.9	1,028.1
2012-09-08 21:15	191.1	1,028.7
2012-09-08 21:20	190.9	1,019.6
2012-09-08 21:25	190.3	1,015.0
2012-09-08 21:30	190.8	1,009.6
2012-09-08 21:35	188.2	1,012.0
2012-09-08 21:40	193.3	1,003.3
2012-09-08 21:45	195.0	999.0
2012-09-08 21:50	197.6	994.6
2012-09-08 21:55	197.4	990.1
2012-09-08 22:00	194.5	984.6
2012-09-08 22:05	194.1	975.3
2012-09-08 22:10	189.2	973.4
2012-09-08 22:15	202.4	964.2
2012-09-08 22:20	211.4	960.6
2012-09-08 22:25	222.2	956.3
2012-09-08 22:30	224.8	949.5
2012-09-08 22:35	231.6	943.1
2012-09-08 22:40	232.5	934.4
2012-09-08 22:45	232.0	932.3
2012-09-08 22:50	227.4	923.5
2012-09-08 22:55	220.0	919.4
2012-09-08 23:00	218.1	910.4
2012-09-08 23:05	211.6	907.8
2012-09-08 23:10	213.1	901.4
2012-09-08 23:15	209.8	895.6
2012-09-08 23:20	210.2	886.2
2012-09-08 23:25	214.2	880.1
2012-09-08 23:30	225.0	870.3
2012-09-08 23:35	224.6	866.0
2012-09-08 23:40	224.4	860.2
2012-09-08 23:45	222.0	858.1
2012-09-08 23:50	225.1	851.3
2012-09-08 23:55	228.3	846.6

	Wind	Load
2012-09-09 00:00	233.1	842.5
2012-09-09 00:05	236.7	828.4
2012-09-09 00:10	236.1	835.0
2012-09-09 00:15	238.4	824.8
2012-09-09 00:20	238.0	819.8
2012-09-09 00:25	237.7	816.4
2012-09-09 00:30	242.4	813.4
2012-09-09 00:35	239.6	812.6
2012-09-09 00:40	241.8	805.2
2012-09-09 00:45	236.7	803.0
2012-09-09 00:50	234.2	796.0
2012-09-09 00:55	232.5	793.2
2012-09-09 01:00	231.8	791.2
2012-09-09 01:05	229.6	784.1
2012-09-09 01:10	231.1	781.7
2012-09-09 01:15	234.3	785.2
2012-09-09 01:20	231.3	779.9
2012-09-09 01:25	235.0	777.5
2012-09-09 01:30	231.9	772.8
2012-09-09 01:35	235.5	771.0
2012-09-09 01:40	229.4	766.4
2012-09-09 01:45	231.1	765.2
2012-09-09 01:50	234.9	760.4
2012-09-09 01:55	233.4	757.1
2012-09-09 02:00	238.7	753.3
2012-09-09 02:05	231.4	752.5
2012-09-09 02:10	230.1	748.1
2012-09-09 02:15	222.7	751.2
2012-09-09 02:20	221.5	746.0
2012-09-09 02:25	221.8	743.3
2012-09-09 02:30	219.5	743.8
2012-09-09 02:35	220.5	742.1
2012-09-09 02:40	220.9	741.4
2012-09-09 02:45	217.1	737.7
2012-09-09 02:50	216.9	736.1
2012-09-09 02:55	218.0	732.5
2012-09-09 03:00	209.2	733.7
2012-09-09 03:05	204.6	730.4
2012-09-09 03:10	203.0	729.2
2012-09-09 03:15	201.6	733.7
2012-09-09 03:20	200.4	734.0
2012-09-09 03:25	193.4	730.7
2012-09-09 03:30	188.0	731.6
2012-09-09 03:35	186.5	727.6
2012-09-09 03:40	186.0	726.0
2012-09-09 03:45	187.5	730.7
2012-09-09 03:50	186.2	733.6
2012-09-09 03:55	199.1	726.0

	Wind	Load
2012-09-09 04:00	201.6	724.2
2012-09-09 04:05	200.1	723.7
2012-09-09 04:10	199.8	723.7
2012-09-09 04:15	216.4	724.7
2012-09-09 04:20	219.0	725.6
2012-09-09 04:25	220.6	728.8
2012-09-09 04:30	221.3	728.2
2012-09-09 04:35	219.3	725.2
2012-09-09 04:40	217.1	724.4
2012-09-09 04:45	217.4	726.0
2012-09-09 04:50	222.1	731.2
2012-09-09 04:55	228.5	730.8
2012-09-09 05:00	231.5	731.3
2012-09-09 05:05	241.3	730.1
2012-09-09 05:10	245.7	728.6
2012-09-09 05:15	242.6	733.9
2012-09-09 05:20	236.1	736.9
2012-09-09 05:25	231.0	736.4
2012-09-09 05:30	233.5	740.2
2012-09-09 05:35	224.1	742.7
2012-09-09 05:40	215.8	741.0
2012-09-09 05:45	227.4	747.4
2012-09-09 05:50	226.1	741.9
2012-09-09 05:55	216.6	749.3
2012-09-09 06:00	214.4	747.7
2012-09-09 06:05	221.4	756.5
2012-09-09 06:10	224.0	761.1
2012-09-09 06:15	223.2	766.4
2012-09-09 06:20	220.9	761.2
2012-09-09 06:25	228.1	763.0
2012-09-09 06:30	226.9	765.4
2012-09-09 06:35	226.3	767.2
2012-09-09 06:40	223.4	767.2
2012-09-09 06:45	230.4	770.4
2012-09-09 06:50	224.2	763.2
2012-09-09 06:55	229.2	772.1
2012-09-09 07:00	233.4	778.6
2012-09-09 07:05	232.8	775.4
2012-09-09 07:10	227.9	783.3
2012-09-09 07:15	229.7	785.0
2012-09-09 07:20	234.4	795.1
2012-09-09 07:25	243.7	797.2
2012-09-09 07:30	244.3	805.0
2012-09-09 07:35	242.7	812.7
2012-09-09 07:40	245.5	822.6
2012-09-09 07:45	249.3	824.3
2012-09-09 07:50	251.6	833.1
2012-09-09 07:55	256.7	841.2

	Wind	Load
2012-09-09 08:00	255.1	851.4
2012-09-09 08:05	261.0	856.1
2012-09-09 08:10	256.5	864.8
2012-09-09 08:15	255.0	876.4
2012-09-09 08:20	258.8	879.9
2012-09-09 08:25	260.7	892.4
2012-09-09 08:30	252.1	899.3
2012-09-09 08:35	252.8	908.2
2012-09-09 08:40	252.5	914.9
2012-09-09 08:45	250.0	927.0
2012-09-09 08:50	234.9	929.1
2012-09-09 08:55	241.8	939.1
2012-09-09 09:00	236.6	944.3
2012-09-09 09:05	241.6	956.5
2012-09-09 09:10	232.1	963.2
2012-09-09 09:15	239.1	967.7
2012-09-09 09:20	242.9	977.5
2012-09-09 09:25	239.4	979.3
2012-09-09 09:30	235.1	988.0
2012-09-09 09:35	226.0	998.2
2012-09-09 09:40	230.1	1,011.7
2012-09-09 09:45	229.4	1,019.6
2012-09-09 09:50	230.7	1,023.8
2012-09-09 09:55	224.7	1,025.7
2012-09-09 10:00	231.8	1,037.2
2012-09-09 10:05	240.4	1,038.4
2012-09-09 10:10	233.3	1,048.2
2012-09-09 10:15	236.0	1,049.2
2012-09-09 10:20	236.0	1,062.3
2012-09-09 10:25	232.6	1,061.4
2012-09-09 10:30	243.2	1,061.9
2012-09-09 10:35	240.5	1,070.0
2012-09-09 10:40	235.5	1,062.7
2012-09-09 10:45	240.2	1,058.6
2012-09-09 10:50	239.2	1,066.7
2012-09-09 10:55	243.6	1,063.8
2012-09-09 11:00	238.9	1,067.9
2012-09-09 11:05	233.8	1,068.9
2012-09-09 11:10	239.0	1,076.8
2012-09-09 11:15	228.1	1,079.8
2012-09-09 11:20	214.3	1,075.8
2012-09-09 11:25	204.1	1,083.9
2012-09-09 11:30	200.5	1,087.7
2012-09-09 11:35	207.4	1,092.1
2012-09-09 11:40	213.5	1,101.4
2012-09-09 11:45	214.9	1,098.9
2012-09-09 11:50	213.3	1,102.2
2012-09-09 11:55	201.8	1,109.9

	Wind	Load
2012-09-09 12:00	213.5	1,105.5
2012-09-09 12:05	210.9	1,106.5
2012-09-09 12:10	210.1	1,111.8
2012-09-09 12:15	216.7	1,117.2
2012-09-09 12:20	227.0	1,121.3
2012-09-09 12:25	213.7	1,124.0
2012-09-09 12:30	198.9	1,116.6
2012-09-09 12:35	187.5	1,123.4
2012-09-09 12:40	185.9	1,122.3
2012-09-09 12:45	200.2	1,122.4
2012-09-09 12:50	184.9	1,119.5
2012-09-09 12:55	174.9	1,119.8
2012-09-09 13:00	192.9	1,122.5
2012-09-09 13:05	185.7	1,121.3
2012-09-09 13:10	209.1	1,124.6
2012-09-09 13:15	209.6	1,117.3
2012-09-09 13:20	193.0	1,116.6
2012-09-09 13:25	203.3	1,119.0
2012-09-09 13:30	211.0	1,109.7
2012-09-09 13:35	202.1	1,106.3
2012-09-09 13:40	191.7	1,107.1
2012-09-09 13:45	191.4	1,109.4
2012-09-09 13:50	190.9	1,103.4
2012-09-09 13:55	187.7	1,109.1
2012-09-09 14:00	190.7	1,106.3
2012-09-09 14:05	187.1	1,105.7
2012-09-09 14:10	188.6	1,106.1
2012-09-09 14:15	193.4	1,101.9
2012-09-09 14:20	188.7	1,101.3
2012-09-09 14:25	200.9	1,102.6
2012-09-09 14:30	210.0	1,102.1
2012-09-09 14:35	215.1	1,099.3
2012-09-09 14:40	213.9	1,103.9
2012-09-09 14:45	215.1	1,094.9
2012-09-09 14:50	213.3	1,098.1
2012-09-09 14:55	210.7	1,098.8
2012-09-09 15:00	208.1	1,088.6
2012-09-09 15:05	210.2	1,098.5
2012-09-09 15:10	210.4	1,095.8
2012-09-09 15:15	205.7	1,089.9
2012-09-09 15:20	205.6	1,093.8
2012-09-09 15:25	196.0	1,090.6
2012-09-09 15:30	184.2	1,101.0
2012-09-09 15:35	193.2	1,099.8
2012-09-09 15:40	190.0	1,100.0
2012-09-09 15:45	186.0	1,105.0
2012-09-09 15:50	174.6	1,103.7
2012-09-09 15:55	168.8	1,112.0

	Wind	Load
2012-09-09 16:00	168.9	1,111.4
2012-09-09 16:05	165.7	1,118.4
2012-09-09 16:10	152.7	1,122.6
2012-09-09 16:15	153.9	1,130.7
2012-09-09 16:20	155.5	1,133.4
2012-09-09 16:25	152.9	1,133.8
2012-09-09 16:30	149.5	1,137.4
2012-09-09 16:35	153.4	1,141.0
2012-09-09 16:40	160.5	1,145.1
2012-09-09 16:45	158.9	1,146.5
2012-09-09 16:50	158.3	1,148.7
2012-09-09 16:55	160.1	1,151.3
2012-09-09 17:00	159.5	1,149.9
2012-09-09 17:05	159.0	1,145.2
2012-09-09 17:10	153.8	1,141.7
2012-09-09 17:15	156.4	1,146.0
2012-09-09 17:20	163.7	1,144.7
2012-09-09 17:25	156.9	1,141.9
2012-09-09 17:30	156.3	1,146.2
2012-09-09 17:35	158.0	1,139.2
2012-09-09 17:40	157.9	1,142.0
2012-09-09 17:45	160.2	1,141.8
2012-09-09 17:50	159.3	1,137.8
2012-09-09 17:55	153.3	1,129.9
2012-09-09 18:00	159.5	1,126.0
2012-09-09 18:05	148.8	1,119.1
2012-09-09 18:10	160.8	1,118.0
2012-09-09 18:15	158.4	1,114.6
2012-09-09 18:20	149.4	1,114.8
2012-09-09 18:25	157.6	1,112.4
2012-09-09 18:30	146.5	1,113.9
2012-09-09 18:35	154.7	1,112.7
2012-09-09 18:40	153.9	1,102.9
2012-09-09 18:45	151.0	1,108.3
2012-09-09 18:50	149.1	1,106.3
2012-09-09 18:55	153.5	1,107.0
2012-09-09 19:00	153.4	1,107.5
2012-09-09 19:05	142.5	1,110.4
2012-09-09 19:10	132.1	1,111.9
2012-09-09 19:15	133.1	1,115.3
2012-09-09 19:20	124.5	1,117.2
2012-09-09 19:25	117.8	1,123.1
2012-09-09 19:30	122.8	1,131.4
2012-09-09 19:35	124.0	1,133.9
2012-09-09 19:40	124.0	1,139.2
2012-09-09 19:45	127.9	1,144.0
2012-09-09 19:50	118.8	1,148.3
2012-09-09 19:55	114.4	1,146.8

	Wind	Load
2012-09-09 20:00	114.4	1,151.1
2012-09-09 20:05	111.8	1,148.4
2012-09-09 20:10	111.2	1,147.6
2012-09-09 20:15	102.5	1,153.5
2012-09-09 20:20	98.1	1,149.3
2012-09-09 20:25	89.8	1,146.6
2012-09-09 20:30	97.4	1,142.6
2012-09-09 20:35	98.1	1,140.5
2012-09-09 20:40	99.0	1,136.7
2012-09-09 20:45	93.2	1,124.8
2012-09-09 20:50	98.0	1,125.0
2012-09-09 20:55	84.7	1,119.4
2012-09-09 21:00	90.2	1,116.2
2012-09-09 21:05	85.7	1,108.0
2012-09-09 21:10	81.8	1,102.8
2012-09-09 21:15	78.6	1,092.1
2012-09-09 21:20	78.3	1,084.9
2012-09-09 21:25	83.4	1,078.9
2012-09-09 21:30	78.7	1,066.7
2012-09-09 21:35	76.9	1,062.8
2012-09-09 21:40	70.0	1,051.9
2012-09-09 21:45	67.9	1,050.0
2012-09-09 21:50	74.1	1,042.4
2012-09-09 21:55	64.0	1,033.1
2012-09-09 22:00	63.2	1,025.8
2012-09-09 22:05	57.4	1,019.2
2012-09-09 22:10	57.7	1,013.5
2012-09-09 22:15	61.8	1,003.5
2012-09-09 22:20	61.8	993.7
2012-09-09 22:25	70.9	984.2
2012-09-09 22:30	62.9	976.4
2012-09-09 22:35	61.6	966.8
2012-09-09 22:40	57.6	961.5
2012-09-09 22:45	54.9	953.0
2012-09-09 22:50	47.1	947.2
2012-09-09 22:55	52.7	937.4
2012-09-09 23:00	60.1	925.2
2012-09-09 23:05	58.2	916.3
2012-09-09 23:10	61.1	911.4
2012-09-09 23:15	56.1	903.9
2012-09-09 23:20	53.5	894.3
2012-09-09 23:25	52.0	888.8
2012-09-09 23:30	45.6	884.4
2012-09-09 23:35	46.5	877.2
2012-09-09 23:40	43.9	867.8
2012-09-09 23:45	40.5	857.4
2012-09-09 23:50	37.1	853.7
2012-09-09 23:55	38.8	844.0

	Wind	Load
2012-09-10 00:00	41.1	843.6
2012-09-10 00:05	36.4	835.9
2012-09-10 00:10	38.1	831.7
2012-09-10 00:15	34.2	825.5
2012-09-10 00:20	36.2	822.8
2012-09-10 00:25	34.7	817.8
2012-09-10 00:30	42.9	809.4
2012-09-10 00:35	49.1	807.8
2012-09-10 00:40	40.6	802.5
2012-09-10 00:45	40.4	800.8
2012-09-10 00:50	38.4	797.7
2012-09-10 00:55	38.8	796.0
2012-09-10 01:00	38.5	793.1
2012-09-10 01:05	46.7	789.0
2012-09-10 01:10	46.6	788.5
2012-09-10 01:15	46.2	785.4
2012-09-10 01:20	51.1	781.9
2012-09-10 01:25	54.3	780.9
2012-09-10 01:30	53.7	775.5
2012-09-10 01:35	66.3	776.7
2012-09-10 01:40	73.1	773.2
2012-09-10 01:45	73.1	776.5
2012-09-10 01:50	78.7	774.6
2012-09-10 01:55	76.5	768.4
2012-09-10 02:00	84.7	769.0
2012-09-10 02:05	81.9	769.3
2012-09-10 02:10	87.3	767.2
2012-09-10 02:15	96.5	762.1
2012-09-10 02:20	99.1	761.2
2012-09-10 02:25	101.3	758.6
2012-09-10 02:30	100.1	758.7
2012-09-10 02:35	90.7	755.1
2012-09-10 02:40	99.5	756.8
2012-09-10 02:45	105.8	754.1
2012-09-10 02:50	109.2	755.1
2012-09-10 02:55	98.3	755.3
2012-09-10 03:00	102.2	754.4
2012-09-10 03:05	110.2	750.7
2012-09-10 03:10	122.6	751.7
2012-09-10 03:15	117.2	748.6
2012-09-10 03:20	131.3	745.0
2012-09-10 03:25	132.8	743.0
2012-09-10 03:30	140.8	748.0
2012-09-10 03:35	157.5	742.8
2012-09-10 03:40	156.8	747.7
2012-09-10 03:45	152.2	747.5
2012-09-10 03:50	140.5	745.5
2012-09-10 03:55	131.5	752.3

	Wind	Load
2012-09-10 04:00	127.7	749.1
2012-09-10 04:05	124.8	747.0
2012-09-10 04:10	122.9	749.5
2012-09-10 04:15	128.9	750.2
2012-09-10 04:20	114.8	749.8
2012-09-10 04:25	107.5	748.7
2012-09-10 04:30	100.4	747.5
2012-09-10 04:35	85.6	750.3
2012-09-10 04:40	85.9	751.8
2012-09-10 04:45	87.1	750.3
2012-09-10 04:50	80.7	753.9
2012-09-10 04:55	74.4	755.2
2012-09-10 05:00	73.3	763.1
2012-09-10 05:05	85.4	767.8
2012-09-10 05:10	84.4	765.2
2012-09-10 05:15	89.6	771.8
2012-09-10 05:20	93.2	780.7
2012-09-10 05:25	102.4	787.7
2012-09-10 05:30	102.4	793.5
2012-09-10 05:35	82.7	800.3
2012-09-10 05:40	90.3	799.0
2012-09-10 05:45	87.1	807.0
2012-09-10 05:50	100.1	810.5
2012-09-10 05:55	106.6	828.1
2012-09-10 06:00	106.8	842.8
2012-09-10 06:05	114.6	858.6
2012-09-10 06:10	107.3	874.5
2012-09-10 06:15	111.5	884.2
2012-09-10 06:20	128.2	899.5
2012-09-10 06:25	120.0	907.1
2012-09-10 06:30	117.3	919.5
2012-09-10 06:35	112.1	930.6
2012-09-10 06:40	126.5	943.8
2012-09-10 06:45	133.9	955.8
2012-09-10 06:50	124.3	969.5
2012-09-10 06:55	135.5	985.7
2012-09-10 07:00	158.0	1,001.3
2012-09-10 07:05	171.5	1,011.2
2012-09-10 07:10	172.9	1,024.3
2012-09-10 07:15	170.3	1,035.6
2012-09-10 07:20	179.8	1,047.9
2012-09-10 07:25	177.6	1,053.5
2012-09-10 07:30	187.8	1,064.9
2012-09-10 07:35	190.3	1,069.8
2012-09-10 07:40	188.7	1,070.0
2012-09-10 07:45	192.9	1,068.8
2012-09-10 07:50	185.6	1,078.4
2012-09-10 07:55	189.3	1,081.3

