NEW YORK CONTROL AREA INSTALLED CAPACITY REQUIREMENT FOR THE PERIOD MAY 2008 TO APRIL 2009

EXECUTIVE SUMMARY

A New York Control Area (NYCA) Installed Reserve Margin (IRM) Study is conducted annually by the New York State Reliability Council (NYSRC) Installed Capacity Subcommittee to provide parameters for establishing NYCA IRM requirements for the following capability year. This year's report covers the period May 2008 to April 2009 (2008 capability year).

The base case for the 2008 IRM Study calculated that NYCA IRM requirement for the 2008 capability year to be __%. For this base case, the study also determined Minimum Locational Capacity Requirements (MLCRs) of __% and __% for New York City and Long Island, respectively. In its role of setting the appropriate locational capacity requirements (LCRs), the New York Independent System Operator (NYISO) will consider these MLCRs. These results satisfy and are consistent with all NYSRC Reliability Rules and Northeast Power Coordinating Council (NPCC) and North American Electric Reliability Corporation (NERC) standards.

The above 2008 base case IRM study result is __ percentage points more/less than the IRM requirement determined by the 2007 IRM Study. The principle reasons for this includes: (list)

- Reason A
- Reason B
- Reason C____.

Formatted: Bullets and Numbering

Table 2 shows the IRM impacts caused by updating the models and assumptions used in the 2007 IRM Study.

The study also evaluated IRM requirement impacts of several sensitivity cases. These results are depicted in Table 3 and in Appendix B-1. The base case and sensitivity case results, along with other relevant factors, will be considered by the NYSRC Executive Committee for the determination of the final NYCA IRM requirement for the 2008 Capability Year.

INTRODUCTION

This report describes a technical study, conducted by the NYSRC Installed Capacity Subcommittee, for establishing the NYCA IRM for the period of May 1, 2008 through

April 30, 2009 (2008 capability year). This study is conducted each year in compliance with Section 3.03 of the NYSRC Agreement which states that the NYSRC shall establish the annual statewide Installed Capacity Requirement (ICR) for the NYCA.

The ICR relates to the IRM through the following equation:

$$ICR = (1 + IRM\% / 100) \times \text{Forecasted NYCA Peak Load}$$

The base case and sensitivity case results, along with other relevant factors, will be considered by the NYSRC Executive Committee for the determination of the final NYCA IRM requirement for the 2008 Capability Year.

The NYISO will implement the final NYCA IRM as determined by the NYSRC — in accordance with the NYSRC Reliability Rules and the NYISO Installed Capacity manual. The NYISO translates the required IRM to an Unforced Capacity (UCAP) basis. These values are also used in a Spot Market Auction based on FERC approved Demand Curves. These Unforced Capacity and Demand Curve concepts are described later in the report. The timetable for the IRM study is based on these NYISO requirements.

The study criteria, procedures, and types of assumptions used for this 2008 IRM Study are in accordance with NYSRC Policy 5-1, *Procedure for Establishing New York Control Area Installed Capacity Requirements,* dated November 14, 2006. The primary reliability criterion used in the IRM study requires, on average, a Loss of Load Expectation (LOLE) of no more than once in 10 years for the NYCA. This NYSRC resource adequacy criterion is consistent with NPCC and NERC standards. IRM study procedures include the use of two study methodologies, the *Unified* and the *IRM Anchoring Methodologies.* The above reliability criterion and methodologies are discussed in more detail later in the report. In addition to calculating the NYCA IRM requirement, these methodologies identify corresponding MLCRs. In its role of setting the appropriate LCRs, the NYISO will utilize the same study methodologies and procedures as in the 2008 IRM Study, and will consider the MLCR values determined in this study.

The previous NYCA 2000 to 2007 IRM Study reports can be found on www.nysrc2.org/reports.asp. Table B-__ in Appendix B provides a comparison of previous NYSRC base case results and final NYCA IRMs for the 2000 through 2008 capability years. Definitions of certain terms in this report can be found in the NYSRC Glossary in the *NYSRC Reliability Rules for Planning and Operating the New York State Power System*,
www.nysrc2.org/NYSRCReliabilityRulesComplianceMonitoring.asp.

