NYISO 2011 BUDGET OVERVIEW

(dollars in millions, unless otherwise noted)

Scott Brown, NYPA (Chair, Budget & Priorities Working Group)

Management Committee

November 17, 2010

Schedule

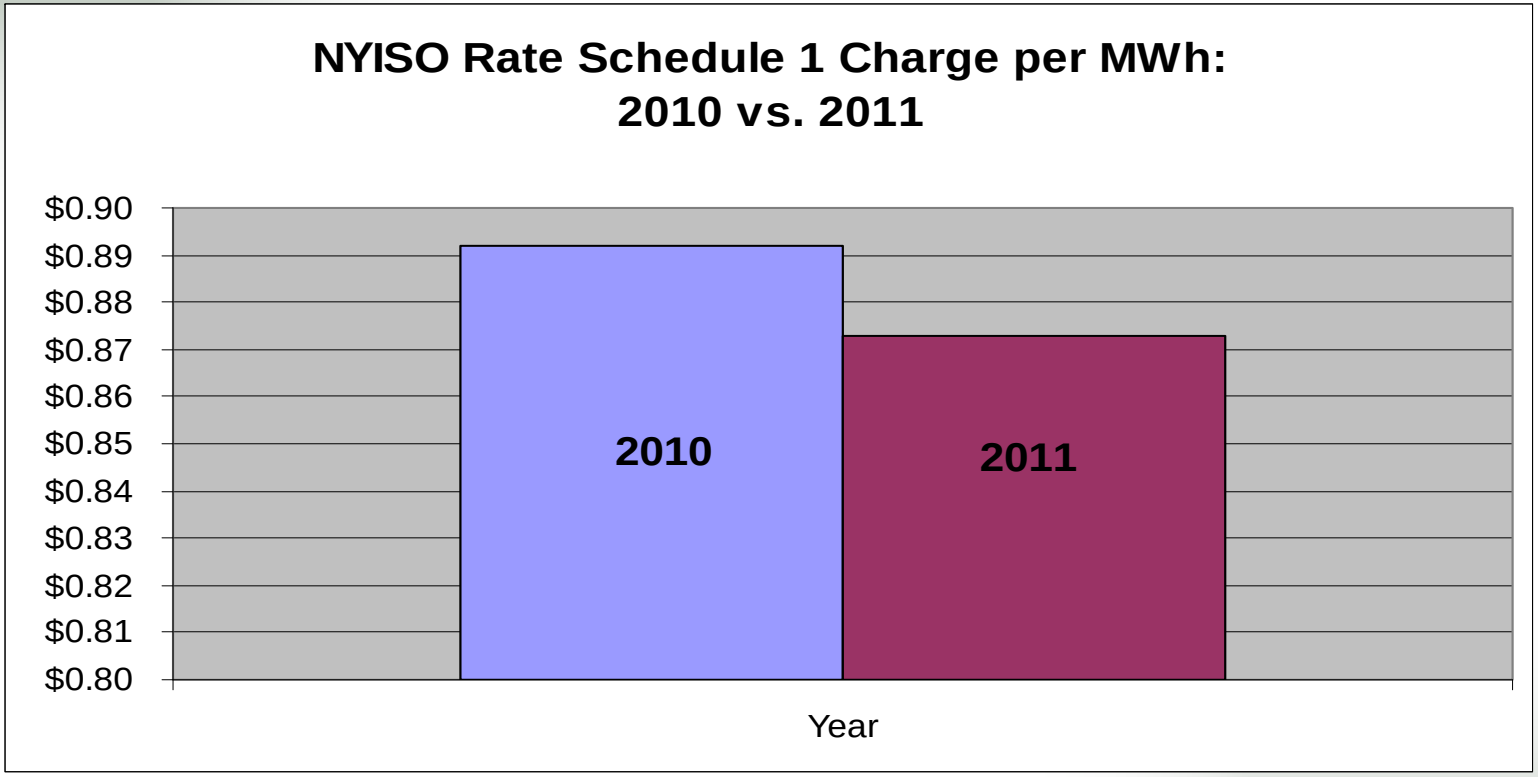
- **September 8:** BPWG meeting (review 2011 budget)
- **September 24:** BPWG meeting (review 2012-2013 budget projections)
- **September 29:** MC meeting (review 2011 budget)
- **October 8:** BPWG meeting
- **October 18:** BOD meeting (review 2011 budget and 2012-2013 projections)
- **October 20:** BPWG meeting
- **October 21:** MC meeting (discuss 2011 budget and 2012-2013 projections)
- **November 4:** BPWG meeting

- **November 17:** MC vote on 2011 budget

- **December 20:** BOD approval of final 2011 budget

Note: Management Committee vote and BOD approval on 2011 budget were postponed by one month from original schedule to permit additional discussion on the Infrastructure Master Plan.