	Wind	Load
2012-09-10 08:00	196.8	1,083.0
2012-09-10 08:05	195.7	1,088.6
2012-09-10 08:10	198.7	1,091.4
2012-09-10 08:15	198.9	1,093.3
2012-09-10 08:20	164.2	1,093.9
2012-09-10 08:25	155.1	1,097.9
2012-09-10 08:30	141.0	1,099.1
2012-09-10 08:35	138.4	1,100.2
2012-09-10 08:40	150.6	1,095.4
2012-09-10 08:45	144.8	1,103.1
2012-09-10 08:50	132.6	1,103.3
2012-09-10 08:55	113.2	1,107.1
2012-09-10 09:00	107.5	1,108.1
2012-09-10 09:05	102.3	1,118.4
2012-09-10 09:10	90.9	1,116.2
2012-09-10 09:15	82.8	1,116.7
2012-09-10 09:20	82.4	1,121.3
2012-09-10 09:25	81.1	1,126.6
2012-09-10 09:30	80.8	1,126.1
2012-09-10 09:35	91.9	1,125.1
2012-09-10 09:40	87.0	1,129.6
2012-09-10 09:45	84.9	1,126.4
2012-09-10 09:50	78.8	1,130.1
2012-09-10 09:55	84.9	1,130.2
2012-09-10 10:00	84.9	1,133.2
2012-09-10 10:05	84.3	1,135.2
2012-09-10 10:10	79.5	1,139.5
2012-09-10 10:15	78.7	1,143.4
2012-09-10 10:20	76.8	1,143.8
2012-09-10 10:25	72.9	1,147.4
2012-09-10 10:30	70.0	1,153.0
2012-09-10 10:35	74.5	1,154.8
2012-09-10 10:40	75.7	1,156.4
2012-09-10 10:45	83.1	1,155.0
2012-09-10 10:50	88.3	1,160.6
2012-09-10 10:55	88.2	1,157.0
2012-09-10 11:00	85.2	1,159.1
2012-09-10 11:05	79.7	1,161.2
2012-09-10 11:10	86.2	1,154.4
2012-09-10 11:15	87.8	1,154.3
2012-09-10 11:20	87.8	1,167.6
2012-09-10 11:25	83.7	1,167.6
2012-09-10 11:30	76.7	1,164.6
2012-09-10 11:35	80.7	1,163.2
2012-09-10 11:40	81.8	1,165.4
2012-09-10 11:45	88.8	1,172.0
2012-09-10 11:50	76.4	1,170.2
2012-09-10 11:55	76.5	1,167.9

	Wind	Load
2012-09-10 12:00	70.1	1,167.3
2012-09-10 12:05	69.8	1,162.1
2012-09-10 12:10	78.2	1,162.5
2012-09-10 12:15	79.4	1,160.4
2012-09-10 12:20	90.1	1,156.9
2012-09-10 12:25	86.8	1,154.7
2012-09-10 12:30	95.8	1,151.3
2012-09-10 12:35	109.9	1,156.0
2012-09-10 12:40	97.5	1,159.7
2012-09-10 12:45	101.4	1,154.6
2012-09-10 12:50	102.7	1,152.3
2012-09-10 12:55	110.6	1,148.0
2012-09-10 13:00	96.2	1,150.2
2012-09-10 13:05	98.4	1,147.7
2012-09-10 13:10	104.4	1,146.6
2012-09-10 13:15	105.2	1,151.9
2012-09-10 13:20	99.0	1,152.5
2012-09-10 13:25	97.3	1,145.2
2012-09-10 13:30	92.7	1,149.4
2012-09-10 13:35	100.6	1,146.4
2012-09-10 13:40	101.7	1,148.0
2012-09-10 13:45	108.6	1,148.4
2012-09-10 13:50	102.1	1,140.7
2012-09-10 13:55	115.6	1,141.9
2012-09-10 14:00	108.7	1,134.9
2012-09-10 14:05	116.8	1,132.0
2012-09-10 14:10	120.8	1,135.7
2012-09-10 14:15	129.0	1,133.1
2012-09-10 14:20	126.6	1,132.8
2012-09-10 14:25	123.3	1,133.6
2012-09-10 14:30	132.8	1,130.7
2012-09-10 14:35	129.1	1,124.4
2012-09-10 14:40	124.5	1,129.2
2012-09-10 14:45	140.2	1,130.1
2012-09-10 14:50	137.2	1,121.7
2012-09-10 14:55	142.7	1,128.0
2012-09-10 15:00	145.4	1,123.8
2012-09-10 15:05	150.9	1,127.5
2012-09-10 15:10	137.4	1,135.8
2012-09-10 15:15	128.4	1,132.6
2012-09-10 15:20	128.0	1,131.6
2012-09-10 15:25	138.1	1,140.8
2012-09-10 15:30	126.4	1,142.9
2012-09-10 15:35	111.7	1,138.1
2012-09-10 15:40	115.4	1,150.4
2012-09-10 15:45	122.5	1,152.8
2012-09-10 15:50	106.0	1,154.0
2012-09-10 15:55	110.7	1,153.1

	Wind	Load
2012-09-10 16:00	109.0	1,160.0
2012-09-10 16:05	96.4	1,161.8
2012-09-10 16:10	105.3	1,167.2
2012-09-10 16:15	91.9	1,173.5
2012-09-10 16:20	95.7	1,176.7
2012-09-10 16:25	103.2	1,184.4
2012-09-10 16:30	103.9	1,187.3
2012-09-10 16:35	107.3	1,182.5
2012-09-10 16:40	94.8	1,187.2
2012-09-10 16:45	110.1	1,191.7
2012-09-10 16:50	112.2	1,195.6
2012-09-10 16:55	132.3	1,195.4
2012-09-10 17:00	143.7	1,192.4
2012-09-10 17:05	108.7	1,182.6
2012-09-10 17:10	114.5	1,191.8
2012-09-10 17:15	142.8	1,192.0
2012-09-10 17:20	134.7	1,184.2
2012-09-10 17:25	120.6	1,187.1
2012-09-10 17:30	121.2	1,183.2
2012-09-10 17:35	117.8	1,178.8
2012-09-10 17:40	146.3	1,182.7
2012-09-10 17:45	134.0	1,176.2
2012-09-10 17:50	129.3	1,176.7
2012-09-10 17:55	140.9	1,166.3
2012-09-10 18:00	145.3	1,158.5
2012-09-10 18:05	135.5	1,147.4
2012-09-10 18:10	121.8	1,144.0
2012-09-10 18:15	114.2	1,139.7
2012-09-10 18:20	107.7	1,141.7
2012-09-10 18:25	93.7	1,144.6
2012-09-10 18:30	94.5	1,143.7
2012-09-10 18:35	108.4	1,136.3
2012-09-10 18:40	109.6	1,135.8
2012-09-10 18:45	125.3	1,135.6
2012-09-10 18:50	119.3	1,123.3
2012-09-10 18:55	131.1	1,125.3
2012-09-10 19:00	135.3	1,125.3
2012-09-10 19:05	152.8	1,123.7
2012-09-10 19:10	157.5	1,121.0
2012-09-10 19:15	157.7	1,119.1
2012-09-10 19:20	155.1	1,120.7
2012-09-10 19:25	160.9	1,120.8
2012-09-10 19:30	135.3	1,121.2
2012-09-10 19:35	130.5	1,122.2
2012-09-10 19:40	129.6	1,129.6
2012-09-10 19:45	149.1	1,134.7
2012-09-10 19:50	161.3	1,137.0
2012-09-10 19:55	165.4	1,137.7

	Wind	Load
2012-09-10 20:00	135.4	1,136.6
2012-09-10 20:05	121.0	1,139.8
2012-09-10 20:10	119.5	1,140.7
2012-09-10 20:15	136.9	1,144.2
2012-09-10 20:20	149.1	1,141.7
2012-09-10 20:25	165.2	1,138.5
2012-09-10 20:30	171.7	1,141.3
2012-09-10 20:35	171.2	1,133.8
2012-09-10 20:40	180.8	1,136.0
2012-09-10 20:45	175.5	1,128.8
2012-09-10 20:50	161.8	1,126.8
2012-09-10 20:55	174.3	1,120.5
2012-09-10 21:00	151.8	1,107.0
2012-09-10 21:05	152.4	1,100.6
2012-09-10 21:10	153.5	1,091.9
2012-09-10 21:15	154.5	1,089.3
2012-09-10 21:20	157.0	1,077.5
2012-09-10 21:25	161.6	1,072.3
2012-09-10 21:30	144.7	1,070.2
2012-09-10 21:35	153.8	1,059.7
2012-09-10 21:40	164.6	1,048.4
2012-09-10 21:45	172.3	1,044.5
2012-09-10 21:50	183.7	1,035.4
2012-09-10 21:55	201.0	1,029.7
2012-09-10 22:00	199.6	1,023.9
2012-09-10 22:05	198.4	1,010.6
2012-09-10 22:10	183.6	1,000.5
2012-09-10 22:15	193.3	986.6
2012-09-10 22:20	226.4	983.6
2012-09-10 22:25	221.3	969.8
2012-09-10 22:30	220.5	965.3
2012-09-10 22:35	219.2	959.7
2012-09-10 22:40	220.3	949.2
2012-09-10 22:45	212.0	943.3
2012-09-10 22:50	218.4	934.3
2012-09-10 22:55	223.2	927.9
2012-09-10 23:00	213.0	918.0
2012-09-10 23:05	223.8	922.1
2012-09-10 23:10	218.1	918.4
2012-09-10 23:15	228.3	911.8
2012-09-10 23:20	223.4	901.2
2012-09-10 23:25	227.3	890.7
2012-09-10 23:30	233.7	886.4
2012-09-10 23:35	227.2	877.5
2012-09-10 23:40	229.0	865.6
2012-09-10 23:45	225.6	858.7
2012-09-10 23:50	224.4	853.1
2012-09-10 23:55	211.3	845.4

	Wind	Load
2012-09-11 00:00	227.6	837.5
2012-09-11 00:05	240.5	830.6
2012-09-11 00:10	243.5	825.7
2012-09-11 00:15	242.9	816.6
2012-09-11 00:20	244.5	809.2
2012-09-11 00:25	237.1	809.6
2012-09-11 00:30	243.0	804.2
2012-09-11 00:35	242.5	799.5
2012-09-11 00:40	231.9	795.9
2012-09-11 00:45	228.6	793.5
2012-09-11 00:50	227.2	789.1
2012-09-11 00:55	233.5	784.3
2012-09-11 01:00	235.6	786.1
2012-09-11 01:05	219.2	777.0
2012-09-11 01:10	221.9	773.1
2012-09-11 01:15	233.3	771.9
2012-09-11 01:20	233.2	767.5
2012-09-11 01:25	239.8	769.2
2012-09-11 01:30	240.8	767.6
2012-09-11 01:35	240.8	764.8
2012-09-11 01:40	238.7	761.7
2012-09-11 01:45	232.0	764.3
2012-09-11 01:50	234.4	764.1
2012-09-11 01:55	228.5	762.4
2012-09-11 02:00	230.6	753.6
2012-09-11 02:05	234.4	755.4
2012-09-11 02:10	233.9	749.3
2012-09-11 02:15	243.7	753.3
2012-09-11 02:20	248.8	750.0
2012-09-11 02:25	247.2	745.6
2012-09-11 02:30	241.2	742.9
2012-09-11 02:35	234.5	742.5
2012-09-11 02:40	243.0	742.1
2012-09-11 02:45	240.9	740.3
2012-09-11 02:50	246.2	740.2
2012-09-11 02:55	242.4	736.8
2012-09-11 03:00	238.7	737.6
2012-09-11 03:05	252.1	742.9
2012-09-11 03:10	257.2	739.4
2012-09-11 03:15	254.9	735.0
2012-09-11 03:20	257.4	737.7
2012-09-11 03:25	259.3	744.0
2012-09-11 03:30	255.8	736.2
2012-09-11 03:35	261.4	733.8
2012-09-11 03:40	266.0	736.1
2012-09-11 03:45	269.7	735.6
2012-09-11 03:50	260.8	731.4
2012-09-11 03:55	265.5	731.6

	Wind	Load
2012-09-11 04:00	264.8	735.9
2012-09-11 04:05	267.9	733.9
2012-09-11 04:10	266.4	732.7
2012-09-11 04:15	273.3	732.1
2012-09-11 04:20	262.7	735.3
2012-09-11 04:25	268.2	734.2
2012-09-11 04:30	266.1	736.6
2012-09-11 04:35	269.3	735.1
2012-09-11 04:40	268.5	736.9
2012-09-11 04:45	265.7	738.1
2012-09-11 04:50	260.1	738.9
2012-09-11 04:55	263.0	737.8
2012-09-11 05:00	262.1	748.7
2012-09-11 05:05	256.9	747.8
2012-09-11 05:10	257.9	750.0
2012-09-11 05:15	261.1	751.8
2012-09-11 05:20	262.1	756.5
2012-09-11 05:25	263.8	757.9
2012-09-11 05:30	267.1	762.7
2012-09-11 05:35	267.9	769.6
2012-09-11 05:40	264.3	780.2
2012-09-11 05:45	255.5	790.3
2012-09-11 05:50	251.5	790.4
2012-09-11 05:55	248.6	804.5
2012-09-11 06:00	248.4	812.3
2012-09-11 06:05	243.5	823.8
2012-09-11 06:10	238.1	846.0
2012-09-11 06:15	240.3	849.6
2012-09-11 06:20	237.9	863.9
2012-09-11 06:25	238.5	872.8
2012-09-11 06:30	245.2	881.7
2012-09-11 06:35	241.8	894.5
2012-09-11 06:40	243.2	906.3
2012-09-11 06:45	254.5	913.0
2012-09-11 06:50	254.7	921.8
2012-09-11 06:55	240.1	932.8
2012-09-11 07:00	243.2	946.5
2012-09-11 07:05	247.2	954.7
2012-09-11 07:10	245.1	971.8
2012-09-11 07:15	255.5	983.8
2012-09-11 07:20	248.9	994.9
2012-09-11 07:25	247.7	1,003.9
2012-09-11 07:30	253.6	1,006.1
2012-09-11 07:35	247.8	1,013.6
2012-09-11 07:40	234.9	1,020.7
2012-09-11 07:45	239.1	1,016.0
2012-09-11 07:50	230.5	1,026.9
2012-09-11 07:55	224.2	1,024.1

	Wind	Load
2012-09-11 08:00	236.2	1,035.1
2012-09-11 08:05	251.8	1,042.9
2012-09-11 08:10	252.5	1,044.1
2012-09-11 08:15	251.3	1,048.3
2012-09-11 08:20	251.7	1,049.9
2012-09-11 08:25	250.5	1,046.6
2012-09-11 08:30	242.7	1,044.9
2012-09-11 08:35	231.3	1,048.1
2012-09-11 08:40	224.5	1,046.3
2012-09-11 08:45	226.4	1,047.6
2012-09-11 08:50	230.6	1,050.7
2012-09-11 08:55	221.5	1,056.4
2012-09-11 09:00	226.8	1,055.1
2012-09-11 09:05	220.2	1,054.1
2012-09-11 09:10	224.9	1,061.1
2012-09-11 09:15	230.2	1,059.1
2012-09-11 09:20	227.2	1,068.7
2012-09-11 09:25	222.7	1,073.6
2012-09-11 09:30	215.9	1,075.7
2012-09-11 09:35	208.6	1,077.8
2012-09-11 09:40	206.5	1,072.3
2012-09-11 09:45	200.3	1,078.5
2012-09-11 09:50	206.5	1,079.3
2012-09-11 09:55	212.5	1,079.4
2012-09-11 10:00	209.3	1,077.8
2012-09-11 10:05	204.0	1,074.0
2012-09-11 10:10	190.7	1,077.1
2012-09-11 10:15	191.5	1,072.7
2012-09-11 10:20	195.9	1,077.6
2012-09-11 10:25	182.8	1,079.7
2012-09-11 10:30	179.0	1,075.9
2012-09-11 10:35	174.2	1,079.5
2012-09-11 10:40	177.1	1,079.3
2012-09-11 10:45	172.4	1,077.8
2012-09-11 10:50	164.2	1,082.5
2012-09-11 10:55	162.4	1,086.2
2012-09-11 11:00	164.7	1,083.2
2012-09-11 11:05	161.3	1,085.0
2012-09-11 11:10	162.1	1,088.1
2012-09-11 11:15	176.0	1,085.4
2012-09-11 11:20	173.4	1,090.7
2012-09-11 11:25	167.2	1,094.9
2012-09-11 11:30	177.8	1,095.5
2012-09-11 11:35	179.4	1,094.2
2012-09-11 11:40	172.1	1,097.7
2012-09-11 11:45	176.8	1,098.5
2012-09-11 11:50	177.0	1,096.3
2012-09-11 11:55	180.2	1,096.9

	Wind	Load
2012-09-11 12:00	176.2	1,099.7
2012-09-11 12:05	183.2	1,096.1
2012-09-11 12:10	173.8	1,093.1
2012-09-11 12:15	174.6	1,093.4
2012-09-11 12:20	159.9	1,093.7
2012-09-11 12:25	176.5	1,093.9
2012-09-11 12:30	171.3	1,088.8
2012-09-11 12:35	183.5	1,097.4
2012-09-11 12:40	169.6	1,095.3
2012-09-11 12:45	165.2	1,095.9
2012-09-11 12:50	165.6	1,093.4
2012-09-11 12:55	160.4	1,091.2
2012-09-11 13:00	159.1	1,096.7
2012-09-11 13:05	155.2	1,096.3
2012-09-11 13:10	145.3	1,097.8
2012-09-11 13:15	149.1	1,091.5
2012-09-11 13:20	146.2	1,091.2
2012-09-11 13:25	146.6	1,093.6
2012-09-11 13:30	156.9	1,091.3
2012-09-11 13:35	152.9	1,097.2
2012-09-11 13:40	142.1	1,091.3
2012-09-11 13:45	138.3	1,088.9
2012-09-11 13:50	146.0	1,092.3
2012-09-11 13:55	150.2	1,084.6
2012-09-11 14:00	157.6	1,085.7
2012-09-11 14:05	160.6	1,084.2
2012-09-11 14:10	151.4	1,084.6
2012-09-11 14:15	143.3	1,086.4
2012-09-11 14:20	142.7	1,081.1
2012-09-11 14:25	138.1	1,083.1
2012-09-11 14:30	150.5	1,079.6
2012-09-11 14:35	138.5	1,082.0
2012-09-11 14:40	132.9	1,073.5
2012-09-11 14:45	119.4	1,071.3
2012-09-11 14:50	118.9	1,074.3
2012-09-11 14:55	106.3	1,074.0
2012-09-11 15:00	119.0	1,078.3
2012-09-11 15:05	113.6	1,081.7
2012-09-11 15:10	116.3	1,080.1
2012-09-11 15:15	120.3	1,083.5
2012-09-11 15:20	125.1	1,093.5
2012-09-11 15:25	122.5	1,089.2
2012-09-11 15:30	117.1	1,095.0
2012-09-11 15:35	127.6	1,091.0
2012-09-11 15:40	123.4	1,092.6
2012-09-11 15:45	122.0	1,098.8
2012-09-11 15:50	121.1	1,102.0
2012-09-11 15:55	130.8	1,102.5

	Wind	Load
2012-09-11 16:00	121.6	1,103.2
2012-09-11 16:05	128.7	1,102.7
2012-09-11 16:10	128.6	1,111.5
2012-09-11 16:15	129.3	1,115.2
2012-09-11 16:20	133.5	1,116.5
2012-09-11 16:25	124.7	1,121.2
2012-09-11 16:30	119.5	1,121.0
2012-09-11 16:35	122.0	1,122.7
2012-09-11 16:40	134.3	1,125.8
2012-09-11 16:45	126.4	1,131.7
2012-09-11 16:50	137.3	1,127.6
2012-09-11 16:55	133.4	1,130.3
2012-09-11 17:00	124.1	1,130.8
2012-09-11 17:05	125.9	1,130.8
2012-09-11 17:10	120.6	1,119.7
2012-09-11 17:15	115.8	1,128.6
2012-09-11 17:20	113.6	1,121.4
2012-09-11 17:25	120.4	1,128.0
2012-09-11 17:30	119.4	1,126.8
2012-09-11 17:35	108.9	1,120.8
2012-09-11 17:40	110.2	1,121.2
2012-09-11 17:45	102.2	1,115.6
2012-09-11 17:50	109.1	1,123.1
2012-09-11 17:55	102.0	1,112.1
2012-09-11 18:00	91.6	1,114.1
2012-09-11 18:05	87.0	1,096.1
2012-09-11 18:10	82.6	1,090.8
2012-09-11 18:15	77.8	1,082.0
2012-09-11 18:20	75.4	1,080.4
2012-09-11 18:25	74.9	1,084.2
2012-09-11 18:30	66.1	1,076.2
2012-09-11 18:35	61.3	1,078.0
2012-09-11 18:40	61.9	1,074.9
2012-09-11 18:45	59.9	1,071.2
2012-09-11 18:50	54.6	1,071.5
2012-09-11 18:55	54.3	1,068.0
2012-09-11 19:00	51.1	1,070.0
2012-09-11 19:05	47.8	1,069.2
2012-09-11 19:10	45.0	1,068.9
2012-09-11 19:15	43.9	1,072.9
2012-09-11 19:20	43.2	1,074.3
2012-09-11 19:25	52.5	1,076.6
2012-09-11 19:30	58.9	1,084.8
2012-09-11 19:35	62.5	1,090.4
2012-09-11 19:40	66.5	1,097.2
2012-09-11 19:45	69.9	1,109.1
2012-09-11 19:50	63.4	1,117.2
2012-09-11 19:55	64.5	1,128.1

