
NYISO Business Issues Committee Meeting Minutes
May 16, 2018
10:00 a.m. – 1:00 p.m.

1. Introductions, Meeting Objectives, and Chairman's Report

Mr. John Cordi (NYPA) called the meeting to order at 10:00 a.m. by welcoming the members of the BIC. The members of the BIC identified themselves and attendance was recorded. A quorum was determined.

2. Approval of BIC Minutes

There were no comments or questions regarding the draft meeting minutes for the March 15, 2018 and April 11, 2018 BIC meetings that were included with the meeting material.

Motion #1:

Motion to approve the meeting minutes for the March 15, 2018 BIC meeting and the April 11, 2018 BIC meeting.

Motion passed unanimously.

3. Market Operations Report and Broader Regional Markets Report

Mr. Rana Mukerji (NYISO) reviewed the Market Operations report posted with the meeting material.

Mr. Mike Mager (Couch White) asked whether the NYISO could provide any further information on outcomes from April 2018, which reflected increased prices with lower load and lower fuel costs. Mr. Shaun Johnson (NYISO) noted that during shoulder periods in the spring there are often outages that can give rise to increased congestion costs.

Mr. Mukerji reviewed the Broader Regional Markets report included with the meeting material.

Mr. Howard Fromer (PSEG) asked whether the new deliverability documentation requirements that became effective for May 2018 impacted capacity import sales across the PJM interface. Mr. Mukerji noted that the NYISO was unable to provide comment on whether this new requirement specifically implicated capacity imports across the AC ties with PJM. It was, however, noted that there were no capacity import sales across PJM AC ties for May 2018.

4. Public Website Redesign Update

Mr. Dave O'Brien (NYISO) provided a verbal update regarding the status of the NYISO's ongoing public website redesign project. Mr. O'Brien stated that the public website redesign project remains on schedule for deployment by the end of 2018. Mr. O'Brien also noted that a stakeholder focus group meeting will be held on May 24, 2018 to gather additional feedback. There were no questions or comments.

5. 2017 State of the Market Report Overview

Mr. Pallas LeeVanSchaik (Potomac Economics) reviewed the presentation included with the meeting material. Detailed discussions on the 2017 State of the Market report will take place at the May 23, 2018 and May 31, 2018 joint ICAPWG/MIWG meetings.

Working Group Updates

- Billing and Accounting and Credit Working Group: The group met on April 20, 2018 and reviewed the standard accounting/settlement reports.

- Electric System Planning Working Group: The group has met three times since the last BIC meeting. The group met on April 18, 2018 and reviewed key study assumptions for Generator Deactivation Assessments for certain Ravenswood facilities (2-1, 2-2, 2-3, 2-4, 3-1, 3-2 and 3-4), Lyonsdale Biomass and Pilgrim GT1 and GT2, local transmission plan updates from Central Hudson, Con Edison, LIPA, National Grid, NYPA and NYSEG, and proposed enhancements to the

reporting of historic congestion information. On April 30, 2018, the group met and reviewed proposed enhancements to the Comprehensive System Planning Process, lessons learned from the 2017 Congestion Assessment and Resource Integration Study (CARIS) Phase 1 study process, and preliminary results for the evaluation of viable and sufficient transmission solutions submitted in response to the AC Transmission Public Policy Transmission Need (PPTN). The group also met on May 10, 2018 and reviewed preliminary results for the evaluation of viable and sufficient transmission solutions submitted in response to the AC Transmission PPTN.