NYSRC RESOURCE ADEQUACY RELIABILITY CRITERION

The acceptable LOLE reliability level used for establishing NYCA IRM Requirements is dictated by the NYSRC Reliability Rule A-R1, *Statewide Installed Reserve Margin Requirements,* which states:

> *The NYSRC shall establish the IRM requirement for the NYCA such that the probability (or risk) of disconnecting any firm load due to resource deficiencies shall be, on average, not more than once in ten years. Compliance with this criterion shall be evaluated probabilistically, such that the loss of load expectation (LOLE) of disconnecting firm load due to resource deficiencies shall be, on average, no more than 0.1 day per year. This evaluation shall make due allowance for demand uncertainty, scheduled outages and deratings, forced outages and deratings, assistance over interconnections with neighboring control areas, NYS Transmission System emergency transfer capability, and capacity and/or load relief from available operating procedures.*

This NYSRC Reliability Rule is consistent with the NPCC Resource Adequacy Standard in NPCC Document A-2. The NYS Transmission System transfer capability in the above Reliability Rule is represented using emergency transfer limits.

In accordance with NYSRC Rule A-R2, *Load Serving Entity (LSE) Installed Capacity Requirements*, the NYISO is required to establish LSE installed capacity requirements, including locational capacity requirements, in order to meet the statewide IRM Requirements established by the NYSRC for maintaining NYSRC Rule A-R1 above.

The NYSRC Reliability Rules can be found on the NYSRC Web site, www.nysrc2.org/NYSRCReliabilityRulesComplianceMonitoring.asp.

IRM STUDY PROCEDURES

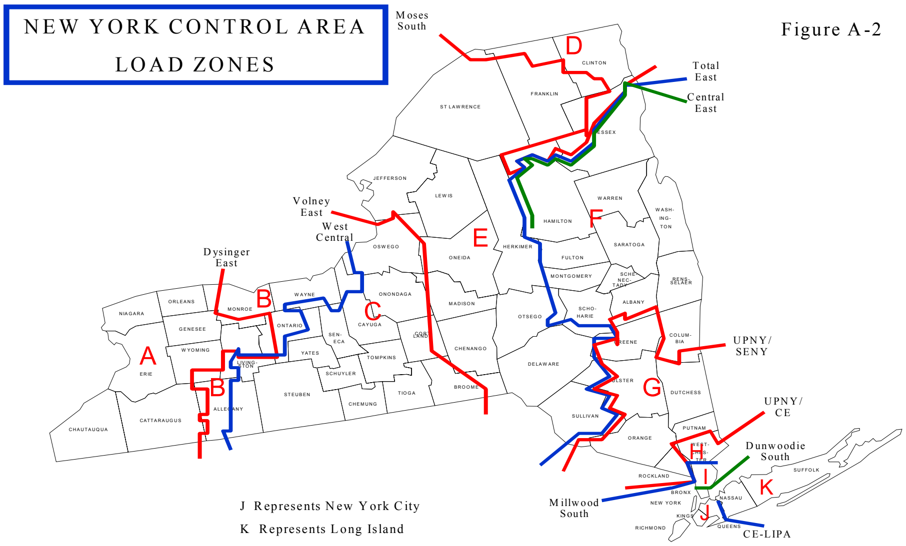
The study procedures used for the 2008 IRM Study are described in detail in NYSRC Policy 5-1, *Procedure for Establishing New York Control Area Installed Capacity Requirements*. Policy 5-1 describes the computer program used for the reliability calculation in addition to the procedures and types of input data and models used for the IRM Study. Policy 5-1 can be found on the NYSRC Web site, www.nysrc2.org/policies.asp.

This study utilizes a *probabilistic* approach for determining the NYCA IRM requirements. This technique calculates the probabilities of generating unit outages, in conjunction with load and transmission representations, to determine the days per year of expected capacity shortages.

GE-MARS is the primary computer program used for this probabilistic analysis. This program includes detailed load, generation, and transmission representation for the eleven NYCA Zones — plus four external Control Areas ("Outside World" Areas) directly interconnected to the NYCA. The eleven NYPA zones are depicted in Figure 1. GE-

MARS calculates LOLE, expressed in days per year, to provide a consistent measure of system reliability.

Figure 1



Using the GE-MARS program, a procedure is utilized for establishing NYCA IRM requirements (termed the *Unified Methodology)* which establishes a graphical relationship between NYCA IRM and MLCRs. All points on these curves meet the NYSRC 0.1 days/year LOLE reliability criterion described above. This methodology develops a pair of curves, one for New York City (NYC) and one for Long Island (LI).