	Wind	Load
2012-09-11 20:00	60.7	1,135.1
2012-09-11 20:05	57.9	1,139.7
2012-09-11 20:10	52.2	1,140.1
2012-09-11 20:15	47.4	1,145.9
2012-09-11 20:20	44.5	1,145.1
2012-09-11 20:25	37.7	1,140.4
2012-09-11 20:30	37.0	1,141.3
2012-09-11 20:35	37.0	1,141.7
2012-09-11 20:40	35.9	1,135.8
2012-09-11 20:45	35.7	1,131.6
2012-09-11 20:50	32.0	1,131.0
2012-09-11 20:55	32.0	1,124.3
2012-09-11 21:00	31.9	1,117.2
2012-09-11 21:05	31.9	1,111.9
2012-09-11 21:10	30.8	1,104.1
2012-09-11 21:15	31.1	1,098.5
2012-09-11 21:20	32.8	1,088.9
2012-09-11 21:25	31.5	1,085.6
2012-09-11 21:30	28.8	1,070.7
2012-09-11 21:35	28.2	1,063.6
2012-09-11 21:40	27.2	1,065.4
2012-09-11 21:45	27.8	1,052.5
2012-09-11 21:50	27.8	1,042.1
2012-09-11 21:55	27.8	1,034.2
2012-09-11 22:00	26.8	1,029.7
2012-09-11 22:05	29.9	1,012.7
2012-09-11 22:10	32.0	1,011.1
2012-09-11 22:15	33.1	998.0
2012-09-11 22:20	34.0	985.4
2012-09-11 22:25	35.9	980.5
2012-09-11 22:30	39.5	969.3
2012-09-11 22:35	43.3	963.4
2012-09-11 22:40	41.3	953.1
2012-09-11 22:45	42.9	943.4
2012-09-11 22:50	41.9	932.4
2012-09-11 22:55	45.6	922.7
2012-09-11 23:00	46.8	914.1
2012-09-11 23:05	46.2	917.7
2012-09-11 23:10	45.5	904.7
2012-09-11 23:15	43.8	902.4
2012-09-11 23:20	43.3	892.6
2012-09-11 23:25	43.0	883.1
2012-09-11 23:30	43.8	876.4
2012-09-11 23:35	43.3	874.4
2012-09-11 23:40	42.7	867.6
2012-09-11 23:45	45.6	858.6
2012-09-11 23:50	44.1	845.7
2012-09-11 23:55	42.1	842.7

	Wind	Load
2012-09-12 00:00	48.1	837.2
2012-09-12 00:05	46.8	828.7
2012-09-12 00:10	47.8	821.4
2012-09-12 00:15	51.7	814.7
2012-09-12 00:20	56.9	816.4
2012-09-12 00:25	57.0	810.9
2012-09-12 00:30	56.5	803.7
2012-09-12 00:35	59.6	797.9
2012-09-12 00:40	62.1	794.3
2012-09-12 00:45	59.7	787.2
2012-09-12 00:50	63.7	786.5
2012-09-12 00:55	62.5	781.3
2012-09-12 01:00	62.4	777.2
2012-09-12 01:05	61.4	774.2
2012-09-12 01:10	61.3	772.1
2012-09-12 01:15	64.0	776.3
2012-09-12 01:20	63.8	768.5
2012-09-12 01:25	61.7	768.9
2012-09-12 01:30	63.7	768.8
2012-09-12 01:35	64.4	762.2
2012-09-12 01:40	65.5	762.6
2012-09-12 01:45	61.7	759.3
2012-09-12 01:50	62.1	757.2
2012-09-12 01:55	61.7	758.1
2012-09-12 02:00	58.3	755.1
2012-09-12 02:05	56.9	754.2
2012-09-12 02:10	54.5	754.5
2012-09-12 02:15	57.6	751.4
2012-09-12 02:20	55.1	750.1
2012-09-12 02:25	52.3	741.6
2012-09-12 02:30	49.3	745.3
2012-09-12 02:35	48.3	747.0
2012-09-12 02:40	46.9	743.7
2012-09-12 02:45	46.7	744.5
2012-09-12 02:50	44.6	741.4
2012-09-12 02:55	41.3	741.0
2012-09-12 03:00	41.3	741.3
2012-09-12 03:05	38.3	745.0
2012-09-12 03:10	38.3	745.8
2012-09-12 03:15	38.3	748.0
2012-09-12 03:20	36.7	742.0
2012-09-12 03:25	28.1	739.7
2012-09-12 03:30	28.1	740.3
2012-09-12 03:35	28.1	742.4
2012-09-12 03:40	28.1	741.8
2012-09-12 03:45	26.7	739.5
2012-09-12 03:50	26.7	746.0
2012-09-12 03:55	26.5	744.9

	Wind	Load
2012-09-12 04:00	26.5	742.9
2012-09-12 04:05	22.0	734.0
2012-09-12 04:10	22.0	737.1
2012-09-12 04:15	22.1	735.2
2012-09-12 04:20	27.4	739.6
2012-09-12 04:25	27.4	743.5
2012-09-12 04:30	27.4	741.6
2012-09-12 04:35	27.4	742.6
2012-09-12 04:40	27.4	744.2
2012-09-12 04:45	27.9	739.7
2012-09-12 04:50	27.9	745.6
2012-09-12 04:55	27.9	746.9
2012-09-12 05:00	27.9	746.9
2012-09-12 05:05	27.7	752.7
2012-09-12 05:10	27.7	760.7
2012-09-12 05:15	24.6	766.0
2012-09-12 05:20	24.5	769.0
2012-09-12 05:25	24.5	776.9
2012-09-12 05:30	25.4	779.3
2012-09-12 05:35	25.4	785.5
2012-09-12 05:40	26.6	787.5
2012-09-12 05:45	26.6	798.3
2012-09-12 05:50	26.9	804.0
2012-09-12 05:55	26.9	815.6
2012-09-12 06:00	26.9	824.0
2012-09-12 06:05	29.4	847.8
2012-09-12 06:10	29.4	861.2
2012-09-12 06:15	26.1	878.9
2012-09-12 06:20	26.1	890.0
2012-09-12 06:25	26.8	899.2
2012-09-12 06:30	26.8	903.4
2012-09-12 06:35	26.8	911.9
2012-09-12 06:40	25.0	925.9
2012-09-12 06:45	25.0	936.0
2012-09-12 06:50	25.0	947.5
2012-09-12 06:55	25.0	957.3
2012-09-12 07:00	23.9	972.5
2012-09-12 07:05	23.9	985.1
2012-09-12 07:10	23.9	1,003.2
2012-09-12 07:15	21.3	1,016.1
2012-09-12 07:20	21.3	1,025.3
2012-09-12 07:25	21.3	1,029.9
2012-09-12 07:30	21.3	1,037.9
2012-09-12 07:35	21.3	1,044.5
2012-09-12 07:40	21.3	1,048.3
2012-09-12 07:45	21.3	1,046.7
2012-09-12 07:50	20.1	1,057.3
2012-09-12 07:55	20.1	1,058.8

	Wind	Load
2012-09-12 08:00	20.1	1,058.3
2012-09-12 08:05	20.6	1,070.6
2012-09-12 08:10	20.6	1,074.9
2012-09-12 08:15	20.6	1,080.0
2012-09-12 08:20	20.5	1,078.5
2012-09-12 08:25	20.5	1,081.0
2012-09-12 08:30	11.8	1,070.2
2012-09-12 08:35	10.8	1,075.9
2012-09-12 08:40	10.8	1,074.4
2012-09-12 08:45	10.8	1,079.6
2012-09-12 08:50	10.8	1,080.4
2012-09-12 08:55	10.8	1,079.4
2012-09-12 09:00	6.3	1,079.5
2012-09-12 09:05	6.3	1,082.7
2012-09-12 09:10	6.3	1,085.6
2012-09-12 09:15	5.6	1,088.2
2012-09-12 09:20	3.6	1,094.4
2012-09-12 09:25	3.6	1,099.3
2012-09-12 09:30	3.6	1,099.4
2012-09-12 09:35	3.6	1,097.1
2012-09-12 09:40	1.8	1,100.5
2012-09-12 09:45	1.8	1,102.9
2012-09-12 09:50	1.8	1,104.2
2012-09-12 09:55	2.2	1,108.1
2012-09-12 10:00	2.2	1,107.4
2012-09-12 10:05	2.2	1,104.1
2012-09-12 10:10	2.9	1,105.5
2012-09-12 10:15	2.9	1,107.9
2012-09-12 10:20	2.9	1,105.9
2012-09-12 10:25	2.9	1,110.4
2012-09-12 10:30	3.6	1,107.5
2012-09-12 10:35	3.6	1,107.5
2012-09-12 10:40	3.6	1,109.4
2012-09-12 10:45	2.9	1,108.5
2012-09-12 10:50	4.0	1,105.6
2012-09-12 10:55	4.0	1,102.9
2012-09-12 11:00	4.0	1,105.3
2012-09-12 11:05	4.0	1,105.4
2012-09-12 11:10	4.4	1,111.3
2012-09-12 11:15	4.4	1,110.1
2012-09-12 11:20	4.4	1,116.3
2012-09-12 11:25	6.6	1,115.5
2012-09-12 11:30	6.6	1,116.2
2012-09-12 11:35	6.6	1,117.2
2012-09-12 11:40	6.6	1,119.5
2012-09-12 11:45	7.5	1,120.1
2012-09-12 11:50	7.9	1,124.0
2012-09-12 11:55	7.9	1,125.4

	Wind	Load
2012-09-12 12:00	8.2	1,121.5
2012-09-12 12:05	9.5	1,124.6
2012-09-12 12:10	9.5	1,127.0
2012-09-12 12:15	9.7	1,122.6
2012-09-12 12:20	9.3	1,123.1
2012-09-12 12:25	11.2	1,118.9
2012-09-12 12:30	11.2	1,124.3
2012-09-12 12:35	9.4	1,125.7
2012-09-12 12:40	12.8	1,123.7
2012-09-12 12:45	10.2	1,121.9
2012-09-12 12:50	9.3	1,125.1
2012-09-12 12:55	9.2	1,121.6
2012-09-12 13:00	9.2	1,125.6
2012-09-12 13:05	9.2	1,123.5
2012-09-12 13:10	11.2	1,120.2
2012-09-12 13:15	10.9	1,113.8
2012-09-12 13:20	10.6	1,115.5
2012-09-12 13:25	12.4	1,115.5
2012-09-12 13:30	11.6	1,115.6
2012-09-12 13:35	11.6	1,121.9
2012-09-12 13:40	12.6	1,119.1
2012-09-12 13:45	12.1	1,116.1
2012-09-12 13:50	12.5	1,106.2
2012-09-12 13:55	12.2	1,102.4
2012-09-12 14:00	13.8	1,110.4
2012-09-12 14:05	14.8	1,104.8
2012-09-12 14:10	15.6	1,103.1
2012-09-12 14:15	15.9	1,100.6
2012-09-12 14:20	16.5	1,096.2
2012-09-12 14:25	16.5	1,090.8
2012-09-12 14:30	17.7	1,096.3
2012-09-12 14:35	19.3	1,091.7
2012-09-12 14:40	18.8	1,096.5
2012-09-12 14:45	18.8	1,096.6
2012-09-12 14:50	20.6	1,104.8
2012-09-12 14:55	23.2	1,101.5
2012-09-12 15:00	23.8	1,099.7
2012-09-12 15:05	23.6	1,098.3
2012-09-12 15:10	28.3	1,102.0
2012-09-12 15:15	30.7	1,104.6
2012-09-12 15:20	33.8	1,102.9
2012-09-12 15:25	34.5	1,110.1
2012-09-12 15:30	37.8	1,113.8
2012-09-12 15:35	39.5	1,116.5
2012-09-12 15:40	36.7	1,117.3
2012-09-12 15:45	36.3	1,124.1
2012-09-12 15:50	37.5	1,118.1
2012-09-12 15:55	40.9	1,123.8

	Wind	Load
2012-09-12 16:00	39.9	1,121.9
2012-09-12 16:05	43.6	1,123.6
2012-09-12 16:10	45.3	1,124.6
2012-09-12 16:15	45.5	1,132.6
2012-09-12 16:20	49.6	1,141.9
2012-09-12 16:25	47.5	1,141.6
2012-09-12 16:30	49.8	1,135.3
2012-09-12 16:35	52.2	1,143.1
2012-09-12 16:40	55.1	1,140.7
2012-09-12 16:45	52.8	1,145.6
2012-09-12 16:50	50.2	1,146.5
2012-09-12 16:55	49.0	1,147.6
2012-09-12 17:00	49.4	1,147.7
2012-09-12 17:05	47.1	1,141.8
2012-09-12 17:10	46.6	1,147.3
2012-09-12 17:15	41.2	1,139.7
2012-09-12 17:20	42.0	1,147.1
2012-09-12 17:25	40.2	1,147.2
2012-09-12 17:30	39.7	1,139.3
2012-09-12 17:35	41.0	1,136.3
2012-09-12 17:40	40.5	1,133.5
2012-09-12 17:45	40.7	1,131.1
2012-09-12 17:50	42.0	1,130.0
2012-09-12 17:55	41.9	1,124.5
2012-09-12 18:00	41.4	1,118.4
2012-09-12 18:05	41.0	1,108.7
2012-09-12 18:10	42.3	1,102.6
2012-09-12 18:15	45.3	1,101.3
2012-09-12 18:20	44.1	1,094.4
2012-09-12 18:25	41.5	1,097.9
2012-09-12 18:30	40.9	1,088.4
2012-09-12 18:35	41.0	1,087.5
2012-09-12 18:40	41.3	1,085.0
2012-09-12 18:45	44.5	1,087.8
2012-09-12 18:50	44.8	1,080.0
2012-09-12 18:55	46.1	1,082.1
2012-09-12 19:00	49.2	1,078.1
2012-09-12 19:05	51.5	1,078.9
2012-09-12 19:10	51.7	1,080.4
2012-09-12 19:15	52.6	1,084.4
2012-09-12 19:20	49.9	1,088.3
2012-09-12 19:25	52.8	1,087.8
2012-09-12 19:30	53.6	1,095.6
2012-09-12 19:35	54.5	1,103.1
2012-09-12 19:40	56.1	1,111.4
2012-09-12 19:45	55.4	1,119.8
2012-09-12 19:50	53.7	1,128.2
2012-09-12 19:55	49.3	1,135.6

	Wind	Load
2012-09-12 20:00	45.6	1,137.1
2012-09-12 20:05	45.4	1,142.1
2012-09-12 20:10	45.1	1,145.7
2012-09-12 20:15	44.9	1,146.8
2012-09-12 20:20	49.2	1,144.3
2012-09-12 20:25	48.2	1,142.8
2012-09-12 20:30	48.9	1,138.5
2012-09-12 20:35	47.7	1,134.9
2012-09-12 20:40	48.8	1,132.6
2012-09-12 20:45	49.6	1,128.9
2012-09-12 20:50	51.8	1,126.5
2012-09-12 20:55	52.6	1,119.4
2012-09-12 21:00	55.8	1,115.3
2012-09-12 21:05	55.3	1,105.2
2012-09-12 21:10	64.0	1,094.4
2012-09-12 21:15	70.2	1,089.3
2012-09-12 21:20	72.1	1,078.2
2012-09-12 21:25	74.2	1,075.3
2012-09-12 21:30	74.4	1,066.6
2012-09-12 21:35	77.9	1,061.9
2012-09-12 21:40	78.2	1,054.3
2012-09-12 21:45	81.0	1,041.4
2012-09-12 21:50	78.0	1,032.8
2012-09-12 21:55	78.7	1,027.8
2012-09-12 22:00	78.9	1,017.0
2012-09-12 22:05	78.3	1,009.3
2012-09-12 22:10	80.1	1,002.2
2012-09-12 22:15	77.8	994.8
2012-09-12 22:20	77.9	983.5
2012-09-12 22:25	76.5	976.2
2012-09-12 22:30	84.3	968.9
2012-09-12 22:35	87.5	958.6
2012-09-12 22:40	92.7	947.0
2012-09-12 22:45	92.3	939.4
2012-09-12 22:50	89.3	931.2
2012-09-12 22:55	87.6	926.8
2012-09-12 23:00	86.8	913.5
2012-09-12 23:05	91.6	915.8
2012-09-12 23:10	93.7	908.3
2012-09-12 23:15	92.3	901.3
2012-09-12 23:20	87.0	896.3
2012-09-12 23:25	89.6	887.9
2012-09-12 23:30	87.2	873.6
2012-09-12 23:35	84.7	865.3
2012-09-12 23:40	83.5	852.8
2012-09-12 23:45	77.1	844.8
2012-09-12 23:50	76.6	837.2
2012-09-12 23:55	76.5	831.6

	Wind	Load
2012-09-13 00:00	78.7	823.7
2012-09-13 00:05	79.5	818.1
2012-09-13 00:10	84.5	812.3
2012-09-13 00:15	82.3	807.3
2012-09-13 00:20	82.0	797.9
2012-09-13 00:25	81.4	793.0
2012-09-13 00:30	80.6	790.7
2012-09-13 00:35	79.7	781.5
2012-09-13 00:40	81.2	779.2
2012-09-13 00:45	81.3	780.4
2012-09-13 00:50	80.8	773.9
2012-09-13 00:55	76.3	772.5
2012-09-13 01:00	76.4	770.1
2012-09-13 01:05	73.2	763.0
2012-09-13 01:10	75.1	765.7
2012-09-13 01:15	74.4	759.3
2012-09-13 01:20	73.5	754.3
2012-09-13 01:25	71.6	754.9
2012-09-13 01:30	70.6	749.2
2012-09-13 01:35	70.6	750.7
2012-09-13 01:40	71.8	748.9
2012-09-13 01:45	73.2	748.4
2012-09-13 01:50	73.7	747.9
2012-09-13 01:55	73.8	745.3
2012-09-13 02:00	74.6	748.5
2012-09-13 02:05	74.0	746.7
2012-09-13 02:10	76.1	746.8
2012-09-13 02:15	78.2	742.4
2012-09-13 02:20	79.2	742.5
2012-09-13 02:25	81.6	740.3
2012-09-13 02:30	81.8	739.7
2012-09-13 02:35	80.6	737.3
2012-09-13 02:40	83.1	735.5
2012-09-13 02:45	84.2	734.9
2012-09-13 02:50	81.3	735.4
2012-09-13 02:55	83.4	736.4
2012-09-13 03:00	82.0	732.9
2012-09-13 03:05	80.6	735.7
2012-09-13 03:10	78.9	733.5
2012-09-13 03:15	78.7	734.4
2012-09-13 03:20	83.4	732.0
2012-09-13 03:25	84.6	731.7
2012-09-13 03:30	85.2	731.6
2012-09-13 03:35	88.3	735.0
2012-09-13 03:40	85.5	732.5
2012-09-13 03:45	80.4	735.2
2012-09-13 03:50	80.9	733.4
2012-09-13 03:55	84.0	732.7

	Wind	Load
2012-09-13 04:00	84.9	735.9
2012-09-13 04:05	83.5	736.8
2012-09-13 04:10	86.3	734.6
2012-09-13 04:15	86.5	741.0
2012-09-13 04:20	81.9	738.1
2012-09-13 04:25	83.3	741.7
2012-09-13 04:30	84.1	743.3
2012-09-13 04:35	84.1	740.3
2012-09-13 04:40	86.6	743.1
2012-09-13 04:45	86.2	745.3
2012-09-13 04:50	87.9	745.5
2012-09-13 04:55	86.1	750.7
2012-09-13 05:00	86.6	751.2
2012-09-13 05:05	87.5	749.4
2012-09-13 05:10	87.9	758.6
2012-09-13 05:15	89.8	762.7
2012-09-13 05:20	92.6	764.4
2012-09-13 05:25	89.9	767.7
2012-09-13 05:30	88.1	772.5
2012-09-13 05:35	90.7	779.4
2012-09-13 05:40	90.2	785.9
2012-09-13 05:45	88.4	794.1
2012-09-13 05:50	86.1	797.2
2012-09-13 05:55	86.2	806.1
2012-09-13 06:00	87.0	813.6
2012-09-13 06:05	87.3	832.6
2012-09-13 06:10	89.9	846.0
2012-09-13 06:15	90.0	862.4
2012-09-13 06:20	90.6	876.5
2012-09-13 06:25	91.9	883.2
2012-09-13 06:30	94.1	889.4
2012-09-13 06:35	94.5	904.9
2012-09-13 06:40	94.9	916.7
2012-09-13 06:45	94.7	922.4
2012-09-13 06:50	95.7	936.6
2012-09-13 06:55	96.8	949.1
2012-09-13 07:00	97.5	957.3
2012-09-13 07:05	105.3	975.3
2012-09-13 07:10	106.8	989.7
2012-09-13 07:15	110.4	1,003.3
2012-09-13 07:20	110.5	1,012.0
2012-09-13 07:25	112.6	1,018.2
2012-09-13 07:30	110.1	1,029.1
2012-09-13 07:35	106.4	1,033.5
2012-09-13 07:40	107.2	1,038.9
2012-09-13 07:45	107.4	1,042.8
2012-09-13 07:50	108.9	1,048.8
2012-09-13 07:55	113.0	1,052.6

	Wind	Load
2012-09-13 08:00	113.8	1,054.9
2012-09-13 08:05	117.3	1,058.0
2012-09-13 08:10	119.0	1,058.8
2012-09-13 08:15	122.7	1,062.3
2012-09-13 08:20	122.0	1,059.9
2012-09-13 08:25	122.4	1,062.6
2012-09-13 08:30	117.8	1,063.8
2012-09-13 08:35	117.0	1,066.4
2012-09-13 08:40	116.0	1,072.3
2012-09-13 08:45	111.5	1,070.1
2012-09-13 08:50	109.6	1,069.8
2012-09-13 08:55	105.0	1,071.1
2012-09-13 09:00	105.9	1,075.2
2012-09-13 09:05	104.0	1,073.8
2012-09-13 09:10	106.4	1,075.7
2012-09-13 09:15	108.9	1,080.0
2012-09-13 09:20	105.4	1,080.2
2012-09-13 09:25	107.0	1,084.6
2012-09-13 09:30	104.9	1,082.5
2012-09-13 09:35	106.0	1,086.0
2012-09-13 09:40	104.2	1,087.2
2012-09-13 09:45	98.8	1,093.0
2012-09-13 09:50	99.0	1,088.9
2012-09-13 09:55	100.1	1,093.3
2012-09-13 10:00	98.8	1,094.7
2012-09-13 10:05	96.1	1,093.6
2012-09-13 10:10	105.1	1,094.2
2012-09-13 10:15	106.0	1,091.1
2012-09-13 10:20	103.6	1,088.7
2012-09-13 10:25	104.5	1,096.8
2012-09-13 10:30	105.6	1,100.7
2012-09-13 10:35	110.2	1,100.0
2012-09-13 10:40	103.3	1,099.6
2012-09-13 10:45	102.7	1,102.6
2012-09-13 10:50	99.6	1,102.5
2012-09-13 10:55	104.8	1,105.3
2012-09-13 11:00	103.0	1,105.6
2012-09-13 11:05	95.4	1,111.7
2012-09-13 11:10	96.3	1,111.7
2012-09-13 11:15	95.2	1,113.8
2012-09-13 11:20	94.8	1,114.0
2012-09-13 11:25	106.7	1,118.4
2012-09-13 11:30	104.8	1,116.1
2012-09-13 11:35	114.8	1,119.0
2012-09-13 11:40	112.6	1,125.6
2012-09-13 11:45	110.3	1,120.0
2012-09-13 11:50	113.7	1,119.7
2012-09-13 11:55	113.8	1,122.3