- Installed Capacity Working Group: The group has met four times since the last BIC meeting. On April 24, 2018, the group met jointly with MIWG and reviewed proposed changes to the future reporting of information currently provided in the annual ICAP report filed with FERC, an overview of considerations in developing capacity market rules for energy storage resources, an overview of considerations for reviewing potential changes to the Supplemental Resource Evaluation commitment process for external capacity suppliers, and the draft outline for the Master Plan related to the ongoing Integrating Public Policy Initiative. The group met jointly with MIWG on April 26, 2018 and reviewed an update from GE Energy Consulting related to its ongoing study regarding the capacity value of resources with energy limitations. On May 9, 2018, the group met jointly with MIWG to review an update from GE Energy Consulting on its assessment of certain potential alternative methodologies for calculating Locality Exchange Factors. The group also met jointly with MIWG on May 15, 2018 and reviewed the initial draft Master Plan related to the ongoing Integrating Public Policy Initiative.
- Electric Gas Coordination Working Group: The group has not met since the last BIC meeting.
- Load Forecasting Task Force: The group has met twice since the last BIC meeting. The group met on May 3, 2018 and reviewed end-use load forecasting models for determining monthly energy forecasts. The group also met on May 8, 2018 and reviewed proposed revisions to the Load Forecasting Manual primarily related to the treatment of Behind-the-Meter Net Generation Resources.
- Market Issues Working Group: The group has met four times since the last BIC meeting. The group met jointly with ICAPWG on April 24, 2018 and reviewed the draft outline for the Master Plan related to the ongoing Integrating Public Policy Initiative. The group also met jointly with ICAPWG on April 26, 2018 and reviewed the energy storage and integration initiative, a proposal regarding the potential development of a flexible ramping product, proposed measurement and verification requirements for Distributed Energy Resources (DER), and a presentation by the Market Monitoring Unit regarding its evaluation of Coordinated Transaction Scheduling (CTS) with ISO-NE. On May 9, 2018, the group met jointly with ICAPWG and reviewed an overview of potential efforts to evaluate more frequent interregional transaction scheduling, an initial straw proposal for the potential development of a Historic Fixed Price TCC extension product, an update regarding proposed modeling enhancements for the Niagara Power Plant, an update regarding the Securing 100+ kV Transmission Facilities in the Market Model project, and considerations related to re-evaluating Ancillary Services shortage pricing. The met jointly with ICAPWG on May 15, 2018 and reviewed an update regarding the DER pilot program, and the initial draft Master Plan related to the ongoing Integrating Public Policy Initiative.
- Price Responsive Load Working Group: The group has met three times since the last BIC meeting. On April 24, 2018, the group met jointly with MIWG and ICAPWG and reviewed the draft outline for the Master Plan related to the ongoing Integrating Public Policy Initiative. The group also met jointly with MIWG and ICAPWG on April 26, 2018 and reviewed the DER-related agenda topics, and an update from GE Energy Consulting related to its ongoing study regarding the capacity value of resources with energy limitations. The group met jointly with MIWG and ICAPWG on May 15, 2018 and reviewed the DER-related agenda topics, and the initial draft Master Plan related to the ongoing Integrating Public Policy Initiative.

6. New Business

Ms. Emilie Nelson (NYISO) read the following statement regarding the NYISO's review of GE Energy Consulting's assessment of certain potential alternative probabilistic methodologies for calculating Locality Exchange Factors:

NYISO has been working with GE since 2016 to develop a probabilistic approach to determine the Locality Exchange Factors (LEF) but have not been able to identify a

viable methodology. The effort has required a significant amount of resources. The NYISO has become convinced that the stability and transparency of the current approach is preferable to a probabilistic approach and, therefore, recommends that we terminate further evaluation.

The NYISO's Services Tariff includes a capacity market mechanism to account for capacity exports from Localities to External Control Areas. The current Services Tariff established LEF approach is rooted in a deterministic power flow analysis that accounts for the increase in effective transfer capability into the Locality that results from counter flow due to exports to the respective neighboring Control Areas. The deterministic approach supports reliability while providing an appropriate market signal in the Locality if exports do indeed occur, and has been deemed by FERC to be just and reasonable.

The NYISO appreciates that when stakeholders approved the deterministic approach as part of the LEF rules in 2016, there was insufficient time to fully evaluate probabilistic alternatives. As such, it was important to provide due consideration to probabilistic techniques, as requested and prioritized by stakeholders.

Starting in late 2016 and continuing through today, the NYISO has engaged GE to evaluate if a probabilistic technique could be developed to determine the LEF. GE presented its initial findings in August 2017, which found that more research would be required to develop a probabilistic model and that the complexity and stability of the model was problematic. Since that initial assessment, GE has continued its work with consideration of multiple alternatives rooted in a probabilistic methodology.

On May 9, 2018 GE presented the culmination of its work to stakeholders. Fundamentally, it appears that GE MARS is not structured to model the impact of a relatively small sale, modeled in significantly more detail than the rest of the system, with any degree of accuracy or stability.