RS1 Summary: 2010 vs. 2011



Note: The NYISO's revised 2011 draft budget totals $0.873/MWh, a 2% decrease from the 2010 budget of $0.892/MWh.

Budget Highlights

In Summary:

- The NYISO's draft 2011 budget totals $146.4M, allocated across a forecast of 167.7 million MWhs, for a Rate Schedule 1 charge/MWh of $0.873.
- 2011 RS1 charge/MWh represents a 2% **decrease** from the 2010 RS1 charge/MWh of $0.892 ($149.2M allocated across 167.3 million MWhs).

Primary Drivers:

- The budgeted MWh volumes for 2011 reflect only a 0.2% increase from the 2010 budget.
- In an effort to mitigate rate impacts to consumers and NYISO Market Participants, the NYISO has reduced spending or held budgets flat in various 2011 budget categories *(see details on next slide).*
- The majority of Infrastructure Master Plan costs are assumed to be financed over 20 years with interest payments only during 2011. 2011 Infrastructure Master Plan activities are focused on enhancements at Carman Road and the completion of design efforts for Krey Boulevard. *(See additional details in the Appendix to this presentation.)*

Peer Comparison:

- The NYISO's amount of debt outstanding, and number of full-time equivalent employees, continue to be among the lowest of all ISOs/RTOs.

Budget Highlights

Cost Consciousness:

- The NYISO continues to focus its spending on initiatives and investments that: improve overall operations and reliability (e.g. staff additions and facility improvements); are responsive to Market Participant feedback; and represent prudent investments (e.g. Broader Regional Markets).

- The NYISO recognizes that ongoing economic conditions are difficult for all Market Participants and has taken feasible steps to implement cost reductions in 2011.

- One significant example of the NYISO's efforts to reduce costs relates to a change in business model from utilizing external consultants to relying upon internal NYISO employees. This shift has resulted in an increase to Salaries and Benefits, which is offset by a reduction in Professional Fees, for net annual savings of approximately $2.4M.

- The NYISO also reduced legal fees by $1.1M from the 2010 budget by hiring additional staff to shift legal matters from outside counsel to internal counsel.

- The NYISO reduced budgetary spending for Debt Service costs, Building Service costs, and ongoing Insurance renewals. The NYISO also maintained spending on baseline Computer Service costs, BOD/Travel & Training costs, and ongoing Telecommunication costs.

Historical Budget Comparisons

				% Changes	
(in millions, excluding RS#1/MWH charges)	2009 Budget	2010 Budget	2011 Draft	2011 vs. 2010	2011 vs. 2009
RS#1 Rev. Requirement – in $$	$144.2	$149.2	$146.4	(1.9%)	1.5%
Budgeted MWH Hours	177.3	167.3	167.7	0.2%	(5.4%)
RS#1 Rev. Requirement - $/MWH	$0.813	$0.892	$0.873	(2.1%)	7.5%
Supplemental Information – RS1 Charge/MWH by MP Type					
Total RS#1 Rev. Requirement - $/MWH	$0.813	$0.892	$0.873	(2.1%)	7.4%
RS#1 Charge/MWH: Purchasers @ 80%	*$0.650*	*$0.669*	*$0.655*	*(2.1%)*	*0.8%*
RS#1 Charge/MWH: Sellers @ 20%	*$0.163*	*$0.169*	*$0.164*	*(3.0%)*	*0.6%*
RS#1 Charge/MWH: Non-physical transactions	-	*$0.054*	*$0.054*	-	*n/a*