Base case NYCA IRM requirements and related MLCRs are established by a supplemental procedure (termed the *IRM Anchoring Methodology*) which is used to define *anchor points* on these curves. From the results of GE-MARS simulations for a range of IRM values, the curves for this year's IRM study were derived by calculating the first derivative of the best fit second order polynomial function. (A second order polynomial was selected since it only produced a single solution at the Tangent 45 degree inflection point.) These anchor points are selected by applying a tangent of 45 degrees (Tan 45) analysis at the bend (or "knee") of each curve. NYSRC Policy 5-1 provides detailed descriptions of these two methodologies.

BASE CASE STUDY RESULTS

Year 2008 IRM base case study results show a required NYCA IRM of __%. Accordingly, we conclude that maintaining the NYCA installed reserve of ___% over the forecasted NYCA 2008 summer peak season will achieve applicable NYSRC and NPCC reliability criteria for base case study assumptions shown in Appendix A. The base case study results show corresponding MLCRs for NYC and LI of __% and __%, respectively. The NYISO will consider these MLCRs when developing the final NYC and LI values.

The change (increase/decrease) in this year's IRM is attributed to: (list)

- Reason A
- Reason B
- Reason C

Figure 2 depicts the relationship between NYCA IRM Requirements and resource capacity in NYC and LI. The anchor points on these curves, from which these study results are based, were evaluated using the Tan 45 analysis described under "IRM Study Procedures". Accordingly, we conclude that maintaining the NYCA installed reserve of __% for the 2008 Capability Year, together with MLCRs of __% and __% for NYC and LI, respectively, will achieve applicable NYSRC and NPCC reliability criteria for the base case study assumptions shown in Appendix A.

Figure 2

NYCA IRM Requirements vs. Locational Capacity Requirements

(Similar to Figure 1 in 2007 IRM Report)

Ten-year historical values from previous IRM Studies are summarized below in Table # . Peak load values are derived from the NYISO's annual NYCA Peak Load Forecast.

Table _

Historical IRM Statistics

IRM Study Year	NYCA Peak Load MW	NYC (J) Peak Load MW	LI (K) Peak Load MW	NYC (J) LCR%	LI (K) LCR%	**Calculated Basecase % IRM**	Final Approved % IRM
1999							18.0%
2000	30,130						18.0%
2001	30,620					**17.1%**	18.0%
2002	30,475					**18.0%**	18.0%

Formatted: Bullets and Numbering
Deleted: ¶
Formatted: Left
Formatted: Font: (Default) Arial
Formatted: Centered
Formatted ... [1]
Formatted: Font: 9 pt
Formatted: Centered
Formatted ... [2]
Formatted: Font: (Default) Arial, 9 pt
Formatted: Font: (Default) Arial, 9 pt
Formatted: Centered
Formatted: Font: (Default) Arial, 9 pt
Formatted: Font: (Default) Arial, 9 pt
Formatted ... [3]
Formatted: Font: (Default) Arial, 9 pt
Formatted: Font: 9 pt
Formatted: Centered
Formatted ... [4]
Formatted: Centered
Formatted: Font: (Default) Arial, 9 pt
Formatted: Font: 9 pt
Formatted: Centered
Formatted ... [5]
Formatted: Centered
Formatted: Font: (Default) Arial, 9 pt
Formatted: Font: 9 pt
Formatted: Centered
Formatted ... [6]
Formatted: Centered
Formatted: Font: (Default) Arial, 9 pt
Formatted: Font: 9 pt
Formatted: Centered
Formatted ... [7]
Formatted: Centered
Formatted: Font: (Default) Arial, 9 pt

2003	31,430					**17.5%**	18.0%
2004	31,800			80.0%	99.0%	**17.1%**	18.0%
2005	31,962	11,315	5,231	83.0%	99.0%	**17.6%**	18.0%
2006	33,295	11,630	5,348	82.5%	106.0%	**18.0%**	18.0%
2007	33,447	11,780	5,422	80.0%	99.0%	**16.0%**	16.5%
2008							

MODELS AND KEY INPUT ASSUMPTIONS

This section describes the models and related input assumptions for the 2008 IRM study. The models represented in the MARS program include the Load Model, Capacity Model, Transmission System Model, and the Outside World Model. Appendix A provides more details of these models and assumptions.

Load Model

Peak Load Forecast: The 2008 summer peak load forecast used in the study was developed by the NYISO Staff in October 2007. This forecast was based on actual 2007 summer load conditions. Although the NYISO will prepare an updated 2008 summer forecast in early 2008 for use in NYISO locational capacity and other studies, it is expected that both forecasts will be similar.