	Wind	Load
2012-09-13 12:00	114.5	1,118.7
2012-09-13 12:05	118.7	1,120.1
2012-09-13 12:10	117.8	1,115.7
2012-09-13 12:15	122.0	1,120.7
2012-09-13 12:20	123.4	1,117.0
2012-09-13 12:25	121.6	1,113.9
2012-09-13 12:30	129.3	1,112.5
2012-09-13 12:35	125.9	1,112.2
2012-09-13 12:40	125.2	1,117.5
2012-09-13 12:45	127.4	1,112.1
2012-09-13 12:50	129.7	1,113.5
2012-09-13 12:55	136.1	1,112.3
2012-09-13 13:00	129.6	1,109.2
2012-09-13 13:05	125.5	1,111.8
2012-09-13 13:10	123.4	1,112.9
2012-09-13 13:15	126.0	1,109.5
2012-09-13 13:20	123.2	1,110.1
2012-09-13 13:25	126.0	1,109.2
2012-09-13 13:30	122.9	1,105.7
2012-09-13 13:35	128.2	1,110.3
2012-09-13 13:40	128.5	1,107.3
2012-09-13 13:45	126.7	1,108.1
2012-09-13 13:50	129.9	1,111.9
2012-09-13 13:55	128.5	1,103.3
2012-09-13 14:00	123.4	1,103.2
2012-09-13 14:05	129.8	1,105.4
2012-09-13 14:10	129.0	1,104.4
2012-09-13 14:15	130.6	1,102.7
2012-09-13 14:20	127.2	1,105.0
2012-09-13 14:25	124.3	1,103.0
2012-09-13 14:30	119.5	1,103.7
2012-09-13 14:35	118.1	1,110.1
2012-09-13 14:40	124.3	1,104.0
2012-09-13 14:45	119.5	1,103.9
2012-09-13 14:50	117.6	1,102.6
2012-09-13 14:55	118.2	1,108.3
2012-09-13 15:00	120.2	1,110.3
2012-09-13 15:05	120.1	1,106.6
2012-09-13 15:10	120.3	1,110.9
2012-09-13 15:15	116.6	1,109.3
2012-09-13 15:20	120.3	1,111.2
2012-09-13 15:25	96.0	1,112.8
2012-09-13 15:30	91.5	1,120.5
2012-09-13 15:35	92.2	1,120.6
2012-09-13 15:40	101.5	1,124.9
2012-09-13 15:45	101.0	1,125.2
2012-09-13 15:50	97.9	1,126.5
2012-09-13 15:55	93.9	1,129.7

	Wind	Load
2012-09-13 16:00	95.7	1,126.9
2012-09-13 16:05	91.6	1,124.4
2012-09-13 16:10	92.4	1,130.4
2012-09-13 16:15	90.7	1,128.9
2012-09-13 16:20	84.0	1,138.6
2012-09-13 16:25	89.9	1,145.6
2012-09-13 16:30	83.1	1,142.4
2012-09-13 16:35	83.8	1,143.9
2012-09-13 16:40	86.5	1,145.5
2012-09-13 16:45	85.4	1,143.8
2012-09-13 16:50	78.3	1,144.5
2012-09-13 16:55	76.4	1,148.4
2012-09-13 17:00	75.1	1,147.3
2012-09-13 17:05	73.6	1,144.6
2012-09-13 17:10	74.9	1,143.8
2012-09-13 17:15	78.8	1,144.6
2012-09-13 17:20	75.1	1,141.9
2012-09-13 17:25	71.9	1,141.8
2012-09-13 17:30	71.0	1,142.6
2012-09-13 17:35	69.5	1,137.3
2012-09-13 17:40	72.2	1,135.6
2012-09-13 17:45	78.4	1,130.8
2012-09-13 17:50	78.5	1,131.7
2012-09-13 17:55	81.4	1,129.5
2012-09-13 18:00	77.5	1,119.4
2012-09-13 18:05	75.6	1,109.1
2012-09-13 18:10	73.2	1,110.2
2012-09-13 18:15	74.2	1,105.8
2012-09-13 18:20	80.4	1,105.1
2012-09-13 18:25	81.8	1,099.2
2012-09-13 18:30	83.9	1,096.2
2012-09-13 18:35	85.7	1,094.3
2012-09-13 18:40	89.2	1,091.8
2012-09-13 18:45	93.9	1,092.4
2012-09-13 18:50	95.6	1,092.2
2012-09-13 18:55	99.8	1,088.7
2012-09-13 19:00	100.8	1,084.3
2012-09-13 19:05	101.0	1,086.6
2012-09-13 19:10	106.1	1,092.7
2012-09-13 19:15	112.9	1,098.9
2012-09-13 19:20	115.9	1,104.4
2012-09-13 19:25	117.5	1,106.3
2012-09-13 19:30	119.9	1,110.4
2012-09-13 19:35	121.7	1,119.9
2012-09-13 19:40	123.4	1,131.9
2012-09-13 19:45	129.1	1,140.7
2012-09-13 19:50	132.7	1,150.9
2012-09-13 19:55	134.4	1,159.3

	Wind	Load
2012-09-13 20:00	130.3	1,157.6
2012-09-13 20:05	136.2	1,166.0
2012-09-13 20:10	137.5	1,165.8
2012-09-13 20:15	142.4	1,169.3
2012-09-13 20:20	138.5	1,168.7
2012-09-13 20:25	142.2	1,169.8
2012-09-13 20:30	139.8	1,167.1
2012-09-13 20:35	136.8	1,163.1
2012-09-13 20:40	134.9	1,157.9
2012-09-13 20:45	133.7	1,153.6
2012-09-13 20:50	133.1	1,147.0
2012-09-13 20:55	132.5	1,137.8
2012-09-13 21:00	133.5	1,130.4
2012-09-13 21:05	129.8	1,124.3
2012-09-13 21:10	129.2	1,117.8
2012-09-13 21:15	129.6	1,087.0
2012-09-13 21:20	132.6	1,083.7
2012-09-13 21:25	123.5	1,079.3
2012-09-13 21:30	127.4	1,070.3
2012-09-13 21:35	124.9	1,065.5
2012-09-13 21:40	127.1	1,059.0
2012-09-13 21:45	125.3	1,049.9
2012-09-13 21:50	124.1	1,045.7
2012-09-13 21:55	121.4	1,035.4
2012-09-13 22:00	119.1	1,026.4
2012-09-13 22:05	117.3	1,025.0
2012-09-13 22:10	115.8	1,012.0
2012-09-13 22:15	117.1	998.8
2012-09-13 22:20	113.8	990.3
2012-09-13 22:25	109.0	979.2
2012-09-13 22:30	107.6	967.9
2012-09-13 22:35	105.0	966.7
2012-09-13 22:40	105.5	956.3
2012-09-13 22:45	102.9	953.2
2012-09-13 22:50	101.2	943.6
2012-09-13 22:55	103.3	930.6
2012-09-13 23:00	103.8	929.0
2012-09-13 23:05	102.7	925.7
2012-09-13 23:10	103.5	924.3
2012-09-13 23:15	105.3	918.6
2012-09-13 23:20	105.9	906.6
2012-09-13 23:25	105.5	897.9
2012-09-13 23:30	115.9	882.7
2012-09-13 23:35	119.7	881.1
2012-09-13 23:40	117.6	873.9
2012-09-13 23:45	117.1	862.4
2012-09-13 23:50	120.2	857.2
2012-09-13 23:55	132.0	854.2

	Wind	Load
2012-09-14 00:00	127.5	839.1
2012-09-14 00:05	130.3	833.4
2012-09-14 00:10	126.4	826.2
2012-09-14 00:15	131.1	822.9
2012-09-14 00:20	129.7	816.3
2012-09-14 00:25	126.5	805.7
2012-09-14 00:30	131.1	802.2
2012-09-14 00:35	129.1	801.7
2012-09-14 00:40	130.9	791.6
2012-09-14 00:45	128.8	793.4
2012-09-14 00:50	133.0	789.6
2012-09-14 00:55	127.7	783.4
2012-09-14 01:00	131.3	781.2
2012-09-14 01:05	126.2	776.3
2012-09-14 01:10	131.6	774.6
2012-09-14 01:15	132.0	772.2
2012-09-14 01:20	133.6	770.8
2012-09-14 01:25	128.6	769.2
2012-09-14 01:30	132.3	765.7
2012-09-14 01:35	131.0	760.6
2012-09-14 01:40	132.3	761.9
2012-09-14 01:45	129.4	761.8
2012-09-14 01:50	128.5	755.1
2012-09-14 01:55	131.6	754.9
2012-09-14 02:00	126.6	752.4
2012-09-14 02:05	123.5	747.0
2012-09-14 02:10	125.0	746.9
2012-09-14 02:15	126.9	750.8
2012-09-14 02:20	130.1	747.0
2012-09-14 02:25	127.3	750.5
2012-09-14 02:30	128.0	745.8
2012-09-14 02:35	122.5	739.9
2012-09-14 02:40	126.7	743.0
2012-09-14 02:45	117.8	741.4
2012-09-14 02:50	115.1	737.3
2012-09-14 02:55	118.6	736.1
2012-09-14 03:00	112.6	740.6
2012-09-14 03:05	109.4	743.3
2012-09-14 03:10	107.4	739.1
2012-09-14 03:15	107.2	741.1
2012-09-14 03:20	111.7	735.5
2012-09-14 03:25	108.2	736.1
2012-09-14 03:30	106.2	740.1
2012-09-14 03:35	104.3	738.8
2012-09-14 03:40	105.4	739.5
2012-09-14 03:45	103.0	740.5
2012-09-14 03:50	100.8	734.5
2012-09-14 03:55	97.9	736.1

	Wind	Load
2012-09-14 04:00	97.0	735.5
2012-09-14 04:05	105.0	740.4
2012-09-14 04:10	99.8	738.1
2012-09-14 04:15	98.4	744.7
2012-09-14 04:20	98.7	745.6
2012-09-14 04:25	96.6	738.4
2012-09-14 04:30	93.9	741.8
2012-09-14 04:35	94.9	741.2
2012-09-14 04:40	91.0	748.0
2012-09-14 04:45	91.0	746.2
2012-09-14 04:50	94.3	749.4
2012-09-14 04:55	91.9	745.9
2012-09-14 05:00	89.6	753.7
2012-09-14 05:05	91.7	760.2
2012-09-14 05:10	89.1	762.7
2012-09-14 05:15	89.9	756.8
2012-09-14 05:20	93.0	767.4
2012-09-14 05:25	88.0	769.2
2012-09-14 05:30	84.2	775.0
2012-09-14 05:35	85.0	781.6
2012-09-14 05:40	86.5	782.3
2012-09-14 05:45	85.4	789.4
2012-09-14 05:50	84.4	796.4
2012-09-14 05:55	80.8	801.0
2012-09-14 06:00	84.0	810.3
2012-09-14 06:05	87.7	826.3
2012-09-14 06:10	82.1	842.5
2012-09-14 06:15	82.7	853.0
2012-09-14 06:20	89.5	867.7
2012-09-14 06:25	87.3	877.7
2012-09-14 06:30	81.6	882.4
2012-09-14 06:35	83.1	897.5
2012-09-14 06:40	84.3	901.9
2012-09-14 06:45	85.8	917.2
2012-09-14 06:50	87.1	923.0
2012-09-14 06:55	86.2	932.7
2012-09-14 07:00	86.6	946.9
2012-09-14 07:05	89.5	962.1
2012-09-14 07:10	88.5	978.7
2012-09-14 07:15	88.9	988.6
2012-09-14 07:20	93.3	998.1
2012-09-14 07:25	93.5	1,009.2
2012-09-14 07:30	97.1	1,013.2
2012-09-14 07:35	94.7	1,018.9
2012-09-14 07:40	89.9	1,026.3
2012-09-14 07:45	93.1	1,033.0
2012-09-14 07:50	91.3	1,034.9
2012-09-14 07:55	87.5	1,042.8

	Wind	Load
2012-09-14 08:00	87.1	1,044.4
2012-09-14 08:05	84.3	1,051.2
2012-09-14 08:10	87.6	1,059.3
2012-09-14 08:15	87.6	1,062.7
2012-09-14 08:20	87.1	1,059.6
2012-09-14 08:25	84.9	1,068.1
2012-09-14 08:30	85.7	1,069.2
2012-09-14 08:35	85.2	1,073.1
2012-09-14 08:40	79.9	1,067.9
2012-09-14 08:45	80.4	1,074.2
2012-09-14 08:50	80.2	1,071.6
2012-09-14 08:55	78.7	1,076.5
2012-09-14 09:00	82.0	1,076.4
2012-09-14 09:05	81.8	1,083.8
2012-09-14 09:10	78.4	1,082.1
2012-09-14 09:15	78.6	1,089.0
2012-09-14 09:20	74.7	1,087.2
2012-09-14 09:25	70.9	1,091.7
2012-09-14 09:30	74.4	1,093.1
2012-09-14 09:35	66.5	1,090.5
2012-09-14 09:40	59.9	1,097.4
2012-09-14 09:45	58.0	1,098.6
2012-09-14 09:50	61.7	1,101.5
2012-09-14 09:55	56.5	1,102.8
2012-09-14 10:00	56.1	1,104.3
2012-09-14 10:05	53.1	1,104.2
2012-09-14 10:10	52.0	1,108.3
2012-09-14 10:15	49.5	1,109.2
2012-09-14 10:20	46.0	1,109.0
2012-09-14 10:25	40.3	1,114.3
2012-09-14 10:30	42.8	1,112.9
2012-09-14 10:35	40.4	1,115.6
2012-09-14 10:40	41.1	1,118.4
2012-09-14 10:45	43.1	1,116.6
2012-09-14 10:50	39.7	1,118.4
2012-09-14 10:55	40.6	1,119.6
2012-09-14 11:00	38.8	1,125.5
2012-09-14 11:05	37.6	1,125.2
2012-09-14 11:10	37.9	1,125.2
2012-09-14 11:15	39.5	1,127.5
2012-09-14 11:20	38.2	1,129.3
2012-09-14 11:25	38.5	1,127.3
2012-09-14 11:30	38.5	1,130.2
2012-09-14 11:35	35.9	1,126.9
2012-09-14 11:40	38.3	1,135.2
2012-09-14 11:45	39.7	1,133.9
2012-09-14 11:50	38.7	1,136.6
2012-09-14 11:55	43.8	1,135.3

	Wind	Load
2012-09-14 12:00	44.1	1,131.9
2012-09-14 12:05	45.0	1,136.8
2012-09-14 12:10	49.2	1,134.6
2012-09-14 12:15	53.8	1,134.2
2012-09-14 12:20	56.0	1,129.3
2012-09-14 12:25	53.5	1,127.3
2012-09-14 12:30	58.8	1,127.8
2012-09-14 12:35	55.9	1,128.8
2012-09-14 12:40	61.0	1,129.7
2012-09-14 12:45	60.2	1,129.4
2012-09-14 12:50	66.0	1,132.6
2012-09-14 12:55	65.8	1,126.8
2012-09-14 13:00	63.2	1,125.5
2012-09-14 13:05	65.7	1,124.0
2012-09-14 13:10	63.3	1,126.3
2012-09-14 13:15	63.1	1,126.0
2012-09-14 13:20	63.4	1,124.7
2012-09-14 13:25	62.6	1,124.0
2012-09-14 13:30	60.4	1,125.4
2012-09-14 13:35	57.9	1,123.5
2012-09-14 13:40	62.9	1,119.9
2012-09-14 13:45	62.1	1,125.2
2012-09-14 13:50	55.1	1,123.1
2012-09-14 13:55	59.6	1,125.8
2012-09-14 14:00	57.2	1,123.9
2012-09-14 14:05	62.8	1,124.9
2012-09-14 14:10	56.3	1,124.5
2012-09-14 14:15	52.2	1,120.9
2012-09-14 14:20	58.8	1,122.3
2012-09-14 14:25	62.8	1,119.6
2012-09-14 14:30	66.0	1,114.6
2012-09-14 14:35	68.9	1,113.2
2012-09-14 14:40	70.0	1,118.0
2012-09-14 14:45	67.8	1,115.8
2012-09-14 14:50	71.1	1,115.0
2012-09-14 14:55	69.1	1,117.6
2012-09-14 15:00	68.7	1,110.7
2012-09-14 15:05	75.5	1,112.2
2012-09-14 15:10	70.7	1,113.8
2012-09-14 15:15	71.8	1,119.1
2012-09-14 15:20	67.2	1,111.8
2012-09-14 15:25	70.4	1,122.0
2012-09-14 15:30	67.2	1,115.1
2012-09-14 15:35	69.4	1,115.9
2012-09-14 15:40	69.8	1,118.2
2012-09-14 15:45	66.2	1,119.3
2012-09-14 15:50	69.2	1,116.3
2012-09-14 15:55	67.8	1,115.3

	Wind	Load
2012-09-14 16:00	70.9	1,119.0
2012-09-14 16:05	69.8	1,114.0
2012-09-14 16:10	69.2	1,114.1
2012-09-14 16:15	63.1	1,120.8
2012-09-14 16:20	65.9	1,122.5
2012-09-14 16:25	67.1	1,121.5
2012-09-14 16:30	70.7	1,121.6
2012-09-14 16:35	62.0	1,118.8
2012-09-14 16:40	63.7	1,113.7
2012-09-14 16:45	64.9	1,123.9
2012-09-14 16:50	70.4	1,119.8
2012-09-14 16:55	69.7	1,122.5
2012-09-14 17:00	63.5	1,116.7
2012-09-14 17:05	63.0	1,118.7
2012-09-14 17:10	63.1	1,113.1
2012-09-14 17:15	64.4	1,109.0
2012-09-14 17:20	64.0	1,109.3
2012-09-14 17:25	70.4	1,110.8
2012-09-14 17:30	71.5	1,109.8
2012-09-14 17:35	74.1	1,103.6
2012-09-14 17:40	70.1	1,101.9
2012-09-14 17:45	69.1	1,098.7
2012-09-14 17:50	68.8	1,090.9
2012-09-14 17:55	65.8	1,091.0
2012-09-14 18:00	63.2	1,085.2
2012-09-14 18:05	61.5	1,075.8
2012-09-14 18:10	61.2	1,071.7
2012-09-14 18:15	63.2	1,069.0
2012-09-14 18:20	67.7	1,064.8
2012-09-14 18:25	71.4	1,062.6
2012-09-14 18:30	76.8	1,062.0
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2012-09-14 18:40	79.8	1,056.1
2012-09-14 18:45	86.4	1,057.2
2012-09-14 18:50	90.8	1,048.1
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2012-09-14 19:00	90.6	1,047.3
2012-09-14 19:05	100.7	1,047.2
2012-09-14 19:10	105.9	1,044.5
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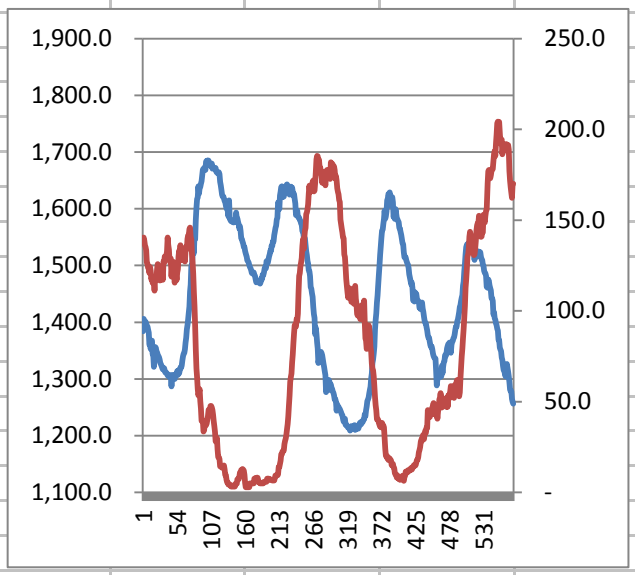
2012-09-14 19:30	106.5	1,058.1
2012-09-14 19:35	102.9	1,064.1
2012-09-14 19:40	106.1	1,077.6
2012-09-14 19:45	112.2	1,085.5
2012-09-14 19:50	114.6	1,091.1
2012-09-14 19:55	113.0	1,094.3