2011 Budget Overview

	2011 Draft Budget						
($ in millions, except RS#1/MWH)	Baseline	Projects	Infrast. Master Plan	Grants	Total	2010 Budget	$ Variance
Capital	$2.2	$5.1	$12.1	$1.7	$21.1	$18.6	$2.5
Less: Proceeds from Infrastructure Master Plan Financing	-	-	(5.1)	-	(5.1)	(10.0)	4.9
Less: Proceeds from 2007-2010 Budget Debt	-	-	(5.0)	-	(5.0)	-	(5.0)
Less: Proceeds from Annual RS1 Carryovers & Prior Year Budget Underspend	-	-	(2.0)	-	(2.0)	-	(2.0)
Capital – net of Proceeds	2.2	5.1	-	1.7	9.0	8.6	0.4
Salaries& Benefits	57.6	9.3	-	1.4	68.3	63.1	5.2
Professional Fees (including Legal)	18.6	5.6	-	7.0	31.2	37.0	(5.8)
Building Services	5.0	-	-	-	5.0	5.1	(0.1)
Computer Services	15.8	-	-	0.2	16.0	15.8	0.2
Insurance	2.9	-	0.6	-	3.5	3.0	0.5
Telecommunications	4.1	-	-	-	4.1	4.0	0.1
Other Expenses (BOD, Travel/Training, NPCC Fees)	3.2	-	-	-	3.2	3.2	-
Subtotal: Current Year Needs (excl. FERC Fees)	$109.4	$20.0	$0.6	$10.3	$140.3	$139.8	$0.5
Debt Service	24.3	-	1.6	-	25.9	24.6	1.3
Subtotal: Cash Budget	$133.7	$20.0	$2.2	$10.3	$166.2	$164.4	$1.8
Less: Miscellaneous Revenues	(2.2)	-	-	(5.3)	(7.5)	(2.3)	(5.2)
Less: Proceeds from 2011-2013 Budget Debt	-	(20.0)	-	(5.0)	(25.0)	(25.0)	-
Add: Interest on Budget Debt	-	0.4	0.1	0.1	0.6	0.7	(0.1)
Add: Interest on Infrastructure Master Plan Financing	-	-	0.1	-	0.1	0.2	(0.1)
Subtotal: Net Budget Needs	$131.5	$0.4	$2.4	$0.1	$134.4	$138.0	($3.6)
FERC Fees	12.0	-	-	-	12.0	11.2	0.8
Total: Rate Schedule #1 Revenue Requirement in $$	$143.5	$0.4	$2.4	$0.1	$146.4	$149.2	($2.8)
Budgeted MWH Hours *(in millions)*					167.7	167.3	0.4
Rate Schedule #1 Revenue Requirement in $/MWH *(budget)*					$0.873	$0.892	($0.019)

For presentation purposes 2010 DOE costs of $5M have been included in Professional Fees, offset by $5M in Debt Proceeds.

Comparison with Other ISOs/RTOs

($ in millions)				
	REVENUE REQUIREMENT		OTHER INFORMATION	
ISO/RTO	2011 Revenue Requirement: in $$ (excludes FERC Fees)	2011 Revenue Requirement: in $/MWh (excludes FERC Fees)	Debt Outstanding at 12/31/11	FTEs at 12/31/11
MISO	$263.5M	$0.387	$264.1M	815
PJM	$252.0M	$0.307	$100.0M	610-625
CAISO	$195.1M	$0.813	$284.6M	601
ISO-NE	$137.5M	$1.040	$83.9M	521
NYISO	$134.4M	$0.801	$76.6M	521
ERCOT	TBD	TBD	$225.0M	585

These amounts are draft, and may be subject to change as each ISO/RTO completes its 2011 approval process.

NYISO Revenue Requirements are net of FERC Fees in order to compare with other ISO/RTO budgets, which exclude FERC Fees.

PJM's Revenue Requirements are inclusive of recovery for software, hardware, & facilities costs of second data center and control center.