The NYISO recommends not spending any additional resources on exploring LEF probabilistic techniques at this time. We have fulfilled our commitment to stakeholders to explore alternative approaches including probabilistic methods.

The NYISO appreciates stakeholder collaboration in considering this issue.

Dr. Mayer Sasson (Con Edison) read the following statement related to the assessment of alternative probabilistic methodologies for calculating Locality Exchange Factors:

Con Edison appreciates the NYISO's support in reviewing the potential of using a Probabilistic Locality Exchange Factor (PLEF) for capacity exports from localities and in contracting with GE to work on the project. We also are appreciative of the support provided by the NYTOs throughout the project. All told, the project evaluated three proposals for calculating a PLEF.

The final proposal, developed by Con Edison with the support of the NYTOs and evaluated by GE, builds upon the solid foundation of the NYISO's Deterministic LEF (DLEF). It similarly considers that the capacity sold belongs to the external system, that it flows through the NYCA system to reach the external system whenever the exporting unit is available, creating counterflow through binding interfaces, and that a counterflow is not created when the capacity is unavailable. As noted in stakeholder discussions, the proposal meets the IRM and LOLE Criterion. Analysis of the proposal demonstrates that in 2018, the PLEF can reach a maximum of 59%, a significant increase

from the 47.7% of the DLEF. Moreover, results are stable (2017 and 2018 were compared) and not volatile. As the export amount increases, the PLEF decreases in the direction of the DLEF.

We believe that the Con Edison proposal also meets the objective of the MMU as set forth in its 2017 State of the Market Report, which provides that the MMU “support[s] the NYISO efforts to develop a probabilistic MARS-based method for quantifying the benefits of export-transactions from an import-constrained zone if this would produce a significantly different result from the deterministic method.”

Con Edison has performed a “proof of concept” of a PLEF that would save customers tens of millions of additional dollars beyond the savings resulting from the use of the DLEF. This statement leaves a record of the work performed. While we are grateful for the time and effort engaged in this effort by the NYISO and GE, we are disappointed that the proposal is being rejected and the project terminated without a full vetting of the proposal through the stakeholder process.

Mr. Michael Cadwalader (Atlantic Economics) stated that GE Energy Consulting's conclusions appear to be based on an assumption that the alternative probabilistic methodology may result in increased reliance on emergency assistance or potential for increased volatility, but analysis conducted by Con Edison did not demonstrate these potential concerns arising. Ms. Nelson replied that although the NYISO does not support continued stakeholder efforts to develop a probabilistic alternative at this time, the NYISO would be open to further discussions with GE Energy Consulting regarding their provision additional information to stakeholders regarding the data and information relied on to support their conclusions regarding alternative probabilistic methodologies for calculating Locality Exchange Factors. Mr. Cadwalader expressed his disappointment in the NYISO's decision to no longer allocate resources toward further pursuing the development of an alternative probabilistic analysis for calculating Locality Exchange Factors.

Ms. Erin Hogan (UIU) recommended that the NYISO further consider providing additional information to stakeholders regarding the data relied upon by GE Energy Consulting in reaching its conclusions about alternative probabilistic methodologies for calculating Locality Exchange Factors.

The meeting adjourned at 1:00 p.m.

Business Issues Committee
May 16, 2018
Final Motions

Motion #1:

Motion to approve the March 15, 2018 and April 11, 2018 Meeting Minutes.

Motion passed unanimously.