	Wind	Load
2012-09-14 20:00	114.1	1,097.3
2012-09-14 20:05	116.7	1,095.4
2012-09-14 20:10	117.8	1,100.2
2012-09-14 20:15	113.1	1,099.2
2012-09-14 20:20	109.9	1,095.2
2012-09-14 20:25	111.6	1,094.1
2012-09-14 20:30	112.2	1,089.6
2012-09-14 20:35	115.1	1,086.6
2012-09-14 20:40	120.5	1,083.7
2012-09-14 20:45	122.9	1,078.4
2012-09-14 20:50	119.9	1,075.5
2012-09-14 20:55	118.5	1,069.4
2012-09-14 21:00	121.3	1,064.1
2012-09-14 21:05	121.2	1,055.6
2012-09-14 21:10	118.5	1,049.1
2012-09-14 21:15	115.5	1,043.0
2012-09-14 21:20	114.4	1,032.5
2012-09-14 21:25	114.1	1,023.9
2012-09-14 21:30	110.5	1,022.3
2012-09-14 21:35	110.5	1,017.8
2012-09-14 21:40	104.3	1,010.5
2012-09-14 21:45	103.2	1,001.9
2012-09-14 21:50	106.3	1,000.5
2012-09-14 21:55	102.1	989.7
2012-09-14 22:00	104.4	985.6
2012-09-14 22:05	107.3	972.6
2012-09-14 22:10	104.6	967.7
2012-09-14 22:15	100.6	960.8
2012-09-14 22:20	99.4	955.5
2012-09-14 22:25	97.2	949.0
2012-09-14 22:30	96.9	947.2
2012-09-14 22:35	96.8	941.8
2012-09-14 22:40	98.2	931.8
2012-09-14 22:45	99.5	924.8
2012-09-14 22:50	104.2	921.0
2012-09-14 22:55	99.8	912.4
2012-09-14 23:00	100.9	905.2
2012-09-14 23:05	102.7	903.6
2012-09-14 23:10	102.1	902.4
2012-09-14 23:15	99.0	891.3
2012-09-14 23:20	100.7	886.7
2012-09-14 23:25	96.3	882.7
2012-09-14 23:30	93.3	874.9
2012-09-14 23:35	91.2	871.1
2012-09-14 23:40	84.7	864.0
2012-09-14 23:45	84.3	852.5
2012-09-14 23:50	84.9	849.5
2012-09-14 23:55	83.3	840.5

	Wind	Load
2012-09-15 00:00	86.3	834.9

	Wind	Load
2012-02-09 00:00	1,383.9	139.6
2012-02-09 00:05	1,406.2	140.3
2012-02-09 00:10	1,403.1	138.8
2012-02-09 00:15	1,395.3	136.1
2012-02-09 00:20	1,400.9	135.0
2012-02-09 00:25	1,397.5	133.4
2012-02-09 00:30	1,394.1	126.4
2012-02-09 00:35	1,392.6	126.0
2012-02-09 00:40	1,387.0	123.6
2012-02-09 00:45	1,381.7	124.1
2012-02-09 00:50	1,360.1	120.8
2012-02-09 00:55	1,362.7	124.1
2012-02-09 01:00	1,353.2	122.0
2012-02-09 01:05	1,366.4	117.4
2012-02-09 01:10	1,367.5	118.8
2012-02-09 01:15	1,344.0	115.3
2012-02-09 01:20	1,342.8	115.7
2012-02-09 01:25	1,321.6	116.4
2012-02-09 01:30	1,333.6	111.1
2012-02-09 01:35	1,356.4	118.9
2012-02-09 01:40	1,355.3	117.4
2012-02-09 01:45	1,349.0	118.2
2012-02-09 01:50	1,346.7	122.9
2012-02-09 01:55	1,343.0	125.7
2012-02-09 02:00	1,340.3	123.2
2012-02-09 02:05	1,338.2	121.3
2012-02-09 02:10	1,334.2	116.7
2012-02-09 02:15	1,328.1	116.8
2012-02-09 02:20	1,325.8	118.0
2012-02-09 02:25	1,323.0	120.6
2012-02-09 02:30	1,319.5	120.3
2012-02-09 02:35	1,317.0	117.2
2012-02-09 02:40	1,318.9	127.2
2012-02-09 02:45	1,319.3	126.7
2012-02-09 02:50	1,314.4	130.0
2012-02-09 02:55	1,311.3	129.2
2012-02-09 03:00	1,311.4	130.3
2012-02-09 03:05	1,309.6	132.8
2012-02-09 03:10	1,306.2	140.4
2012-02-09 03:15	1,305.6	136.2
2012-02-09 03:20	1,304.5	133.7
2012-02-09 03:25	1,307.1	127.6
2012-02-09 03:30	1,302.7	126.9
2012-02-09 03:35	1,304.9	128.8
2012-02-09 03:40	1,287.1	118.9
2012-02-09 03:45	1,304.9	124.4
2012-02-09 03:50	1,307.1	125.4
2012-02-09 03:55	1,300.3	127.0



	Wind	Load					
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2012-02-09 04:10	1,307.3	120.7					
2012-02-09 04:15	1,305.9	120.0					
2012-02-09 04:20	1,307.1	116.9					
2012-02-09 04:25	1,314.3	121.1					
2012-02-09 04:30	1,307.4	122.9					
2012-02-09 04:35	1,314.9	130.1					
2012-02-09 04:40	1,310.2	133.2					
2012-02-09 04:45	1,315.4	127.8					
2012-02-09 04:50	1,320.0	136.2					
2012-02-09 04:55	1,319.6	128.0					
2012-02-09 05:00	1,323.6	129.5					
2012-02-09 05:05	1,332.5	132.0					
2012-02-09 05:10	1,339.9	128.8					
2012-02-09 05:15	1,344.7	128.7					
2012-02-09 05:20	1,345.6	130.3					
2012-02-09 05:25	1,352.6	127.2					
2012-02-09 05:30	1,363.9	133.4					
2012-02-09 05:35	1,372.5	135.3					
2012-02-09 05:40	1,387.6	134.1					
2012-02-09 05:45	1,394.8	139.7					
2012-02-09 05:50	1,404.6	141.7					
2012-02-09 05:55	1,416.4	141.5					
2012-02-09 06:00	1,427.5	145.0					
2012-02-09 06:05	1,453.9	145.9					
2012-02-09 06:10	1,466.2	140.8					
2012-02-09 06:15	1,499.9	139.2					
2012-02-09 06:20	1,499.3	131.3					
2012-02-09 06:25	1,519.0	126.8					
2012-02-09 06:30	1,531.4	120.3					
2012-02-09 06:35	1,521.6	110.2					
2012-02-09 06:40	1,554.1	102.3					
2012-02-09 06:45	1,546.3	91.1					
2012-02-09 06:50	1,580.7	78.3					
2012-02-09 06:55	1,602.0	68.3					
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2012-02-09 07:05	1,619.9	57.0					
2012-02-09 07:10	1,639.5	53.4					
2012-02-09 07:15	1,626.8	55.1					
2012-02-09 07:20	1,636.8	56.8					
2012-02-09 07:25	1,638.7	50.3					
2012-02-09 07:30	1,644.0	46.2					
2012-02-09 07:35	1,648.8	39.4					
2012-02-09 07:40	1,659.0	39.3					
2012-02-09 07:45	1,669.0	39.8					
2012-02-09 07:50	1,670.7	33.6					
2012-02-09 07:55	1,671.5	34.4					

	Wind	Load					
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2012-02-09 08:05	1,668.2	38.4					
2012-02-09 08:10	1,682.9	37.1					
2012-02-09 08:15	1,684.8	38.0					
2012-02-09 08:20	1,683.6	40.0					
2012-02-09 08:25	1,685.2	42.1					
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2012-02-09 08:35	1,678.1	45.2					
2012-02-09 08:40	1,679.1	45.7					
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2012-02-09 08:55	1,679.7	46.7					
2012-02-09 09:00	1,670.8	45.3					
2012-02-09 09:05	1,671.9	42.6					
2012-02-09 09:10	1,672.0	39.2					
2012-02-09 09:15	1,671.7	36.4					
2012-02-09 09:20	1,672.3	33.2					
2012-02-09 09:25	1,672.0	28.1					
2012-02-09 09:30	1,665.0	28.1					
2012-02-09 09:35	1,664.1	29.9					
2012-02-09 09:40	1,662.6	23.7					
2012-02-09 09:45	1,662.1	19.4					
2012-02-09 09:50	1,664.3	19.4					
2012-02-09 09:55	1,661.1	18.4					
2012-02-09 10:00	1,647.6	14.3					
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2012-02-09 10:10	1,633.5	14.3					
2012-02-09 10:15	1,624.7	13.6					
2012-02-09 10:20	1,621.4	14.4					
2012-02-09 10:25	1,621.5	14.4					
2012-02-09 10:30	1,618.4	14.9					
2012-02-09 10:35	1,613.5	12.7					
2012-02-09 10:40	1,612.0	9.5					
2012-02-09 10:45	1,605.3	9.5					
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2012-02-09 10:55	1,602.2	5.6					
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2012-02-09 11:10	1,615.0	4.2					
2012-02-09 11:15	1,582.4	4.2					
2012-02-09 11:20	1,580.6	4.2					
2012-02-09 11:25	1,578.0	3.3					
2012-02-09 11:30	1,577.7	3.3					
2012-02-09 11:35	1,579.0	3.3					
2012-02-09 11:40	1,577.1	3.3					
2012-02-09 11:45	1,576.0	3.3					
2012-02-09 11:50	1,577.8	3.3					
2012-02-09 11:55	1,579.8	3.3					

	Wind	Load					
2012-02-09 12:00	1,576.6	4.8					
2012-02-09 12:05	1,593.2	4.8					
2012-02-09 12:10	1,584.0	4.8					
2012-02-09 12:15	1,582.5	7.3					
2012-02-09 12:20	1,577.0	7.3					
2012-02-09 12:25	1,572.3	7.3					
2012-02-09 12:30	1,565.3	8.8					
2012-02-09 12:35	1,569.2	10.9					
2012-02-09 12:40	1,560.4	9.6					
2012-02-09 12:45	1,547.7	12.4					
2012-02-09 12:50	1,546.5	11.1					
2012-02-09 12:55	1,542.2	12.9					
2012-02-09 13:00	1,538.3	12.6					
2012-02-09 13:05	1,532.7	12.0					
2012-02-09 13:10	1,532.6	9.7					
2012-02-09 13:15	1,525.5	5.4					
2012-02-09 13:20	1,521.1	2.8					
2012-02-09 13:25	1,515.5	2.8					
2012-02-09 13:30	1,508.8	2.8					
2012-02-09 13:35	1,507.4	2.8					
2012-02-09 13:40	1,505.4	2.8					
2012-02-09 13:45	1,501.0	2.8					
2012-02-09 13:50	1,497.5	5.0					
2012-02-09 13:55	1,494.9	5.0					
2012-02-09 14:00	1,491.6	5.0					
2012-02-09 14:05	1,486.8	5.0					
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2012-02-09 14:15	1,485.7	5.0					
2012-02-09 14:20	1,488.0	5.0					
2012-02-09 14:25	1,483.3	7.6					
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2012-02-09 15:00	1,471.4	5.5					
2012-02-09 15:05	1,470.4	5.5					
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2012-02-09 15:20	1,477.8	4.9					
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2012-02-09 15:50	1,497.9	5.9					
2012-02-09 15:55	1,494.9	5.9					

	Wind	Load					
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2012-02-09 16:05	1,505.3	7.5					
2012-02-09 16:10	1,504.6	7.5					
2012-02-09 16:15	1,510.6	7.5					
2012-02-09 16:20	1,515.9	7.1					
2012-02-09 16:25	1,519.8	7.3					
2012-02-09 16:30	1,525.9	7.2					
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2012-02-09 16:45	1,534.7	6.5					
2012-02-09 16:50	1,542.7	6.5					
2012-02-09 16:55	1,542.4	6.5					
2012-02-09 17:00	1,553.5	6.5					
2012-02-09 17:05	1,559.3	8.0					
2012-02-09 17:10	1,566.4	9.5					
2012-02-09 17:15	1,569.9	9.5					
2012-02-09 17:20	1,581.1	9.4					
2012-02-09 17:25	1,584.5	9.4					
2012-02-09 17:30	1,610.6	9.9					
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2012-02-09 17:40	1,599.5	13.9					
2012-02-09 17:45	1,623.2	15.7					
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2012-02-09 17:55	1,638.5	21.0					
2012-02-09 18:00	1,639.8	21.0					
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2012-02-09 18:15	1,621.4	23.1					
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2012-02-09 19:10	1,639.3	63.5					
2012-02-09 19:15	1,634.9	65.4					
2012-02-09 19:20	1,637.1	71.6					
2012-02-09 19:25	1,630.1	76.1					
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2012-02-09 19:50	1,589.1	91.4					
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	Wind	Load					
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2012-02-09 20:15	1,584.3	119.2					
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2012-02-09 21:05	1,536.5	145.7					
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2012-02-09 21:15	1,518.1	154.1					
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2012-02-09 21:25	1,503.2	158.8					
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2012-02-09 21:35	1,489.9	168.9					
2012-02-09 21:40	1,480.8	165.4					
2012-02-09 21:45	1,462.0	166.2					
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2012-02-09 21:55	1,451.0	169.3					
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2012-02-09 22:10	1,414.5	165.8					
2012-02-09 22:15	1,407.9	166.1					
2012-02-09 22:20	1,378.8	170.5					
2012-02-09 22:25	1,390.0	176.5					
2012-02-09 22:30	1,379.7	183.4					
2012-02-09 22:35	1,364.9	185.4					
2012-02-09 22:40	1,353.5	185.2					
2012-02-09 22:45	1,328.2	182.1					
2012-02-09 22:50	1,334.8	183.3					
2012-02-09 22:55	1,333.7	178.9					
2012-02-09 23:00	1,330.9	178.9					
2012-02-09 23:05	1,348.1	176.4					
2012-02-09 23:10	1,345.3	174.3					
2012-02-09 23:15	1,341.6	170.6					
2012-02-09 23:20	1,334.3	176.5					
2012-02-09 23:25	1,326.9	172.7					
2012-02-09 23:30	1,321.0	171.0					
2012-02-09 23:35	1,313.2	170.9					
2012-02-09 23:40	1,306.8	169.1					
2012-02-09 23:45	1,276.6	174.8					
2012-02-09 23:50	1,289.5	177.5					
2012-02-09 23:55	1,283.2	174.7					

	Wind	Load					
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2012-02-10 00:05	1,298.2	176.7					
2012-02-10 00:10	1,294.3	177.2					
2012-02-10 00:15	1,290.9	172.6					
2012-02-10 00:20	1,290.0	181.8					
2012-02-10 00:25	1,284.7	179.5					
2012-02-10 00:30	1,282.2	181.1					
2012-02-10 00:35	1,277.7	180.6					
2012-02-10 00:40	1,275.4	177.8					
2012-02-10 00:45	1,271.3	179.5					
2012-02-10 00:50	1,263.7	177.5					
2012-02-10 00:55	1,264.6	172.8					
2012-02-10 01:00	1,260.0	174.3					
2012-02-10 01:05	1,243.8	171.9					
2012-02-10 01:10	1,255.3	167.6					
2012-02-10 01:15	1,247.7	165.7					
2012-02-10 01:20	1,250.6	164.1					
2012-02-10 01:25	1,248.5	161.1					
2012-02-10 01:30	1,246.7	160.0					
2012-02-10 01:35	1,244.0	150.3					
2012-02-10 01:40	1,241.0	147.7					
2012-02-10 01:45	1,237.8	145.4					
2012-02-10 01:50	1,236.1	143.2					
2012-02-10 01:55	1,229.9	140.4					
2012-02-10 02:00	1,224.7	140.0					
2012-02-10 02:05	1,229.1	131.1					
2012-02-10 02:10	1,229.9	129.7					
2012-02-10 02:15	1,219.0	124.3					
2012-02-10 02:20	1,219.7	117.7					
2012-02-10 02:25	1,217.8	113.7					
2012-02-10 02:30	1,215.9	110.3					
2012-02-10 02:35	1,214.3	107.2					
2012-02-10 02:40	1,213.8	110.2					
2012-02-10 02:45	1,213.7	111.0					
2012-02-10 02:50	1,209.2	112.4					
2012-02-10 02:55	1,215.1	109.9					
2012-02-10 03:00	1,216.8	104.9					
2012-02-10 03:05	1,211.4	105.7					
2012-02-10 03:10	1,213.7	108.9					
2012-02-10 03:15	1,216.6	109.6					
2012-02-10 03:20	1,212.4	104.0					
2012-02-10 03:25	1,218.4	110.2					
2012-02-10 03:30	1,210.4	113.8					
2012-02-10 03:35	1,212.7	106.7					
2012-02-10 03:40	1,212.2	103.9					
2012-02-10 03:45	1,217.3	98.4					
2012-02-10 03:50	1,214.6	97.3					
2012-02-10 03:55	1,212.2	100.2					

	Wind	Load					
2012-02-10 04:00	1,216.8	100.0					
2012-02-10 04:05	1,221.8	98.8					
2012-02-10 04:10	1,222.9	95.5					
2012-02-10 04:15	1,219.6	97.3					
2012-02-10 04:20	1,225.0	103.1					
2012-02-10 04:25	1,223.1	99.1					
2012-02-10 04:30	1,224.6	95.0					
2012-02-10 04:35	1,228.5	103.6					
2012-02-10 04:40	1,229.0	105.6					
2012-02-10 04:45	1,237.6	93.6					
2012-02-10 04:50	1,234.5	84.9					
2012-02-10 04:55	1,244.5	83.6					
2012-02-10 05:00	1,251.3	79.1					
2012-02-10 05:05	1,261.2	80.4					
2012-02-10 05:10	1,263.7	86.2					
2012-02-10 05:15	1,267.0	92.1					
2012-02-10 05:20	1,274.4	90.1					
2012-02-10 05:25	1,280.7	86.4					
2012-02-10 05:30	1,286.1	80.0					
2012-02-10 05:35	1,300.9	77.6					
2012-02-10 05:40	1,309.5	71.0					
2012-02-10 05:45	1,327.9	68.3					
2012-02-10 05:50	1,334.4	67.2					
2012-02-10 05:55	1,344.4	63.9					
2012-02-10 06:00	1,356.8	58.3					
2012-02-10 06:05	1,387.1	52.5					
2012-02-10 06:10	1,403.6	48.0					
2012-02-10 06:15	1,415.8	45.2					
2012-02-10 06:20	1,434.5	40.3					
2012-02-10 06:25	1,447.0	40.4					
2012-02-10 06:30	1,465.5	40.0					
2012-02-10 06:35	1,483.5	38.2					
2012-02-10 06:40	1,499.6	37.3					
2012-02-10 06:45	1,518.7	36.1					
2012-02-10 06:50	1,533.3	37.6					
2012-02-10 06:55	1,548.6	35.9					
2012-02-10 07:00	1,561.8	38.3					
2012-02-10 07:05	1,562.7	36.8					
2012-02-10 07:10	1,572.8	36.9					
2012-02-10 07:15	1,582.2	35.7					
2012-02-10 07:20	1,596.9	30.0					
2012-02-10 07:25	1,582.7	24.0					
2012-02-10 07:30	1,587.4	20.2					
2012-02-10 07:35	1,595.5	20.2					
2012-02-10 07:40	1,615.0	19.0					
2012-02-10 07:45	1,618.3	19.6					
2012-02-10 07:50	1,626.3	17.8					
2012-02-10 07:55	1,623.0	18.2					

	Wind	Load					
2012-02-10 08:00	1,628.9	18.8					
2012-02-10 08:05	1,607.0	17.6					
2012-02-10 08:10	1,621.7	17.6					
2012-02-10 08:15	1,620.9	15.0					
2012-02-10 08:20	1,620.2	15.4					
2012-02-10 08:25	1,611.6	15.7					
2012-02-10 08:30	1,585.5	13.8					
2012-02-10 08:35	1,590.6	13.4					
2012-02-10 08:40	1,582.2	10.7					
2012-02-10 08:45	1,599.4	9.9					
2012-02-10 08:50	1,592.0	9.9					
2012-02-10 08:55	1,583.8	8.2					
2012-02-10 09:00	1,581.4	9.4					
2012-02-10 09:05	1,578.5	8.1					
2012-02-10 09:10	1,576.5	8.1					
2012-02-10 09:15	1,566.0	7.2					
2012-02-10 09:20	1,564.6	7.2					
2012-02-10 09:25	1,558.7	7.0					
2012-02-10 09:30	1,553.6	7.2					
2012-02-10 09:35	1,546.4	8.7					
2012-02-10 09:40	1,539.1	9.2					
2012-02-10 09:45	1,537.3	7.6					
2012-02-10 09:50	1,523.2	6.4					
2012-02-10 09:55	1,514.2	8.6					
2012-02-10 10:00	1,516.2	9.2					
2012-02-10 10:05	1,513.9	11.5					
2012-02-10 10:10	1,508.7	11.5					
2012-02-10 10:15	1,503.8	10.9					
2012-02-10 10:20	1,501.5	12.1					
2012-02-10 10:25	1,495.6	12.2					
2012-02-10 10:30	1,484.4	11.8					
2012-02-10 10:35	1,478.8	12.6					
2012-02-10 10:40	1,473.3	13.0					
2012-02-10 10:45	1,467.0	13.4					
2012-02-10 10:50	1,469.5	12.5					
2012-02-10 10:55	1,460.8	13.3					
2012-02-10 11:00	1,438.6	14.1					
2012-02-10 11:05	1,440.1	14.9					
2012-02-10 11:10	1,436.5	15.3					
2012-02-10 11:15	1,453.0	14.7					
2012-02-10 11:20	1,449.6	15.1					
2012-02-10 11:25	1,449.7	16.5					
2012-02-10 11:30	1,441.5	17.8					
2012-02-10 11:35	1,438.9	18.1					
2012-02-10 11:40	1,437.8	19.2					
2012-02-10 11:45	1,436.3	22.1					
2012-02-10 11:50	1,425.1	23.2					
2012-02-10 11:55	1,427.4	24.9					