Debt Service Summary:
Annual Repayments

ANNUAL PRINCIPAL AND INTEREST REPAYMENTS ** *($ in millions)*									
Debt Facility & Repayment Period	Borrowings	2008	2009	2010	2011	2012	2013	2014	2015
2004 Budget Loan (4 yrs)	n/a	$10.7	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2005 KCC Bldg Mortgage & Renov. (20 yrs)	n/a	$1.7	$2.1	$2.1	$2.1	$2.1	$2.1	$2.1	$2.1
2005 Budget Loan (4 yrs)	n/a	$4.7	$4.6	$ -	$ -	$ -	$ -	$ -	$ -
2006 Budget Loan (4 yrs)	n/a	$4.3	$3.9	$4.0	$ -	$ -	$ -	$ -	$ -
2007 Budget Loan (3 yrs)	$15.0M	$5.7	$5.4	$5.1	$ -	$ -	$ -	$ -	$ -
2008 Budget Loan (3 yrs)	$16.7M	$0.5	$6.3	$6.0	$5.7	$ -	$ -	$ -	$ -
2009 Budget Loan (3 yrs)	$18.3M	$ -	$0.4	$7.0	$6.6	$6.3	$ -	$ -	$ -
2010 Budget Loan (3 yrs)	$30.0M Est.	$ -	$ -	$0.6	$11.0	$10.7	$10.2	$ -	$ -
2011 Budget Loan (3 yrs)	$25.0M Est.	$ -	$ -	$ -	$0.5	$9.2	$10.8	$12.1	$ -
2012 Budget Loan (3 yrs)	$25.0M Est.	$ -	$ -	$ -	$ -	$0.6	$7.4	$7.1	$6.9
2013 Budget Loan (3 yrs)	$25.0M Est.	$ -	$ -	$ -	$ -	$ -	$0.6	$7.5	$7.2
Infrastructure Master Plan (20 yrs)	$42.0M Est.	$ -	$ -	$ -	$0.1	$1.0	$2.3	$4.0	$4.1
Bank Fees	n/a	$0.6	$0.6	$0.4	$0.6	$0.6	$0.6	$0.6	$0.6
Total Debt Service Payments		$28.2	$23.3	$25.1	$26.6	$30.5	$34.0	**	**
*** Note: Totals after 2013 are not presented as additional loans after 2013 are not factored into this table.*									

Debt Service Summary:

Principal Balance Outstanding

PRINCIPAL BALANCE OUTSTANDING AT DECEMBER 31, *($ in millions)*									
Debt Facility	2008	2009	2010	2011	2012	2013	2014	2015	2016
2004 Budget Loan	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2005 KCC Bldg Mortgage & Renov.	$22.0	$21.2	$20.4	$19.6	$18.7	$17.7	$16.7	$15.6	$14.4
2005 Budget Loan	$4.5	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2006 Budget Loan	$7.4	$3.6	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2007 Budget Loan	$10.0	$5.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2008 Budget Loan	$16.7	$11.1	$5.6	$ -	$ -	$ -	$ -	$ -	$ -
2009 Budget Loan	$ -	$18.3	$12.2	$6.1	$ -	$ -	$ -	$ -	$ -
2010 Budget Loan	$ -	$ -	$25.0	$20.8	$10.0	$ -	$ -	$ -	$ -
2011 Budget Loan	$ -	$ -	$ -	$25.0	$16.7	$8.3	$ -	$ -	$ -
2012 Budget Loan	$ -	$ -	$ -	$ -	$25.0	$16.7	$8.3	$ -	$ -
2013 Budget Loan	$ -	$ -	$ -	$ -	$ -	$25.0	$16.7	$8.3	$ -
Infrastructure Master Plan (20 yrs)	$ -	$ -	$ -	$5.1	$25.1	$42.0	$40.8	$39.5	$ 38.1
Total Principal Outstanding	$60.6	$59.2	$63.2	$76.6	$95.5	$109.7	**	**	**
*** Note: Totals after 2013 are not presented as additional loans after 2013 are not factored into this table.*									

APPENDIX:

INFRASTRUCTURE MASTER PLAN DETAILS & FINANCING APPROACH

Background

- The Carman Road, Guilderland Power Control Center (PCC) was built in 1969 to support New York Power Pool operations (40 years old)
- The original and current design of the control room did not contemplate today's complex market and system operations needs, nor can the control room accommodate a number of new requirements
  - *Control room technology has not been significantly updated in 40 years*
- The NYISO's purchase of the Krey Blvd. building in 2005 was primarily driven by consolidation of three (3) leased facilities
  - *The NYISO moved the Alternate Control Center to Krey Blvd. to address security concerns at leased facility and proximity to Carman Road*
- Multiple infrastructure repairs and needed upgrades have been identified in recent years, but deferred due to budget constraints and other factors
- Adequacy of facilities and building system infrastructure is an important component of maintaining power system and market reliability

Project Requirements

- Facility deficiencies related to the data center and emergency generators at Carman Road have been deferred multiple times and work required to enhance them needs to start now.
  - *Failure to resolve these known facility issues could impact the NYISO's ability to reliably operate the grid and administer the markets.*

- The evolving nature of grid operations in New York is creating additional responsibilities and driving expanded control room space requirements that cannot be met with the present day configuration of the control rooms.

- Enhanced situational awareness capabilities resulting from Smart Grid investments cannot be fully leveraged for reliability without improvements to the visualization technology within the control rooms.