Load Shape Model: The 2008 IRM Study was performed using a load shape based on 2002 actual values. The 2002 load shape was compared to load shapes from 1999 through 2006. The conclusion reached in this recent analysis was that the load shape used for this year's study should be the same as in the 2006 and 2007 IRM Studies, i.e., the 2002 load shape is best suited for the 2008 IRM Study.

Load Forecast Uncertainty (LFU): It is recognized that some uncertainty exists relative to forecasting NYCA loads for any given year. This uncertainty is incorporated in the base case model by using a load forecast probability distribution that is sensitive to different weather and economic conditions. Recognizing the unique LFU of individual NYCA areas, the LFU model is subdivided into four areas: Zone I, Zone J (NYC), Zone K (LI), and Zones A-H (the rest of New York State). Recognizing LFU in the base case increases IRM requirements by ___% (see Table 3).

Capacity Model

Resource Capacity Availability: Generating unit forced and partial outages are modeled in GE-MARS by inputting a multi-state outage model that represents an "equivalent forced outage rate on demand" (EFORd) for each unit represented. Outage data is received by the NYISO from generator owners based on specific reporting requirements

Formatted: Font: 9 pt
Formatted: Centered
Formatted ... [8]
Formatted: Centered
Formatted: Font: (Default) Arial, 9 pt
Formatted: Font: 9 pt
Formatted ... [9]
Formatted: Centered
Formatted: Font: (Default) Arial, 9 pt
Formatted: Centered
Formatted: Font: 9 pt
Formatted: Centered
Formatted ... [10]
Formatted: Centered
Formatted: Font: (Default) Arial, 9 pt
Formatted: Font: 9 pt
Formatted: Centered
Formatted ... [11]
Formatted: Centered
Formatted: Font: (Default) Arial, 9 pt
Formatted: Font: 9 pt
Formatted: Centered
Formatted ... [12]
Formatted: Centered
Formatted: Font: (Default) Arial, 9 pt
Formatted ... [13]

established by the NYISO. Capacity unavailability is modeled by considering forced and partial outages that occur over the most recent five-year time period. The time span considered for the 2008 IRM Study covered the 2002–2006 period.

Generating unit availability performance has stabilized over the past six years. As depicted in Figure 3, the NYCA average annual EFORd's during the 2000-2006 period have been consistently in the range of 4 to 6%. This is a substantial improvement from the 9 to 16% EFORd range experienced during the prior nine years.

Figure 3
NYCA EFORd Trends, 1992-2006

(Similar to Attachment B in 2008 Base Case Assumptions Report)

[Discussion may be added on market monitoring findings that have led to recent DMNC and EFORd changes for GTs.]

Generating Unit Ambient Deratings: Gas turbine and combined cycle capacity deratings are modeled using ambient temperature correction curves. Deratings of generating units affected by extreme temperature and humid summer conditions are recognized in this model. [Add discussion from NYISO staff paper on the availability of CT capacity, dated 10/22/07.]

Emergency Operating Procedures:

- Special Case Resources (SCRs). SCRs are ICAP resources that include loads that are capable of being interrupted — and distributed generation that may be activated on demand. This study assumes 1205 MW of SCR capacity resource capacity in July and August (and lesser amounts during other months), limited to a maximum of four SCR calls per month in July and August for NYS Department of Environmental Conservation-limited generation.

- Emergency Demand Response Programs (EDRP). EDRP allows registered interruptible loads and standby generators to participate on a voluntary basis - and be paid for their ability to restore operating reserves. This study assumes 193.5 MW of EDRP capacity resources in July and August (and less in other months), limited to a maximum of five EDRP calls per month. Both SCRs and EDRP are included in the Emergency Operating Procedure (EOP) model.

- Other Emergency Operating Procedures. The NYISO will implement EOPs as required to minimize customer disconnections. If a __% IRM is maintained, firm load disconnections due to inadequate resources will not occur more than once in every ten years on average — in accordance with NYSRC and NPCC criteria. (Refer to Appendix B, Table B-2, for the expected use during 2006 of SCRs, EDRP, voltage reductions, and other EOPs.)

Transmission System Model

A detailed transmission system model is represented in the GE-MARS study. The transmission system topology, which shows the eleven NYCA zones and Outside World Areas, along with transfer limits, is shown in Figure __ in Appendix A. GE-MARS is capable of determining the impact of transmission constraints on the NYCA LOLE. This study, as with previous GE-MARS studies, reveals that the transmission system into NYC and LI is constrained and can impede the delivery of emergency capacity assistance required to meet load within these zones. The NYSRC has two reliability planning criteria that recognize transmission constraints: 1) the NYCA IRM requirement considers transmission constraints into NYC and LI, and 2) minimum LCRs must be maintained for both NYC and LI (See NYSRC Resource Adequacy Reliability Criteria section).