	Wind	Load					
2012-02-10 12:00	1,423.1	27.9					
2012-02-10 12:05	1,430.5	29.1					
2012-02-10 12:10	1,435.0	28.5					
2012-02-10 12:15	1,424.0	31.0					
2012-02-10 12:20	1,418.1	31.8					
2012-02-10 12:25	1,410.1	29.2					
2012-02-10 12:30	1,402.6	31.9					
2012-02-10 12:35	1,398.8	33.8					
2012-02-10 12:40	1,398.3	32.8					
2012-02-10 12:45	1,391.1	35.7					
2012-02-10 12:50	1,385.8	35.5					
2012-02-10 12:55	1,377.2	45.3					
2012-02-10 13:00	1,372.8	41.9					
2012-02-10 13:05	1,372.7	42.9					
2012-02-10 13:10	1,366.1	41.5					
2012-02-10 13:15	1,359.5	42.5					
2012-02-10 13:20	1,356.4	45.2					
2012-02-10 13:25	1,357.4	43.1					
2012-02-10 13:30	1,352.4	46.7					
2012-02-10 13:35	1,344.9	47.5					
2012-02-10 13:40	1,340.3	49.2					
2012-02-10 13:45	1,337.9	45.1					
2012-02-10 13:50	1,336.6	43.1					
2012-02-10 13:55	1,336.2	45.4					
2012-02-10 14:00	1,313.9	46.7					
2012-02-10 14:05	1,288.5	44.8					
2012-02-10 14:10	1,299.4	40.7					
2012-02-10 14:15	1,303.7	44.5					
2012-02-10 14:20	1,303.6	46.6					
2012-02-10 14:25	1,302.5	51.1					
2012-02-10 14:30	1,304.9	52.3					
2012-02-10 14:35	1,304.9	54.8					
2012-02-10 14:40	1,304.2	50.2					
2012-02-10 14:45	1,322.8	46.8					
2012-02-10 14:50	1,310.1	52.1					
2012-02-10 14:55	1,321.9	50.9					
2012-02-10 15:00	1,329.9	50.5					
2012-02-10 15:05	1,331.5	50.6					
2012-02-10 15:10	1,342.1	50.1					
2012-02-10 15:15	1,340.3	49.2					
2012-02-10 15:20	1,343.4	47.0					
2012-02-10 15:25	1,353.6	52.3					
2012-02-10 15:30	1,357.9	47.2					
2012-02-10 15:35	1,361.3	53.5					
2012-02-10 15:40	1,362.1	51.5					
2012-02-10 15:45	1,364.2	54.0					
2012-02-10 15:50	1,363.8	55.6					
2012-02-10 15:55	1,346.4	58.5					

	Wind	Load					
2012-02-10 16:00	1,360.1	57.2					
2012-02-10 16:05	1,365.2	56.6					
2012-02-10 16:10	1,367.0	52.6					
2012-02-10 16:15	1,371.6	53.8					
2012-02-10 16:20	1,373.5	52.0					
2012-02-10 16:25	1,379.1	59.1					
2012-02-10 16:30	1,386.7	57.9					
2012-02-10 16:35	1,392.2	56.0					
2012-02-10 16:40	1,392.3	61.2					
2012-02-10 16:45	1,401.4	62.0					
2012-02-10 16:50	1,404.6	57.5					
2012-02-10 16:55	1,411.3	56.8					
2012-02-10 17:00	1,417.8	52.9					
2012-02-10 17:05	1,426.6	55.1					
2012-02-10 17:10	1,430.4	62.8					
2012-02-10 17:15	1,437.5	68.9					
2012-02-10 17:20	1,443.3	75.0					
2012-02-10 17:25	1,447.5	79.2					
2012-02-10 17:30	1,464.4	85.1					
2012-02-10 17:35	1,471.2	90.1					
2012-02-10 17:40	1,490.0	96.3					
2012-02-10 17:45	1,503.2	102.9					
2012-02-10 17:50	1,520.1	112.7					
2012-02-10 17:55	1,532.5	117.3					
2012-02-10 18:00	1,536.3	123.1					
2012-02-10 18:05	1,538.2	130.1					
2012-02-10 18:10	1,531.6	131.1					
2012-02-10 18:15	1,539.6	134.4					
2012-02-10 18:20	1,538.2	140.9					
2012-02-10 18:25	1,534.4	143.6					
2012-02-10 18:30	1,540.0	141.6					
2012-02-10 18:35	1,535.7	133.3					
2012-02-10 18:40	1,538.5	134.9					
2012-02-10 18:45	1,537.7	137.3					
2012-02-10 18:50	1,533.8	138.2					
2012-02-10 18:55	1,531.7	130.6					
2012-02-10 19:00	1,509.7	131.0					
2012-02-10 19:05	1,529.2	134.0					
2012-02-10 19:10	1,524.5	138.4					
2012-02-10 19:15	1,526.0	144.2					
2012-02-10 19:20	1,520.7	147.1					
2012-02-10 19:25	1,517.2	148.3					
2012-02-10 19:30	1,521.9	148.3					
2012-02-10 19:35	1,524.7	152.4					
2012-02-10 19:40	1,523.4	151.4					
2012-02-10 19:45	1,523.3	146.1					
2012-02-10 19:50	1,515.7	140.8					
2012-02-10 19:55	1,511.2	141.0					

	Wind	Load					
2012-02-10 20:00	1,509.7	143.3					
2012-02-10 20:05	1,501.5	143.2					
2012-02-10 20:10	1,499.6	153.0					
2012-02-10 20:15	1,490.5	150.1					
2012-02-10 20:20	1,487.1	148.8					
2012-02-10 20:25	1,486.0	152.3					
2012-02-10 20:30	1,481.7	155.0					
2012-02-10 20:35	1,462.4	155.7					
2012-02-10 20:40	1,460.9	170.4					
2012-02-10 20:45	1,475.5	177.0					
2012-02-10 20:50	1,471.9	177.6					
2012-02-10 20:55	1,464.7	177.1					
2012-02-10 21:00	1,460.0	173.0					
2012-02-10 21:05	1,456.3	174.6					
2012-02-10 21:10	1,442.4	177.1					
2012-02-10 21:15	1,441.9	178.1					
2012-02-10 21:20	1,437.4	178.2					
2012-02-10 21:25	1,413.6	182.4					
2012-02-10 21:30	1,417.2	186.4					
2012-02-10 21:35	1,407.1	188.1					
2012-02-10 21:40	1,404.4	185.3					
2012-02-10 21:45	1,398.3	192.1					
2012-02-10 21:50	1,394.6	197.1					
2012-02-10 21:55	1,388.4	203.3					
2012-02-10 22:00	1,385.0	204.3					
2012-02-10 22:05	1,368.9	203.8					
2012-02-10 22:10	1,368.1	204.0					
2012-02-10 22:15	1,355.3	198.0					
2012-02-10 22:20	1,352.0	192.3					
2012-02-10 22:25	1,349.0	193.9					
2012-02-10 22:30	1,337.6	194.3					
2012-02-10 22:35	1,333.1	186.2					
2012-02-10 22:40	1,323.2	189.9					
2012-02-10 22:45	1,315.9	191.7					
2012-02-10 22:50	1,313.5	189.8					
2012-02-10 22:55	1,309.5	188.8					
2012-02-10 23:00	1,304.2	191.1					
2012-02-10 23:05	1,322.3	191.9					
2012-02-10 23:10	1,326.4	188.3					
2012-02-10 23:15	1,319.5	189.6					
2012-02-10 23:20	1,313.0	191.4					
2012-02-10 23:25	1,304.2	189.0					
2012-02-10 23:30	1,294.3	177.0					
2012-02-10 23:35	1,281.0	171.8					
2012-02-10 23:40	1,278.6	168.0					
2012-02-10 23:45	1,278.7	165.1					
2012-02-10 23:50	1,265.0	162.2					
2012-02-10 23:55	1,260.0	169.4					

	Wind	Load					
2012-02-11 00:00	1,256.7	170.0					

CONFIDENTIAL (Attachment Only)

Request IR-36:

Please provide the ramp rate, for each NSPI thermal and hydro unit.

Response IR-36:

Please refer to Confidential Attachments 1 and 2.

CA IR-36 Attachment 1 has been removed due to confidentiality.

CA IR-36 Attachment 2 has been removed due to confidentiality.

NON-CONFIDENTIAL

Request IR-37:

Please provide the cold start time for each NSPI thermal and hydro unit.

Response IR-37:

Please refer to CA IR-36 Confidential Attachment 1.

NON-CONFIDENTIAL

Request IR-38:

Please provide the cold start time for each NSPI thermal unit.

Response IR-38:

Please refer to CA IR-36.

NON-CONFIDENTIAL

Request IR-39:

Reference Appendix 6.02, p. 28

(a) Please provide the storage capacity for each NSPI hydro plant.

(b) Please clarify whether the statement that "none [of the hydro plants] have sufficient storage (with the possible exception of the Mersey) to guarantee year round operation." Does this mean that the plants operate in peaking

(c) Please provide details on the "operational flexibility [limits] on some hydro systems by stringent operating licenses which impose restrictions on dispatch for periods up to six months," including the specific MW and MWh restrictions on each plant or system.

(d) Please explain how the fact that "hydro power plants will also need to be used for providing energy towards meeting the RES requirements" would interfere with their providing ramping services.

(e) Please describe the specific system load and supply conditions under which providing ramping services would require the hydro system to spill water or otherwise reduce annual energy output.

(f) Please provide any available data on the correlation among wind speeds in New Brunswick, Nova Scotia, Northern Maine, and PEI.

(g) Please provide any information available to NSPI regarding plans or "aspirations" for development of significant wind capacity in Northern Maine in the absence of new transmission connections from Northern Maine to ISO-NE. (Also mentioned on p. 33)

Response IR-39:

(a) The storage capacity of each of NS Power hydro systems is as follows:

Hydro System:	Maximum Storage (GWH)
WRECK COVE	108.0
ANNAPOLIS TIDAL	N/A
AVON	6.0
BLACK	35.4
NICTAUX	7.9
LEQUILLE	3.8
PARADISE	11.1
MERSEY	105.0
SISSIBOO	28.0
BEAR	16.5
TUSKET	0.7
ROSEWAY	N/A
ST MARGARET'S BAY	8.6
SHEET HARBOUR	4.0
DICKIE BROOK	1.8
FALL RIVER	0.5

(b) The NS Power hydro systems are largely run-of-river, the system annual average capacity factor is about 30 percent.

(c) Please refer to CA IR-36 Confidential Attachment 2. This table presents the operating parameters of the NS Power hydro systems as defined by physical or environmental restrictions.

(d-e) For a hydro unit to offer load following or regulation service it must be operated in a manner that allows for both up and down dispatch. This could involve operation outside of optimized ranges for runner efficiency or headpond position. Production from hydro generators under this operational focus would still qualify as renewable energy (after 2015), but some reduction in overall production could come as a consequence of the reduced operating efficiency. The hydro system has traditionally been dispatched on peak where possible but with more intermittent wind generation coming on-line the hydro units will be utilized in an increasing manner to load follow wind variations due to their flexibility.

(f) NS Power has not compiled regional wind speed correlation data.

(g) NS Power has no additional information within the context presented.

Request IR-40:

Reference the statement that "none [of the hydro plants] have sufficient storage (with the possible exception of the Mersey) to guarantee year round operation." (Appendix 6.02, p. 28)

(a) Please clarify whether this means that the plants shut down for weeks or months every year, or in low-water years; that they operate in cycling or peaking mode in some months in low-water years, or something else.

(b) Please provide the minimum and maximum output for each hydro plant or system in a high-water year.

(c) Please provide the minimum and maximum output for each hydro plant or system in a low-water year.

Response IR-40:

(a) Hydro systems typically shut down for weeks or months every year. Some systems can persist through the year at reduced output in cycling mode. In most cases, system operators will retain some storage availablele to protect the system capacity and to be able to count on the system for 10-minute reserve.

(b-c) Please refer to Attachment 1.

Hydro System	Maximum (MW)	Minimum (MW)
Wreck Cove	212.0	45
Annapolis Tidal	20.0	0

Avon	6.8	0
Black River	22.5	0
Nictaux	8.3	0
Lequille	11.2	0
Paradise	4.7	0
Mersey	42.5	0
Sissiboo	24.0	0
Bear River	13.4	0
Tusket	2.4	0
Roseway	1.8	0
St Margarets	10.8	0
Sheet Harbour	10.8	0
Dickie Brook	3.8	0
Fall River	0.5	0

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Hydro Production Generation Summary - GWh

Year	Avon	Bear River (incl. Sissiboo)	Black River	Dickie Brook	Fall River	Harmony	Lequille	Paradise	Nictaux	Roseway	Mersey	St. Marg't	Sheet Harbour	Tusket	Wreck Cove	Gisborne	Total
1990	23.4	102.2	95.2	8.2	2.3	3.0	26.6	19.3	44.2	2.6	219.0	22.4	40.4	10.8	280.0	8.0	907.3
1991	31.3	123.6	116.7	9.4	2.6	3.2	33.1	27.8	49.8	2.9	287.3	31.2	45.7	14.2	363.1	11.0	1153.1
1992	31.2	116.4	108.6	8.4	2.5	3.2	26.7	20.4	48.6	2.8	248.8	31.3	41.0	10.9	278.2	7.4	986.5
1993	24.9	107.7	83.6	8.7	2.5	1.5	26.8	18.8	38.9	1.7	191.6	32.8	47.1	10.8	277.0	7.4	881.8
1994	22.6	140.5	81.1	10.7	2.1	0.2	27.4	22.7	40.7	2.6	256.7	27.1	39.6	13.1	284.1	6.9	978.1
1995	21.7	96.9	94.9	7.3	2.6	1.0	22.8	19.1	39.0	3.7	203.4	24.0	42.6	11.0	254.3	6.4	850.6
1996	31.7	118.8	100.4	10.0	2.8	2.6	31.9	27.0	52.9	3.6	282.9	35.3	53.6	16.1	300.8	9.7	1080.0
1997	21.2	112.6	83.1	7.5	1.9	2.7	20.5	17.1	36.0	3.0	231.3	22.6	38.9	10.7	296.1	10.2	915.4
1998	23.9	90.6	82.6	9.9	2.3	3.1	25.4	19.1	33.5	2.5	183.7	25.1	45.8	11.2	296.6	7.1	862.4
1999	24.1	96.1	99.3	8.8	1.9	2.8	21.9	16.6	41.6	1.5	189.7	21.7	34.4	10.5	377.9	8.1	957.0
2000	22.6	92.1	94.5	9.4	2.2	2.8	22.9	22.1	43.2	2.4	200.0	22.0	36.7	11.1	260.3	7.8	852.1
2001	15.9	61.3	66.4	6.2	1.5	1.2	16.5	14.7	28.5	2.3	159.2	20.8	31.0	8.9	219.4	6.7	660.5
2002	27.7	127.0	102.8	10.2	2.3	2.8	29.8	21.7	45.4	2.5	233.0	29.0	43.3	12.4	303.8	0.0	993.8
2003	22.8	134.0	114.3	9.0	2.1	3.1	27.1	27.5	50.2	2.3	267.9	25.8	44.5	12.0	303.8	0.0	1046.5
2004	17.9	92.9	87.5	3.7	2.0	1.9	21.6	16.4	36.7	2.2	200.8	22.8	40.3	10.4	302.7	0.0	859.7
2005	28.1	125.0	114.1	8.1	2.7	3.1	33.3	27.2	50.8	2.9	273.7	37.6	46.1	9.1	271.0	0.0	1032.9
2006	30.0	125.1	98.3	8.9	2.6	3.1	30.3	20.1	57.0	3.7	265.2	28.6	40.3	10.0	253.3	0.0	976.6
2007	23.3	85.2	101.0	8.6	2.3	2.0	17.7	22.2	40.2	1.9	224.3	23.8	38.8	10.7	284.3	0.0	886.3
2008	30.7	119.3	113.1	5.5	2.8	2.1	28.9	24.8	44.1	1.8	241.5	30.9	54.6	10.2	340.1	0.0	1050.2
2009	28.2	140.0	114.6	9.9	2.0	1.6	30.9	17.4	41.4	1.5	267.2	27.0	51.5	11.2	289.1	0.0	1033.5
2010	20.8	105.8	89.3	5.2	1.6	-0.1	26.7	21.7	45.5	1.5	234.5	20.2	42.0	8.6	340.5	0.0	963.8
2011	26.3	139.1	93.6	7.6	2.8	0.0	32.7	31.9	39.1	1.6	237.2	24.5	56.7	11.8	357.5	0.0	1062.4
2012	24.4	95.8	79.6	3.1	2.2	0.0	19.4	17.4	40.9	0.6	198.9	15.3	44.9	9.7	248.7	0.0	800.7
23 Yr Avg	25.0	110.8	96.3	8.0	2.3	2.0	26.1	21.4	43.0	2.4	230.3	26.2	43.5	11.1	294.9	4.2	947.4

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Request IR-41:

Reference Appendix 6.02, p. 29

Please provide the definition of "available wind capacity" used in Figure 3.6

Response IR-41:

Available wind capacity, as used in this particular reference, refers to the wind power production level in the operating hour.

Request IR-42:

Reference Appendix 6.02, pp. 30–31

(a) Please provide NSPI's understanding of ERCOT's wind capacity in April 2009.

(b) Please provide the portion of the referenced 8,000 MW ramp on the CAISO system is due to wind.

(c) Please provide the portion of the 6,300-MW ramp and 13,500-MW ramp in Figure 3.8 that are due to wind.

(d) Please provide a complete description of how "NSPI is diligently working towards improving its wind forecasting methodology," including a description of each wind forecasting project and a copy of all reports and memoranda describing the projects and any results.

Response IR-42:

(a-c) Please refer to the referenced documents in the Bibliography. These references to other systems in the whitepaper were not an effort to appear as experts in all power systems, but rather to demonstrate that many of the same challenges are being experienced elsewhere.

(d) NSPI has been using a visual basic (VB) wind forecasting tool over the past few years which has produced our forecasts. As more wind has been installed on the system, the amount of time and effort to maintain and support the forecasting tool has increased substantially and NSPI is actively investigating its options to develop and implement a wind forecasting system that will better accommodate increasing levels of wind

penetration and be better aligned with what is becoming industry standard for high wind penetration power systems.

NSPI has been active in learning about forecasting tools implemented by other system operators with high levels of wind penetration. Most of this exposure is through information shared by GE over the course of the past year and also by EirGrid. NSPI learned through its discussion with EirGrid that employing a number of independent wind forecasting service providers that submit wind forecasts directly to the system operator yields very good results.

NSPI is currently working with AWST to implement a wind forecast trial to learn more about the services that AWST provides and the potential benefits that their wind forecasting tools can provide. Upon completion of this trial, NSPI will be in a better position to comment on the changes that may be required to its existing wind forecasting practices and tools. At this stage, NSPI is anticipating going to market to external wind forecasting service providers for proposals to implement a wind forecasting system that is capable of supporting the expected wind penetration levels going forward.

As industry experience with wind forecasting continues to develop, so does development of forecasting methods and tools available to system operators. As described in the ISO New England Wind Integration Study completed by General Electric, the ability to track turbine availability, forced outages, and local wind behavior is important to the fidelity of forecasting. Development of protocols to collect and process this information will be important, particularly for power systems with high levels of wind penetration. NSPI anticipates that a wind forecasting system with these capabilities will be required going forward.

NSPI is also aware of the work that the AESO in Alberta has done to implement a centralized wind power forecast http://www.aeso.ca/gridoperations/18286.html.

Request IR-43:

Reference Appendix 6.02, p. 32

(a) Please provide all available documentation of the PowerShift Atlantic project.

(b) Please provide any available documentation of the Alberta Load Shed Service for Imports (LSSi), including program design, pricing, and participation levels.

(c) Please provide a comparison of the LSSi to NSPI's existing interruptible load programs, in terms of program design, pricing, and participation levels.

Response IR-43:

(a) PowerShift Atlantic is the first project of its kind in Canada, and one of 19 Clean Energy Fund projects currently underway nationwide. It is led by Natural Resources Canada through the Clean Energy Fund and by New Brunswick Power, in partnership with Nova Scotia Power, Saint John Energy, Maritime Electric, the University of New Brunswick (UNB), and the Governments of New Brunswick and Prince Edward Island. This multi-year initiative was launched in 2010, and will last up until the end of the demonstration portion of the project, in 2014. Detailed information and documentation is available at the following;

http://www.powershiftatlantic.com/

The purpose of the project is to determine if shifting patterns of energy consumption through load control can enable utilities to more effectively integrate renewable energy such as wind. Wind energy is a clean, renewable energy source that has an important role in our electricity system. However, as a natural resource, it's more unpredictable and irregular than traditional generation.

One solution to working with the variability of wind generation is to shift the energy being delivered to homes and commercial buildings at times when it isn't needed. The goal is to experiment and find acceptable ways to shift when electricity flows to homes and businesses, with minimal or no disruption or inconvenience to a customer.

The project is studying a combination of intelligent hardware and software solutions and improved wind forecasting tools that allow Maritime utilities to regulate specific electrical equipment in homes and businesses to better align energy demand with wind generation availability.