- Correcting existing infrastructure deficiencies and developing strategic improvements to the NYISO's control room technology can be achieved much more economically if done at the same time.

Project Urgency

- Actions have been taken to mitigate the facility risks within the Carman Road data center, but the construction lead time and migration timeframe necessitate starting in remediation in 2011
  - Adequacy assessment performed by KEMA supports the NYISO's decision to initiate construction now to avoid risk of failure and maximize benefits

- Business process changes for Broader Regional Markets necessitate control room staff expansion in 2011 and DOE project deliverables will provide better situational awareness tools by 2013
  - Current lead time for project is 24 months for Krey Blvd. primary option

- In addition to providing sufficient space and tools for the primary control center, the NYISO is required to maintain adequate backup control center capabilities
  - Adequacy assessment performed by KEMA indicates that the NYISO's backup facilities are adequate for current reliability functions, but will not provide acceptable space or technology to support the NYISO's expanding responsibilities

Data Center Study

- The NYISO commissioned KEMA to perform a Carman Road Data Center Assessment Study
  - Review the current state of the Data Center at the Carman Road facility
  - Provide recommendations that can be used as an assessment of current adequacy and a roadmap for expansion
  - Identify risks associated with the current facility conditions based on industry best practices
  - Make recommendations regarding any necessary modifications or improvements
- The study considered a number of factors in assessing adequacy of the Data Center facility
  - Power consumption
  - Space requirements
  - Structural integrity
  - Temperature and environmental controls
  - Planned growth and platform expansion
- Opportunities for efficiency gains were identified, as applicable

Data Center Study Key Findings

- The NYISO's data center has delivered good value, but suffers from a number of operational issues
  - Structural weakness of raised floor
  - Computer air conditioning deficiencies
  - Inadequate power supply and distribution
  - Inadequate space for proper cable management
- None of the deficiencies, considered individually, necessitate replacement of the data center. However, taken in total, construction of a new data center is recommended
- Carman Road Data Center will remain useful over the next eighteen months, but deficiencies are expected sometime beyond that time
- KEMA also identified up to $200K per year in power consumption efficiencies that can be obtained in implementation of a modern design
- KEMA recommends construction of a new data center. Greater benefit will be realized the sooner this activity is started in terms of realizing operating cost benefits, avoiding the stranded cost of partial solutions, and earlier mitigation of the risks in the existing data center

Control Room Study

- The NYISO commissioned KEMA to perform a Control Center Needs Assessment Study
  - Review the adequacy of the NYISO's control centers for accommodating the existing and projected new responsibilities to ensure reliable grid operations and market administration.
  - Make recommendations regarding any necessary modifications or improvements in keeping with industry best practices

- The study considered additional responsibilities that would need to be accommodated in the near-term within the Control Center infrastructure ("Expanded NYISO Responsibilities")
  - Implementation of the Broader Regional Markets
  - Incorporation of Smart Grid technologies
  - Incorporation of a growing number of intermittent, renewable generation resources
  - Compliance with evolving reliability requirements

- Requirements for adequate back-up facilities were assessed for current requirements and future needs were also addressed

Control Room Study Key Findings

- The NYISO's control centers accommodate the NYISO's existing responsibilities
- The NYISO must address shortcomings in order to implement Expanded NYISO Responsibilities
  - Failure to address shortcomings could compromise the NYISO's ability to reliably perform core functions
  - Adequacy of the Krey Blvd Control Center to support operations will lessen over time as the control room staffing increase and functions are added
- KEMA recommends that the NYISO construct a new Primary Control Center at Krey Blvd. and convert the Carman Road facility into a viable and sustainable Alternate Control Center
- KEMA recommends that the NYISO initiate planning and construction as soon as practicable

Cost Benefit Assessment

- The NYISO commissioned Energy Initiatives Group (EIG) to perform a cost analysis for the project
  - Compare implementation scenarios and determine lowest cost feasible option, including Net Present Value (NPV)
  - Provide cost benefit analysis and identify project cost payback timeframe for lowest cost implementation scenario
- EIG identified the Krey Blvd. control center options as the lowest cost approach to satisfy the reliability and business requirements
  - Cost in net present value $7.7M lower than Carman Road control center scenario
- Cost benefit analysis demonstrates significant positive return for New York