The impact of transmission constraints on NYCA IRM requirements depends on the level of resource capacity in NYC and LI. In accordance with NYSRC Reliability Rule A-R2, *Load Serving Entity ICAP Requirements,* the NYISO is required to calculate and establish appropriate LCRs. The most recent NYISO study (*Locational Installed Capacity Requirements Study,* dated ____) determined that for 2007 the LCRs for NYC and LI were 80% and 99%, respectively.

As previously discussed, Figure 2 depicts the relationship between NYCA IRM requirements and resource capacity in NYC and LI for the base case. This figure shows that the IRM requirement can be impacted significantly depending on the level of capacity within these zones, particularly to the right of the "anchor point" of the curve where the IRM requirement rises much faster than the locational installed capacity levels are reduced. For base case assumptions, the anchor point in Figure 2 results in the base case IRM requirement of ___% and MLCRs for NYC and LI MLCR of __% and __%, respectively.

Results from this study illustrate the impact on the IRM requirement for changes of LCR level assumptions from the base case. Observations from these results include:

- Unconstrained NYCA Case - If internal transmission constraints were entirely eliminated the NYCA IRM requirement could be reduced to __%, __ percentage points less than the base case IRM requirement (see Figure 2).

- Downstate NY Capacity Levels - If the NYC and LI LCR levels were *increased* from the base case results to __% and __%, respectively, the IRM requirement would be reduced by __ percentage points, to __%. Similarly, if the NYC and LI locational installed capacity levels were *decreased* to __ and __%, respectively, the IRM requirement would increase by about __ percentage points, to __%. (See Figure 2.)

These results illustrate the significant impact on IRM caused by transmission constraints and implementing different LCR levels, assuming all other factors being equal.

Outside World Model

The Outside World Model consists of control areas in Ontario, Quebec, New England, and PJM. NYCA reliability can be improved and IRM requirements can be reduced by recognizing available emergency assistance support from these neighboring interconnected control areas — in accordance with control area agreements during emergency conditions. Assuming such interconnection support arrangements in the base case reduces the NYCA IRM requirements by approximately __ percentage points (see Table 3). A model for representing neighboring control areas, similar to that applied in previous IRM studies, was utilized in his study.

The primary consideration for developing the base case load and capacity assumptions for the Outside World Areas is to avoid overdependence on these Areas for emergency capacity support. For this purpose, from Policy 5-1, a rule is applied whereby an Outside World Area's LOLE cannot be lower than its own LOLE criterion, its isolated LOLE cannot be lower than that of the NYCA, and its IRM can be no higher than that Area's minimum requirement. Table 1 compares the base case NYCA 2008 IRM with lower NYCA IRM requirements assuming (1) each Outside World Area is represented by its planned 2008 IRMs and (2) each Outside Area's required IRM for maintaining its LOLE criteria. The table also compares NYCA LOLEs for the base case and both scenarios.

Table 1
Outside Area IRM Scenarios

Outside Area IRMs	**Required NYCA IRM**	**NYCA LOLE at NYCA Base Case IRM (__%)**
All Outside Areas at their base case IRMs		0.1000
All Outside Areas at their planned 2008 IRMs		
All Outside Areas with IRMs that meet their LOLE Criteria		

Another consideration for developing models for the Outside World Areas is to recognize internal transmission constraints within the Outside World Areas that may limit emergency assistance to the NYCA. This recognition is considered either explicitly, or through direct multi-area modeling providing there is adequate data available to accurately model transmission interfaces and load areas within these Outside World Areas. For this study, two of the Outside World Areas, New England and PJM, are each represented as multi-areas. This level of granularity better captures the impacts of transmission constraints within these areas, particularly on their ability to provide emergency assistance to the NYCA.

Limitations across the Northport-Norwalk Harbor cable were modeled as a function of the availability of Norwalk Harbor generation. Limitations from Eastern PJM system across the Con Edison Hudson-Farragut, Linden-Gothels interconnections, and LIPA's new Neptune intertie, were modeled as a function of the availability of Northern New Jersey generation including Linden, Hudson, and Bergen.