The research project employs a new technical architecture, including a Virtual Power Plant (VPP) that can balance demand against the variability of wind generation. The VPP helps manage individual customer loads in an aggregated fashion, enabling the utility to align energy consumption with shifting patterns of the wind, making small adjustments to the intervals when an aggregated group of end uses turn on and off: either turning them off when the wind goes down, or turning them on when the wind blows.

All equipment eligible for this research has some kind of energy storage capability. By remotely managing the on, off, up and down times of the equipment – shifting cycles a few minutes here and there and combining loads from many customers – PowerShift Atlantic can demonstrate ways to optimize wind-generated energy, without requiring any change in customer behavior. The project is an examination of effective energy use and resource balancing.

NS Power’s contribution to this demonstration project is covered under a capital work order. The work order application was submitted to the Board on October 4, 2010. The Board approved the application on November 23, 2010. The project is listed under NSPI’s ACE Plan as CI 40103 - Load Control Demonstration Project (U & U).

(b) NS Power has no additional information on these programs beyond what is provided in the Bibliography of Appendix 6.02.

(c) NS Power does not have this comparison available at this time.

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Request IR-44:

Reference Appendix 6.02, p. 33

(a) Has NSPI identified any locations in Nova Scotia that may be suitable for pumped hydro storage? If so, please provide any available studies or reports.

(b) Has NSPI identified any options for increasing storage capacity at existing hydro sites? If so, please provide any available studies or reports.

(c) Please provide any data or analyses that describe New Brunswick's "limited generation flexibility."

(d) Please provide a detailed description of the "challenges of minimum unit turndown and commitment" that NSPI is "already encountering."

Response IR-44:

(a) NSPI has investigated the potential for pumped hydro storage. Refer to Attachment 1. The sites that offer larger capability have shortcomings that introduce costs that limit their potential. Attachment 2 Confidential is a recent study of pumped storage potential at Wreck Cove.

(b) Studies and analysis for increasing storage capacity would be submitted as part of NS Power's Annual Capital Expenditure Plan if the investments proved economic.

(c) This is a general reference to the relatively large nature of some baseload generators on the New Brunswick Power system including the Point Lepreau (680MW) and Belledune (467 MW).

(d) NSPI has identified periods of low load in 2012 where NSPI system operators were forced to back steam generation to minimum in order to allow wind generation on the system and still have enough generation online to be able to ramp up for the morning peak. Backing steam generation to minimum provides plenty of up-regulation, but no down-regulation capability for wind and load following. Hydro energy may or may not be available at the time due to either maintenance, forced outages, low water levels or other restrictions. In order to provide sufficient down regulation, with instantaneous response time, NSPI has to start expensive diesel combustion turbines, while at the same time exporting energy to New Brunswick at off-peak energy prices. Situations like these are expected to become more frequent with addition of more wind energy on the system.

Exploratory Investigation of Pumped Storage at Existing NSPI Hydro Systems – January, 2013

Hydro System	Upper Reservoir	Lower Reservoir	Head (m)*	Reservoir Distance (km)*
St. Margaret's Bay	Five Mile Lake	Big Indian Lake	61	4.5
	Big Indian Lake	Sandy Lake	8	< 1
Sissiboo	Fourth Lake	Third Lake/Sissiboo Grand Lake	30	3
	Sissiboo Grand Lake	Sissiboo Falls Reservoir	50	10
Wreck Cove	McMillan	Gisborne	25	6
	Gisborne	Wreck Cove	33	0.5
	Cheticamp	Gisborne	91	9
	Ingonish II	Gisborne	227	6
Paradise	Corbett Lake	Dalhousie Lake	0	< 1
	Paradise Lake	Saunders Headpond	29	5
Dickie Brook	Donahue	Tom	14.5	1.6

*Estimated value

CA IR-44 Attachment 2 has been removed due to confidentiality.

Request IR-45:

Reference Appendix 6.02, Figure 33

(a) Please provide the date from which the "actual system load data and actual wind data" were derived.

(b) Please provide the number of wind farms included in the actual data and the number of wind farms that would be required to reach 785 MW of wind.

Response IR-45:

NS Power assumes the referenced figure is Figure 3.9 on page 33.

(a) The wind generation and load data was taken from the period 2012 12 04 00:00 to 2012 12 06 00:00. Wind generation was scaled to represent a sample case with 785 MW of installed wind generation. Load was scaled to represent a low load scenario. Neither the shape nor the timing of the load and wind generation was shifted from actual data used to develop the example.

(b) Please refer to SBA IR-227 (b).

Request IR-46:

Reference Appendix 6.02, Table 3.3

(a) Please identify any dates on which Nova Scotia wind output has swung from zero output in the low-load hours to 100% of installed capacity in the high-load hours.

(b) Please provide the data and analysis from which NSPI determined that the "System Typical Daily Min/Max Range" is 580 MW.

(c) Please identify the units committed in each of the four cases shown.

(d) Please provide the derivation of the "reserve - combustion turbines" line.

(e) Please provide the capacity available from hydro.

(f) Please provide the capacity available from interruptible load.

(g) Please provide the capacity available from imports from New Brunswick.

Response IR-46:

(a) NS Power has observed no instances of the referenced operating condition in the past three years.

(b) The daily Min/Max range of 580 MW was selected to demonstrate the challenges that could be faced by system operators under a high wind penetration scenario. Min to max swings of over 700 MW occurs on the NS Power system today.

(c) Please refer to the table for the breakdown of minimum unit commitment assumptions used in Table 33:

Generator	Notes	5 Steam	6 Steam	7 Steam	8 Steam
Regulation	For down regulation	25	25	25	25
Brooklyn	Must run for RES	15	15	15	15
PHBM	Must run for RES	60	60	60	60
Point Aconi		120	120	120	120
Steam Unit 2		60	60	60	60
Steam Unit 3		60	60	60	60
Steam Unit 4		60	60	60	60
Steam Unit 5		60	60	60	60
Steam Unit 6			60	60	60
Steam Unit 7				60	60
Steam Unit 8					60
Total (MW)		**460**	**520**	**580**	**640**
Nominal Minimum Values					

(d) The Reserve – Combustion Turbine line of Table 3.3 assumes that the necessary operating reserves are largely served by the combustion turbine fleet.

(e) Installed hydro capacity is 395 MW (including Annapolis Tidal) but is a finite resource as limited by watershed hydrology and further constrained seasonally in some cases by environmental operating considerations.

(f) Present day interruptible load includes the Port Hawkesbury Paper Mill plus between 70 and 120 MW of industrial load.

(g) For the NB NS interconnection, NBSO posts a Non-Recallable Available Transfer Capacity (NATC) of 0 MW (import to NS) for high load seasons. NATC increases to 100 MW in low load seasons. Monthly reports of TTC and ATC can be found at the following link:
http://oasis.nspower.ca/en/home/oasis/monthlyreports/hourly_nbintertie.aspx

Request IR-47:

Reference Appendix 6.02, page 37

(a) Please provide any projections of NSPI's load shifting past summer 2013.

(b) Please describe the history of NSPI's development of its load-shifting program.

Response IR-47:

(a) NS Power is participating in the research project PowerShift Atlantic. NS Power does anticipate a role for demand control in the future, but does not have projections for deployment beyond the proposed end of the project in 2014.

(b) Please refer to CA IR-43 (a).

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Request IR-48:

Reference Appendix 6.02, page 38

Please provide the basis for the cost estimates for simple-cycle combustion turbines.

Response IR-48:

Estimates were derived from data presented in Appendix 6.03 Page 19.

Request IR-49:

Reference Appendix 6.03 Pages 3 and 4

Please provide the derivation of the base and low load forecasts used in the Maritime Link filing:

(a) Please provide the August-2012 GRA-Refresh load forecast.

(b) Please provide all available work papers for the August-2012 GRA-Refresh forecast, and for the base and low forecasts in this proceeding.

(c) Please identify each change in the August-2012 GRA-Refresh forecast used to produce the base forecast in this proceeding.

(d) Please identify each change in the August-2012 GRA-Refresh forecast used to produce the low forecast in this proceeding.

(e) Please clarify the statement that "The rate of growth in residential electric heating was increased by 1% every 5 years. – double the current growth rate."

(i) Please define what quantity was increased by 1% every 5 years: heating GWh, electric heating as a share of residential customers, electric-heat penetration in new construction, or something else.

(ii) Please explain the meaning of the phrase "increased by 1% every 5 years," including whether this is the same as a 0.2% annual increase in the electric-heating parameter, a step 1% increase in every fifth year, or something else.

(f) Please provide all the equations that use the "growth of economic indicators" that "was increased by 50%."

(g) Please explain what is assumed in the base and low load forecasts regarding the operation and load of the Bowater Mersey paper plant and the Imperial Oil refinery.

(h) Please provide the GWh firm energy load assumed in the base and low load forecasts for the Port Hawkesbury paper mill, and how those energy forecast levels relate to the assumption operation of the mill (e.g., one machine, two shifts, 300 days per year).

Response IR-49:

(a) For the purposes of the GRA refresh, the focus was on the years 2013 and 2014 and no load forecast report was created for this August forecast revision.The August-2012 GRA-Refresh load forecast was an updated version of the April 2012 NSPI Load Forecast filed as SR-02 in the 2013 General Rate Application. Details on the load forecast methodology can be found in that April forecast report.

Updates and changes from the April 2012 load forecast include a revised economic forecast from the Conference Board of Canada (CBoC) and updated customer sales and assumptions. Coefficients for the econometric models were re-estimated with this updated input. The resulting annual load forecast loads is shown in the table below:

Year	Annual Energy GWh	System Peak MW
2013	9,861.9	1,997
2014	9,831.2	1,982
2015	9,783.7	1,970
2016	9,744.8	1,962
2017	9,713.6	1,956
2018	9,663.0	1,946
2019	9,644.4	1,942
2020	9,605.1	1,934
2021	9,560.0	1,925
2022	9,498.9	1,913

(b) As described in part (a) of this response, the August-2012 GRA-Refresh forecast was prepared with the same methodology as other NSPI forecasts outlined in SR02. For the purposes of the NSPML filing, the Port Hawkesbury paper mill was add to the GRA-Refresh forecast for the years 2013 to 2019 and this was considered the low case forecast. The reason for this is explained in response to Synapse IR-013 (a). The load forecasts are prepared using models rather than workpapers. The following response is offered to assist.

The NSPML base case began with the GRA-Refresh forecast then added certain load growth contingencies in consideration of compliance with the RES requirements. These inputs included:

- Assumption of higher economic growth.
- Increased use of residential electric space heating.
- Electric vehicles (EVs) becoming a recognizable component of auto sales.

- Port Hawkesbury Paper mill (PHP) continuing to operate beyond 2019, for the duration of the forecast period.

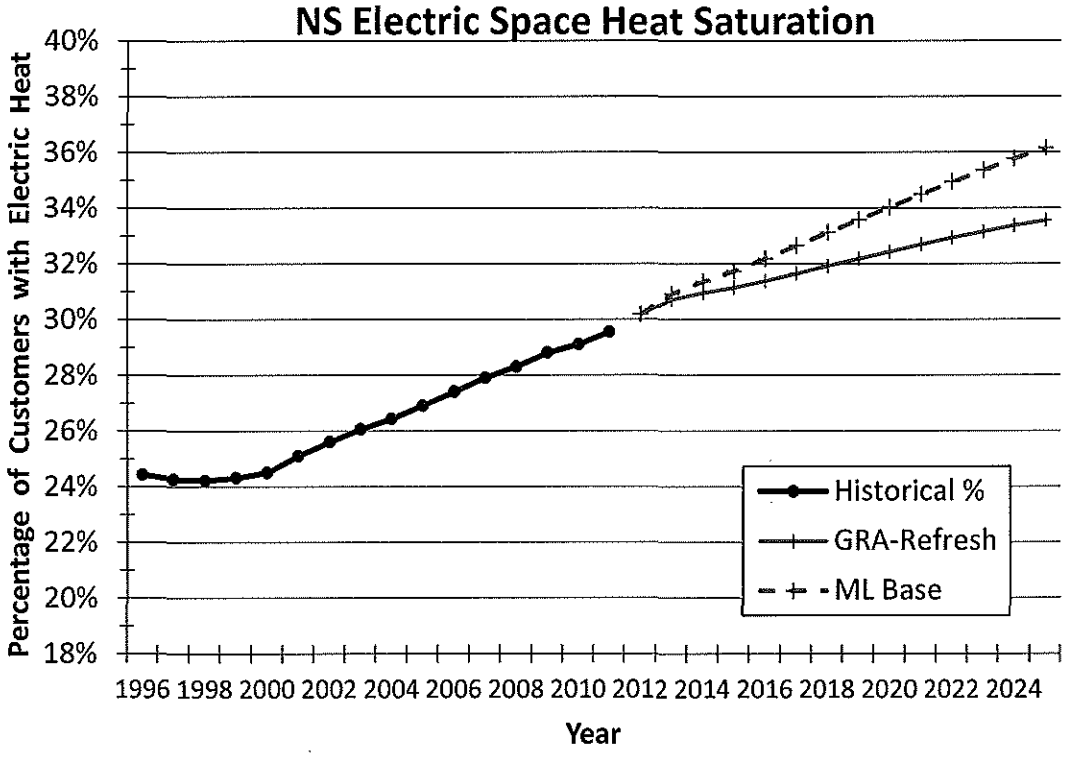
The methods for applying these assumptions are as follows:

For the higher economic growth assumption, it was assumed that the long-term projected growth could be 50 percent higher than the current forecast. The table below shows the calculation of the higher economic growth growth rates as a 50 percent increase in the average annual growth from 2011 to 2030 in the long-term economic forecast. It is a common practice in forecasting to perform sensitivity analysis in this manner. The chosen 50 percent factor applied to these variables generally provides an average growth rate that is still lower than the 30-year historical average, with the exception of the manufacturing GDP which has is a somewhat more volatile series. In the model, each economic indicator was increased by the calculated higher growth rate.

The reason for this is explained in response to Synapse IR-013a).

	Gross Domestic Product, Expenditure Based, Consumer Expenditures, Goods, Nova Scotia	**GDP at Basic Prices Service-Producing Industries, Nova Scotia**	**Gross Domestic Product at Basic Prices, Nova Scotia**	**GDP at Basic Prices Manufacturing, Nova Scotia**
	RCGOODS	RQSRS	RQTOS	RQMANS
	(Millions $ 2002)	(Millions $ 2002)	(Millions $ 2002)	(Millions $ 2002)
2011 actual	10,086	21,548	27,460	2,610
2030 forecast	10,748	27,288	34,479	3,818
Total growth (19yrs)	106.60%	126.60%	125.60%	146.30%
Average annual growth	0.34%	1.25%	1.21%	2.02%
50% growth increase	0.50%	1.88%	1.81%	3.03%

The assumption for residential electric space heat is based on the observation that the projection for customer growth is roughy an additional 1 percent every five years in the GRA Refresh model. If one considers the long-term increase in space heating saturation over the long-term (the last 10-15 years, for example), the adoption of electric heating could be slightly higher if the future trend follows the historical trend. Adding growth to the forecast of future electric heat saturation at the rate of one percent each 5 years provides a trend that is similar to the historical trend. These trends are shown on the chart below. New construction is chosing electric heating as it is economic compared with other heating alternatives.



The EV assumption takes a conservative approach in estimating electric vehicle penetration rate due to the uncertainty in the market segment and a lack of useful historical information. The initial estimate of 0.1 percent per year penetration of new car sales is consistant with a report of Canadian sales in 2012 [REF: http://www.greencarreports.com/news/1082402_plug-in-electric-car-sales-in-canada-for-

january-2013] and is escalated at a conservative 0.1 percent per year for the analysis period. The annual energy consumption estimate per vehicle is based on typical battery cycle consumption 5 days per week, for a total of approximately 5,000 kWh per year.

For the NSPML low case forecast, the Port Hawkesbury Paper mill (PHP) operates until 2019, the duration of the LRT rate agreement. In the NSPML base case, PHP continues to operatre for the duration of the forecast period. The reason for this approach are explained in response to Synapse IR-013 (a).

(c) The NSPML base case is based on the August-2012 GRA-Refresh forecast but with an assumption of higher economic growth, increased electric space heat, electric vehicle load and PHP mill operating for the duration of the foreast period. Details of these adjustments are found in response to part (b) of this question.

(d) The NSPML low case is based on the August-2012 GRA-Refresh forecast with the addition of the PHP mill load to the year 2019.

(e) i) The electric heat saturation or the share of residential customers using electric space heat was increased above the original GRA Refresh forecast assumptions.

ii) The saturation of electric space heating in NSPML base case was increased by an additional 0.2 percent per year above the saturations assumptions in the GRA Refresh.

(f) The adjusted growth for the economic indicators was based on the average growth from the latest actual (2011) to the end of the long-term Conference Board forecast trend (2030). Using the NS GDP as a calculation example the equations are below.

The total growth (tg) over the period:

$$\text{tg} = \frac{GDP\ year\ 2030:\ \ 34{,}479}{GDP\ year\ 2011:\ \ 27{,}460} = 1.25558$$

The average annual growth rate (ag) of this variable over the 19 year period is:

$$ag = tg^{(\frac{1}{19})} - 1 = 1.25558^{(\frac{1}{19})} - 1 = 0.01205$$

The 50 percent increase (ag50) is calculated as:

$$ag50 = \text{ag} * 1.5 = 0.01205 * 1.5 = 0.018077 \text{ or } 1.81\% \text{ per year}$$

The economic indicators that were adjusted for the NSPML base case were the ones employed directly in the econometric models as detailed below.

For the residential sector (RES) model, it was the Consumer Goods Sales (RCGOODS) variable:

$$RES = 348 * AIDX + 0.245 * CHDD + 0.0893 * RCGOODS - 42.2 * RREP + 0.523 * RES_{-1}$$

For the commercial sector (COM) model, it was the GDP for the Service Industry (RQSRS) variable:

$$COM = 0.0576 * RQSRS + 0.1113 * HDD + 0.5148 * COM_{-1}$$

For the Small Industrial (SI) model, it was the NS GDP (RQTOS) variable:

$$SI = 0.001381 * RQTOS + 0.01288\ RRINRBS + 0.7988 * SI_{-1}$$

For the Medium Industrial (MI) model, it was the NS GDP for manufacturing (RQMAN) variable:

$$MI = 0.07484 * RQMAN + 0.6348 * MI_{-1}$$

(g) For the GRA Refresh forecast and the NSPML forecasts, the assumptions for the Bowater Mersey paper plant and the Imperial Oil refinery were unchanged.

The Bowater Mersey paper plant was assumed to be closed and consuming no energy for the entire forecast period. Due to the uncertainty surrounding the future operation of the Imperial Oil refinery, its typical energy consumption was reduced by 50 percent after Q2 2013 and held constant for the duration of the forecasts.

(h) The load assumed for Port Hawkesbury Paper (PHP) was nominated as priority interruptible demand and not firm at 1,138.8 GWh per year in all cases. This load was arrived at through consultation with PHP. In the NSPML low case, the PHP load is removed at the end of the LRT period, 2019. For the NSPML base case, the PHP load or a similar level of other industrial load is assumed for the duration of the forecast.

Request IR-50:

Reference GRA SR-02 Attachment 1 Page 33: "With the exception of large customer classes, monthly and annual net system peaks are computed using forecast monthly energy and average historical coincident load factors for each of the rate classes. Monthly peak loss percentages are applied to each monthly sales peak to produce losses by class and are then summed to produce the total peak demand forecast."

(a) Please provide the data and computations used to estimate the peak contributions for "large customer classes."

(b) Please provide the "historical coincident load factor" for each rate class, and the derivation of those averages.

(c) Please explain how NSPI forecasts monthly sales for the peak month, and provide all work papers.

(d) Please provide monthly peak and energy loss percentages by class.

Response IR-50:

(a) Please refer to Attachment 1. Historical load research data is used to forecast large customer behaviour from year to year. Adjustments are made where changes occur or are communicated by the customers through correspondence, discussions with Key Account Managers, or surveys. These adjustments may range from new customer additions or expansions, to partial or full production line closures. When GRA SR-02 Attachment 1 was developed, it did not assume any changes from the historical data being used. Changes which would have been taken into consideration, like the announcements surrounding Port Hawkesbury Paper and Imperial Oil, were announced later in the year

and were taken into account for the NSPML analysis. The detailed data would include customer confidential information.

(b) The historical coincident load factors for each class are derived from actual load research data by dividing the total monthly energy requirement by the coincident monthly peak multiplied by the hours in the month. Please see Attachment 2 for historical coincident load factors.

(c) For the accrued classes, monthly class sales are developed apportioning the forecasted annual rate class requirement to each month based on a 5-year historical average of each month's sales as a percentage of the annual total. The monthly percentage of the annual sales for each accrued rate class is shown in the table below. The response to part A outlines how monthly sales are determined for large customer classes.