Project Cost Adjustments

- The cost estimates for the various implementation options have changed over time for a variety of reasons:
  - Initial cost estimates were based on conceptual designs and preliminary estimates
  - Design activities have continued to progress, and updated numbers have been based on a more complete / accurate design
  - Material costs fluctuate over time; design estimates from builders reflect most up to date costs
  - Assumptions made with respect to project implementation efficiencies have changed due to segmenting project between sites
- The NYISO is committed to providing Market Participants with the most current project cost expectation, based on the best available information at that time
- Final project estimates will not be known until construction drawings and related processes are completed (targeted for mid-2011)

Project Cost Comparison

- The cost estimates for the recommended project have increased since Q4 2009 for the following reasons:
  - *Project lifecycle:* The current project plan spans 3 years whereas prior project plans occurred over 2 years (requests to slow the project and spread the cost annual impact have lengthened the project timeline)
  - *Lost economic synergies:* Economic synergies planned for original project design have been lost / reduced due to segmenting project between sites
  - *Higher construction / material costs*: As anticipated, material costs have increased since 2009
  - *Inflation:* Inflationary assumptions are included for a longer project timeline
  - *Additional Architectural Analyses:* Additional scenario analyses for project options and justifications was not included in original project estimates

Cost Summary

	2011	2012	2013	Total
Carman Road Data Center / Generators	10.9	2.5		13.4
Krey Blvd. Control Room Design	1.2			1.2
Krey Blvd. Construction		17.0	17.3	34.3
Annual Sub-Totals (Capital):	12.1	19.5	17.3	$48.9M

- Recommended Project Approach:
  - *Primary control center at Krey; Alternate control center at Carman*
- Key Points:
  - *Shortest timeframe to mitigate data center risks and to meet control center requirements*
  - *End-state configuration presents greatest efficiencies*

2011 Planned Project Activities

- Actions have been initiated to mitigate the facility risks within the Carman Road facility
  - Adequacy assessment performed by KEMA supports the NYISO's decision to initiate construction now to avoid risk of failure and maximize benefits

- The 2011 NYISO budget includes $10.9M to support construction on the following Carman Road facility renovations:
  - *Data Center Replacement*
  - *Emergency Generator Placement and Installation*
  - *Temporary Office Removal*
  - *Mechanical and Electrical System Upgrades*
  - *Fire Alarm & Sprinkler System Upgrades*
  - *Roof Replacement*

- The 2011 NYISO budget also includes $1.2M to complete the design activities for Krey (required for loan closing)

Financing Approach

- Market Participants have requested the NYISO to seek financing to offset the RS1 impact of the Infrastructure Master Plan. The NYISO has agreed to pursue such options, although a specific long-term financing vehicle is not yet in place.

- <u>Potential Financing Timeline:</u>
  - *November 2010 – Management Committee vote on 2011 budget (including recommendation to support financing of Infrastructure Master Plan)*
  - *December 2010 – BOD approval of 2011 budget*
  - *Q4 2010 – Negotiate terms & conditions of new financing with lenders*
  - *December 2010/January 2011 – Draft and file PSC petition seeking financing approval*
  - *April / May 2011 – Initial opportunity for PSC to act on the NYISO's financing petition*
  - *TBD (likely June 2011) – expiration of financing commitment*

- <u>Impact on 2011 Budget:</u>
  - Infrastructure Master Plan activities are planned to continue in January 2011 to mitigate risks and meet project timelines, but a new financing petition may not be approved (if at all) until mid-year (approximate 6-month timing difference):
    - Cash flow gap
    - Risk that PSC does not approve financing

Project Financing Details

Amount	Source of Funds	Details	2011 RS1 Impact
$2M	2010 RS1 overcollections & budgetary underspending	• Budget motions request any overcollections and budgetary underspending to be used to reduce outstanding debt or new future debt. • Through October 2010, YTD RS1 overcollections = $1.2M. • Based on projections using actual results through October, NYISO projects a budgetary underrun of up to $1M.	None
$5M	2007-2010 Budget Loan	• $80M loan with ~$75M to be borrowed by 12/31/10 • Loan expires in January 2011 • 3-year P&I repayment over 2011-2013 • Interest is LIBOR plus 65 bps (currently < 1%)	$0.1M in interest; $1.6M in principal
$41.9M	20-Year Financing	• Specific financing is not yet in place (negotiations underway seeking financing of up to $45M) • To be structured as 3 years of interest only (July 2011 – June 2014), followed by 17 years of principal & interest • Requires approval by the NY Public Service Commission • Planned borrowings in 2011 = $5.1M	$0.1M in interest payments
$48.9M	Current Project Estimate (2011-2013)		$1.8M