COMPARISON WITH 2006 IRM STUDY RESULTS

The results of the Year 2008 IRM study show that the base case IRM result has decreased __ percentage points compared to the 2007 IRM Study. Table 2 below compares the estimated IRM impacts of changing certain several key study assumptions from the 2006 Study. The primary drivers that changed the IRM requirement from 2007 include ___________.

Table 2

Parametric IRM Impact Comparison with 2007 Study

(Similar to Table 2 in 2007 IRM Report. We may have a preliminary table available for the Oct. 31 ICS meeting.)

SENSITIVITY CASE STUDY RESULTS

Determining the appropriate IRM requirement to meet NYSRC reliability criteria depends upon many factors. Variations from the base case will, of course, yield different results. Table 3 shows IRM requirement results and related NYC and LI locational capacities for several selected sensitivity cases. Sensitivity results are important input when the NYSRC Executive Committee develops the final NYCA 2008 IRM. A complete summary of all sensitivity case results are shown in Appendix B, Table B-1. Table B-1 also includes a description and explanation of each sensitivity case. Due primarily to time and resource constraints, there was no attempt to re-evaluate the "anchor point" or require each of the sensitivity case MLCR results to be consistent with base case MLCR results.

Table 3
Selected Sensitivity Case Results

NYCA IRM Requirements and Related Locational Capacities

(Similar to Table 1 in 2007 IRM Report)

NYISO IMPLEMENTATION OF THE NYCA IRM REQUIREMENT

NYISO Translation of NYCA Capacity Requirements to Unforced Capacity:

The NYISO values capacity sold and purchased in the market in a manner that considers the forced outage ratings of individual units — Unforced Capacity or "UCAP". To maintain consistency between the rating of a unit (UCAP) and the statewide ICR, the ICR must also be translated to an unforced capacity basis. In the NYCA, these translations occur twice during the course of each capability year, prior to the start of the summer and winter capability periods.

Additionally, any LCRs in place are also translated to equivalent UCAP values during these periods. The conversion to UCAP essentially translates from one index to another, and is not a reduction of actual installed resources. Therefore, no degradation in reliability is expected. The NYISO employs a translation methodology that converts UCAP requirements to ICAP in a manner that assures compliance with NYSRC Resource Adequacy Rule A-R1. The conversion to UCAP provides financial incentives to decrease the forced outage rates while improving reliability.

NYISO Implementation of a Spot Market Auction based on a Demand Curves:

Effective June 1, 2003 the NYISO replaced its monthly Capacity Deficiency Auction with a monthly Spot Market Auction based on three FERC-approved Demand Curves. Demand Curves are developed for Z
ones J, K, and the rest of NYCA.

The existence of Demand Curves does not impact the determination of IRM requirements by the NYSRC.

Page 5: [1] Formatted	jeremks2	10/24/2007 2:55:00 PM

Font: Bold

Page 5: [1] Formatted	jeremks2	10/24/2007 2:55:00 PM

Font: Bold

Page 5: [1] Formatted	jeremks2	10/24/2007 2:55:00 PM

Font: (Default) Arial, Bold

Page 5: [2] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: Bold

Page 5: [2] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: Bold

Page 5: [3] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 5: [3] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 5: [4] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 5: [4] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: 9 pt, Bold

Page 5: [5] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 5: [5] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 5: [5] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: 9 pt, Bold

Page 5: [6] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 5: [6] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 5: [6] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: Bold

Page 5: [6] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: 9 pt, Bold

Page 5: [7] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 5: [7] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 5: [7] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: Bold

Page 5: [7] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: 9 pt, Bold

Page 6: [8] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [8] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [8] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: Bold

Page 6: [8] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: 9 pt, Bold

Page 6: [9] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [9] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [9] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [9] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [9] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: Bold

Page 6: [9] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: 9 pt, Bold

Page 6: [10] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [10] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [10] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [10] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [10] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [10] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [10] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: Bold

Page 6: [10] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: 9 pt, Bold

Page 6: [11] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [11] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [11] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [11] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [11] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [11] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [11] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: Bold

Page 6: [11] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: 9 pt, Bold

Page 6: [12] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [12] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [12] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [12] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [12] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [12] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: (Default) Arial, 9 pt

Page 6: [12] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: Bold

Page 6: [12] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: 9 pt, Bold

Page 6: [13] Formatted	jeremks2	10/24/2007 1:18:00 PM

Font: 9 pt

Page 6: [13] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: 9 pt, Bold

Page 6: [13] Formatted	jeremks2	10/24/2007 3:25:00 PM

Font: 9 pt