	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Regular Domestic	12.0%	10.4%	10.5%	8.4%	7.6%	6.3%	6.4%	6.2%	6.2%	7.1%	8.2%	10.7%
ETS, Time of Use	14.1%	11.9%	11.7%	9.5%	7.2%	4.5%	3.9%	3.6%	4.1%	5.7%	8.7%	15.0%
Small General	11.0%	10.1%	9.6%	8.2%	7.5%	7.1%	7.4%	7.4%	6.7%	7.5%	7.8%	9.8%
General Demand	9.6%	9.0%	9.3%	8.0%	7.6%	7.6%	8.3%	8.0%	7.4%	7.8%	8.1%	9.3%
Small Industrial	8.7%	8.4%	8.4%	8.0%	8.1%	8.4%	8.6%	8.6%	8.0%	7.4%	8.1%	9.4%
Medium Industrial	8.6%	7.8%	8.3%	8.3%	8.2%	8.5%	8.5%	8.5%	8.3%	8.4%	8.2%	8.4%
Unmetered	8.4%	8.0%	8.4%	8.1%	8.6%	8.2%	8.0%	8.3%	8.4%	8.2%	8.7%	8.8%

(d) Please see Attachment 1 for monthly peak and energy loss percentages by class.

MONTHLY SYSTEM COINCIDENT PEAKS: REQUIREMENTS, SALES, AND LOSSES BY RATE CLASS IN MWh PER HOUR

	2013 Jan	2013 Feb	2013 Mar	2013 Apr	2013 May	2013 Jun	2013 Jul	2013 Aug	2013 Sep	2013 Oct	2013 Nov	2013 Dec
Requirements												
Residential non ToD	1,086.2	1,161.8	910.8	821.4	651.5	678.6	467.5	524.5	521.7	654.5	849.3	1,024.8
Residential ToD	33.1	27.4	21.7	22.2	15.1	15.3	14.8	13.2	16.7	14.8	21.1	39.5
Small General	42.1	40.1	42.9	24.0	34.7	27.0	39.2	37.2	34.7	30.5	32.7	39.1
General Demand	488.2	430.0	450.6	357.0	365.7	317.8	421.1	434.6	440.5	380.6	380.5	444.5
Large General	55.1	54.3	58.4	50.9	60.0	49.8	69.1	72.6	72.4	58.2	56.4	57.8
Small Industrial	41.7	39.6	39.8	34.1	43.9	34.4	43.7	42.5	40.0	43.4	35.6	36.5
Medium Industrial	75.9	74.3	66.9	66.2	72.2	69.6	78.3	74.6	74.2	75.3	73.6	77.4
Large Industrial With Interruptible	112.2	121.9	111.4	113.7	110.2	112.7	130.1	131.6	131.5	118.6	97.3	137.1
Large Industrial Firm	32.8	30.0	28.1	28.5	32.2	21.9	30.1	29.0	31.0	28.4	28.3	32.7
Large Industrial Interruptible Only	79.4	91.8	83.3	85.2	78.0	90.8	100.0	102.6	100.5	90.1	69.0	104.3
Gen. Repl. & Load Follow.	(0.1)	0.0	(0.0)	0.2	0.7	(0.0)	2.5	18.2	23.5	1.5	20.1	0.4
Bowater Mersey	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6
Mersey Additional Energy	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
ELI 2P-RTP	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5
Municipal	41.3	42.3	34.8	28.4	25.7	25.5	26.6	26.8	27.5	27.4	32.9	39.2
Unmetered	21.0	26.1	2.9	3.1	3.4	2.9	3.4	3.2	3.0	2.6	19.0	26.5
NSR Peak:	2,077.1	2,098.0	1,820.5	1,601.6	1,463.4	1,413.8	1,376.7	1,459.6	1,466.0	1,487.7	1,698.8	2,003.0
Sales												
Residential non ToD	956.5	1,012.3	810.5	736.7	589.4	612.5	433.7	479.6	483.8	594.2	759.3	894.2
Residential ToD	30.3	25.1	19.8	20.5	14.0	14.1	13.8	12.3	15.7	13.7	19.5	35.5
Small General	38.4	36.5	38.9	22.1	31.7	24.8	36.3	34.1	32.2	28.3	30.1	35.6
General Demand	454.5	402.2	418.4	335.7	341.6	298.1	394.3	404.1	413.4	356.4	357.9	410.3
Large General	51.7	51.1	54.7	48.0	56.2	46.8	65.0	67.7	68.7	54.8	53.2	53.8
Small Industrial	39.5	37.5	37.3	32.3	41.2	32.4	41.6	40.2	38.1	40.9	33.7	34.1
Medium Industrial	72.2	70.5	63.2	62.8	68.0	65.5	74.5	70.5	70.8	71.3	70.0	72.6
Large Industrial With Interruptible	108.0	117.0	106.7	109.0	105.0	107.2	124.7	125.3	126.3	113.4	93.9	129.9
Large Industrial Firm	31.3	28.7	26.8	27.2	30.5	20.8	28.8	27.6	29.6	27.1	27.1	30.9
Large Industrial Interruptible Only	76.6	88.3	79.9	81.8	74.4	86.4	95.9	97.7	96.6	86.3	66.8	99.1
Gen. Repl. & Load Follow.	(0.1)	0.0	(0.0)	0.2	0.7	(0.0)	2.4	17.8	23.0	1.5	19.7	0.4
Bowater Mersey	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
Mersey Additional Energy (LF)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
ELI 2P-RTP	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8
Municipal	39.0	40.5	33.1	27.1	24.5	24.2	25.6	25.6	26.5	26.2	31.2	37.1
Unmetered	18.5	23.6	2.7	2.9	3.2	2.7	3.2	3.1	2.9	2.4	17.5	23.6
Total:	1,887.1	1,894.9	1,664.1	1,476.0	1,354.3	1,307.1	1,293.9	1,359.0	1,380.2	1,381.9	1,564.8	1,805.8
Losses												
Residential non ToD	129.7	149.5	100.2	84.8	62.0	66.1	33.8	44.9	37.9	60.3	89.9	130.7
Residential ToD	2.8	2.3	1.9	1.7	1.2	1.2	1.0	1.0	1.0	1.1	1.6	3.9
Small General	3.7	3.6	4.0	1.9	3.0	2.2	2.9	3.1	2.5	2.1	2.6	3.5
General Demand	33.7	27.7	32.3	21.3	24.1	19.7	26.8	30.5	27.1	24.2	22.5	34.1
Large General	3.4	3.2	3.7	2.9	3.8	3.0	4.0	4.9	3.7	3.4	3.2	4.0
Small Industrial	2.2	2.2	2.4	1.9	2.7	2.0	2.2	2.4	1.9	2.5	1.9	2.4
Medium Industrial	3.8	3.9	3.7	3.4	4.2	4.0	3.8	4.1	3.4	4.0	3.6	4.8
Large Industrial With Interruptible	4.2	4.9	4.8	4.7	5.2	5.4	5.3	6.3	5.2	5.2	3.5	7.1
Large Industrial Firm	1.45	1.34	1.35	1.32	1.69	1.07	1.28	1.41	1.32	1.36	1.24	1.83
Large Industrial Interruptible Only	2.76	3.56	3.44	3.38	3.53	4.35	4.06	4.90	3.88	3.84	2.23	5.28
Gen. Repl. & Load Follow.	(0.0)	0.0	(0.0)	0.0	0.0	(0.0)	0.0	0.4	0.5	0.0	0.4	0.0
Bowater Mersey	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Mersey Additional Energy (LF)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
ELI 2P-RTP	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Municipal	2.3	1.8	1.7	1.3	1.2	1.3	1.0	1.2	1.0	1.2	1.7	2.1
Unmetered	2.6	2.5	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	1.4	2.9
Total:	189.9	203.2	156.5	125.6	109.1	106.7	82.7	100.6	85.8	105.9	134.0	197.2

MONTHLY SYSTEM COINCIDENT PEAKS: REQUIREMENTS, SALES, AND LOSSES BY RATE CLASS IN MWh PER HOUR

	2013 Jan	2013 Feb	2013 Mar	2013 Apr	2013 May	2013 Jun	2013 Jul	2013 Aug	2013 Sep	2013 Oct	2013 Nov	2013 Dec
Losses as %Sales	January	February	March	April	May	June	July	August	September	October	November	December
Residential non ToD	13.6%	14.8%	12.4%	11.5%	10.5%	10.8%	7.8%	9.4%	7.8%	10.2%	11.8%	14.6%
Residential ToD	9.2%	9.2%	9.6%	8.4%	8.3%	8.4%	7.0%	7.9%	6.7%	8.2%	8.3%	11.1%
Small General	9.7%	9.9%	10.2%	8.5%	9.4%	9.0%	8.1%	9.2%	7.6%	7.6%	8.5%	9.9%
General Demand	7.4%	6.9%	7.7%	6.3%	7.1%	6.6%	6.8%	7.5%	6.6%	6.8%	6.3%	8.3%
Large General	6.6%	6.2%	6.8%	6.0%	6.7%	6.4%	6.2%	7.2%	5.3%	6.3%	6.0%	7.5%
Small Industrial	5.7%	5.8%	6.5%	5.7%	6.5%	6.1%	5.2%	5.9%	4.9%	6.0%	5.7%	6.9%
Medium Industrial	5.2%	5.5%	5.8%	5.4%	6.2%	6.1%	5.1%	5.8%	4.8%	5.7%	5.2%	6.6%
Large Industrial With Interruptible	3.9%	4.2%	4.5%	4.3%	5.0%	5.1%	4.3%	5.0%	4.1%	4.6%	3.7%	5.5%
Large Industrial Firm	4.6%	4.7%	5.0%	4.9%	5.5%	5.1%	4.4%	5.1%	4.5%	5.0%	4.6%	5.9%
Large Industrial Interruptible Only	3.6%	4.0%	4.3%	4.1%	4.7%	5.0%	4.2%	5.0%	4.0%	4.5%	3.3%	5.3%
Gen. Repl. & Load Follow.	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Bowater Mersey	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Mersey Additional Energy	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
ELI 2P-RTP	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Municipal	5.9%	4.5%	5.1%	4.7%	4.8%	5.4%	4.1%	4.8%	3.9%	4.5%	5.4%	5.7%
Unmetered	14.0%	10.5%	7.9%	7.0%	5.6%	4.6%	4.7%	5.1%	5.7%	6.5%	8.2%	12.3%
% Loss:	10.1%	10.7%	9.4%	8.5%	8.1%	8.2%	6.4%	7.4%	6.2%	7.7%	8.6%	10.9%

MONTHLY SYSTEM COINCIDENT PEAKS: REQUIREMENTS, SALES, AND LOSSES BY RATE CLASS IN MWh PER HOUR

	2013 Jan	2013 Feb	2013 Mar	2013 Apr	2013 May	2013 Jun	2013 Jul	2013 Aug	2013 Sep	2013 Oct	2013 Nov	2013 Dec
Requirements	1,115.5	1,188.5	929.1	841.1	664.3	691.2	481.4	536.4	539.6	667.0	867.4	1,061.7
Residential non ToD	1,080.6	1,159.8	906.3	817.7	648.4	675.1	465.8	522.5	522.0	651.4	845.2	1,020.1
Residential ToD	34.9	28.7	22.9	23.4	15.9	16.1	15.6	14.0	17.6	15.6	22.2	41.6
Small General	41.9	39.5	42.7	23.9	34.5	26.8	39.0	37.0	34.4	30.3	32.5	38.7
General Demand	488.6	432.0	451.0	357.5	366.0	317.8	421.4	434.8	439.8	380.8	380.9	445.1
Large General	53.9	52.8	57.2	49.8	58.7	48.7	67.5	71.0	70.6	56.9	55.2	56.6
Small Industrial	42.2	39.8	40.2	34.5	44.3	34.7	44.1	43.0	40.3	43.8	36.0	36.9
Medium Industrial	78.3	76.1	68.9	68.2	74.3	71.5	80.6	76.8	76.2	77.6	75.8	79.7
Large Industrial With Interruptible	110.3	117.9	110.1	112.4	109.1	120.3	128.8	130.3	129.8	117.3	97.4	136.5
Large Industrial Firm	32.7	29.7	28.0	28.4	32.0	30.7	30.0	28.9	30.7	28.3	28.2	32.6
Large Industrial Interruptible Only	77.6	88.2	82.1	84.0	77.0	89.6	98.9	101.4	99.1	89.0	69.2	104.0
Gen. Repl. & Load Follow.	(0.1)	0.0	(0.0)	0.2	0.7	(0.0)	2.5	18.2	23.5	1.5	20.1	0.4
Bowater Mersey	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6
Mersey Additional Energy	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
ELI 2P-RTP	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5
Municipal	40.6	41.8	34.6	28.4	25.6	25.4	26.6	26.8	27.4	27.3	32.4	39.0
Unmetered	19.6	24.5	2.7	2.9	3.2	2.7	3.2	3.0	2.9	2.4	17.8	24.9
NSR Peak:	2,071.1	2,093.34	1,816.8	1,599.2	1,461.0	1,419.5	1,375.4	1,457.7	1,465.0	1,485.3	1,696.0	2,000.0
Sales												
Residential non ToD	951.5	1,010.4	806.2	733.1	586.2	614.6	431.7	477.2	480.7	591.1	755.7	889.7
Residential ToD	31.9	26.2	20.8	21.6	14.7	15.0	14.5	12.9	16.5	14.4	20.5	37.4
Small General	38.1	35.9	38.7	22.0	31.5	24.8	36.0	33.8	32.0	28.1	29.9	35.2
General Demand	454.7	403.7	418.5	335.9	341.7	300.8	394.7	404.4	413.1	356.6	358.2	410.6
Large General	50.5	49.6	53.5	47.0	54.9	46.2	63.6	66.2	67.1	53.5	52.1	52.6
Small Industrial	39.8	37.6	37.7	32.6	41.6	33.0	42.0	40.6	38.5	41.3	34.0	34.5
Medium Industrial	74.3	72.1	65.1	64.7	70.0	68.1	76.7	72.6	72.8	73.4	72.1	74.7
Large Industrial With Interruptible	105.3	113.1	105.2	107.6	103.8	115.6	123.6	124.1	124.7	112.1	93.9	129.3
Large Industrial Firm	31.2	28.4	26.6	27.1	30.4	29.4	28.7	27.5	29.4	26.9	26.9	30.7
Large Industrial Interruptible Only	74.2	84.7	78.6	80.6	73.5	86.1	94.9	96.6	95.3	85.2	66.9	98.6
Gen. Repl. & Load Follow.	(0.1)	0.0	(0.0)	0.2	0.7	(0.0)	2.4	17.8	23.0	1.5	19.7	0.4
Bowater Mersey	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
Mersey Additional Energy (LF)	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
ELI 2P-RTP	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8
Municipal	38.8	40.0	32.9	27.1	24.4	24.4	25.5	25.6	26.4	26.2	31.1	36.9
Unmetered	17.3	22.1	2.5	2.7	3.0	2.6	3.0	2.9	2.7	2.3	16.4	22.1
Total:	1,880.9	1,889.4	1,659.8	1,473.2	1,351.4	1,323.6	1,292.5	1,356.9	1,376.2	1,379.2	1,562.3	1,802.1
Losses												
Residential non ToD	129.2	149.5	100.1	84.6	62.2	60.5	34.1	45.2	41.3	60.4	89.5	130.4
Residential ToD	3.0	2.5	2.1	1.9	1.3	1.1	1.0	1.1	1.1	1.2	1.8	4.2
Small General	3.7	3.6	4.0	1.9	3.0	2.0	2.9	3.1	2.5	2.2	2.6	3.6
General Demand	33.9	28.3	32.5	21.6	24.3	17.0	26.7	30.4	26.8	24.2	22.7	34.6
Large General	3.4	3.1	3.7	2.9	3.7	2.5	3.9	4.8	3.5	3.4	3.2	4.0
Small Industrial	2.3	2.2	2.5	1.9	2.7	1.7	2.2	2.4	1.9	2.5	1.9	2.4
Medium Industrial	3.9	4.0	3.9	3.5	4.4	3.5	3.9	4.2	3.4	4.1	3.7	5.0
Large Industrial With Interruptible	4.9	4.9	4.9	4.7	5.2	4.8	5.2	6.2	5.1	5.2	3.6	7.2
Large Industrial Firm	1.56	1.36	1.37	1.32	1.68	1.30	1.26	1.41	1.30	1.35	1.24	1.84
Large Industrial Interruptible Only	3.39	3.50	3.49	3.39	3.55	3.46	3.99	4.83	3.77	3.81	2.32	5.37
Gen. Repl. & Load Follow.	(0.0)	0.0	(0.0)	0.0	0.0	(0.0)	0.0	0.4	0.5	0.0	0.4	0.0
Bowater Mersey	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Mersey Additional Energy (LF)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
ELI 2P-RTP	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Municipal	1.8	1.8	1.7	1.3	1.2	1.1	1.1	1.2	1.0	1.2	1.3	2.1
Unmetered	2.3	2.4	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	1.4	2.7
Total:	190.1	203.9	157.0	126.1	109.6	95.9	82.9	100.8	88.8	106.1	133.6	197.9

MONTHLY SYSTEM COINCIDENT PEAKS: REQUIREMENTS, SALES, AND LOSSES BY RATE CLASS IN MWh PER HOUR

	2013 Jan	2013 Feb	2013 Mar	2013 Apr	2013 May	2013 Jun	2013 Jul	2013 Aug	2013 Sep	2013 Oct	2013 Nov	2013 Dec
Losses as %Sales	January	February	March	April	May	June	July	August	September	October	November	December
Residential non ToD	13.6%	14.8%	12.4%	11.5%	10.6%	9.9%	7.9%	9.5%	8.6%	10.2%	11.8%	14.7%
Residential ToD	9.5%	9.5%	9.9%	8.7%	8.6%	7.6%	7.2%	8.2%	6.8%	8.4%	8.6%	11.3%
Small General	9.8%	10.0%	10.3%	8.7%	9.5%	8.1%	8.1%	9.3%	7.7%	7.7%	8.6%	10.1%
General Demand	7.5%	7.0%	7.8%	6.4%	7.1%	5.7%	6.8%	7.5%	6.5%	6.8%	6.3%	8.4%
Large General	6.7%	6.3%	6.9%	6.2%	6.8%	5.5%	6.1%	7.2%	5.2%	6.3%	6.1%	7.7%
Small Industrial	5.8%	6.0%	6.6%	5.8%	6.4%	5.2%	5.2%	5.9%	4.8%	6.0%	5.7%	7.1%
Medium Industrial	5.3%	5.6%	5.9%	5.4%	6.2%	5.1%	5.1%	5.8%	4.7%	5.6%	5.2%	6.7%
Large Industrial With Interruptible	4.7%	4.3%	4.6%	4.4%	5.0%	4.1%	4.2%	5.0%	4.1%	4.6%	3.8%	5.6%
Large Industrial Firm	5.0%	4.8%	5.2%	4.9%	5.5%	4.4%	4.4%	5.1%	4.4%	5.0%	4.6%	6.0%
Large Industrial Interruptible Only	4.6%	4.1%	4.4%	4.2%	4.8%	4.0%	4.2%	5.0%	4.0%	4.5%	3.5%	5.4%
Gen. Repl. & Load Follow.	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Bowater Mersey	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Mersey Additional Energy	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
ELI 2P-RTP	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Municipal	4.6%	4.5%	5.1%	4.8%	4.8%	4.4%	4.1%	4.8%	3.8%	4.6%	4.1%	5.7%
Unmetered	13.1%	10.8%	7.7%	7.2%	5.4%	3.9%	5.0%	5.5%	5.7%	6.4%	8.5%	12.4%
% Loss:	10.1%	10.8%	9.5%	8.6%	8.1%	7.2%	6.4%	7.4%	6.4%	7.7%	8.6%	11.0%

Load Factors	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Residential	*70.3%*	*61.5%*	*70.3%*	*73.8%*	*72.4%*	*59.2%*	*87.8%*	*73.7%*	*84.2%*	*68.0%*	*64.8%*	*65.8%*
ETS	*144.9%*	*152.7%*	*156.3%*	*151.6%*	*157.0%*	*97.9%*	*113.4%*	*89.0%*	*83.5%*	*125.8%*	*119.7%*	*123.8%*
Small General	*97.5%*	*95.8%*	*81.5%*	*82.2%*	*75.0%*	*94.7%*	*77.4%*	*70.2%*	*68.8%*	*85.5%*	*93.8%*	*96.9%*
General Demand	*76.6%*	*81.5%*	*81.7%*	*73.6%*	*76.2%*	*88.7%*	*69.6%*	*67.6%*	*60.4%*	*74.6%*	*77.3%*	*78.5%*
Large General	*86.6%*	*90.4%*	*90.5%*	*81.6%*	*81.7%*	*96.2%*	*75.0%*	*75.5%*	*69.5%*	*84.9%*	*87.0%*	*89.5%*
Unmetered	*79.3%*	*58.3%*	*86.4%*	*426.5%*	*311.3%*	*336.3%*	*335.0%*	*331.3%*	*392.1%*	*482.9%*	*96.8%*	*64.1%*
Small Industrial	86.7%	86.4%	93.2%	77.2%	69.0%	95.6%	65.2%	76.9%	65.9%	65.1%	93.0%	97.9%
Medium Industrial	90.2%	82.2%	91.1%	85.6%	77.8%	92.5%	78.5%	84.5%	76.2%	82.3%	88.6%	82.8%
Large Industrial	100.6%	93.1%	99.3%	93.4%	84.3%	88.9%	90.3%	96.5%	85.5%	97.6%	100.7%	97.4%
L.I. Interruptible	85.8%	89.2%	93.1%	93.9%	100.1%	92.8%	84.5%	91.2%	83.5%	93.1%	98.6%	82.6%
GRLF	-1137.4%	4912.2%	-106.0%	1335.9%	84.7%	-2762.4%	72.7%	21.4%	57.4%	132.9%	1082.9%	331.6%
Municipal	75.9%	70.5%	78.2%	74.7%	78.2%	75.3%	75.2%	76.1%	72.0%	78.4%	73.9%	75.9%