Organization	Sector	Representative	Alternate1	Alternate2	Alternate3	Alternate4	Alternate5	Alternate6	Alternate7	Proxy	Guest
Vitol Inc.	Other Suppliers	Wadsworth , Joe	Viola , Bob	Kahn , Casey							
XO Energy NY, LP	Other Suppliers	Drangula , Carey	Thompson , Matthew	Hughes , Adam							
Central Hudson Gas & Electric Corp.	Transmission Owners	Borchert , John	Chan, Ting	May , Jeff	Dittmann, David						
Consolidated Edison Co. of NY, Inc.	Transmission Owners	✓Quin , Jane	Nachmias, Stuart	Butler , Scott	✓Hargett , Chris	Butterklee, Neil					✓Sasson, Mayer
National Grid	Transmission Owners	Janzen , Margaret	Lodemore , David	Carron , Benjamin							
New York State Electric & Gas (NYSEG)	Transmission Owners	✓Caletka, Patricia	Kinney, Ray	Brophy , Richard							
Orange & Rockland Utilities, Inc.	Transmission Owners	✓Caletka, Patricia	Kinney, Ray	Brophy , Richard							
Rochester Gas and Electric Corp.	Transmission Owners	✓Mager, Michael	Loughney, Robert	Trinsey , Amanda	Lang, Kevin						
Alcoa, Inc.	Large Consumer	✓Mager, Michael	Loughney, Robert	Trinsey , Amanda	Lang, Kevin						
IBM Corporation	Large Consumer	✓Mager, Michael	Loughney, Robert	Trinsey , Amanda							
Nucor Steel Auburn, Inc.	Large Consumer	✓Brew , James	Mackaronis , Chris								
Occidental Chemical Corp.	Large Consumer	✓Mager, Michael	Loughney, Robert	Trinsey , Amanda	Lang, Kevin						
Wegmans Food Markets	Large Consumer	✓Mager, Michael	Loughney, Robert	Trinsey , Amanda	Lang, Kevin						
Metropolitan Transportation Authority	Large Consumer Government Agency	Keller , David	Chou , Frances								
American Sugar Refining, Inc	Small Consumer	Luthin, Catherine	✓Breidenbaugh , Aaron	Lang, Kevin	✓Mager, Michael	Trinsey , Amanda					
Association for Energy Affordability	Small Consumer	Strauss , Valerie	Hepinstall, David	Farmer , Miles							
Beth Israel Health Care System	Small Consumer	Luthin, Catherine	✓Breidenbaugh , Aaron	Lang, Kevin	✓Mager, Michael	Trinsey , Amanda					
Fordham University	Small Consumer	Luthin, Catherine	✓Breidenbaugh , Aaron	Lang, Kevin	✓Mager, Michael	Trinsey , Amanda					
Memorial Sloan Kettering Cancer Center	Small Consumer	Luthin, Catherine	✓Breidenbaugh , Aaron	Lang, Kevin	✓Mager, Michael	Trinsey , Amanda					
Mount Sinai Medical Center	Small Consumer	Luthin, Catherine	✓Breidenbaugh , Aaron	Lang, Kevin	✓Mager, Michael	Trinsey , Amanda					
New York University	Small Consumer	Luthin, Catherine	✓Breidenbaugh , Aaron	Lang, Kevin	✓Mager, Michael	Trinsey , Amanda					
Utility Intervention Unit, Division of Consumer Protection, NY Dept. of State	Government Statewide Consumer Advocate	✓Hogan , Erin	Montalvo , Marc	✓Kordonis , Dimitrios	Zimmerman , Michael						
City of New York	Government Small Consumer and Retail Aggregate	Lang, Kevin	✓Mager, Michael	Trinsey , Amanda							
NYS Energy Research & Dev. Authority	Government Small Consumer and Retail Aggregate	✓Hall , Christopher	Coup, David	Mas , Carl	Wilcox , James	Matteson , Schuyler					
Long Island Power Authority	State Power Authorities	✓Clarke, Dave	✓Wilczek , Mariann								
New York Power Authority	State Power Authorities	Antinori , Andrew	Lundin , Tim	Mahoney , Daniel							
Bath Electric, Gas & Water Systems	Municipalities and Coops	Bonacci , Erin	✓Wentlent, Chris	Cordeiro, Mark							
Freeport Electric	Municipalities and Coops	Livingston , Al	Kimlingen, Ted	✓Rudebusch, Tom	Fiore , Chris						
Jamestown Board of Public Utilities	Municipalities and Coops	Sellstrom , Kris	Leathers, David	Allen , Cory	✓Rudebusch, Tom						
Lake Placid Village	Municipalities and Coops	Daby , Kimball	✓Wentlent, Chris	Cordeiro, Mark							
Municipal Commission of Boonville	Municipalities and Coops	Varner , Doug	✓Wentlent, Chris	Cordeiro, Mark							
Plattsburgh Municipal Lighting Dept	Municipalities and Coops	Treacy, William	✓Wentlent, Chris	Cordeiro, Mark							
Village of Arcade	Municipalities and Coops	Kilburn, Larry	✓Wentlent, Chris	Cordeiro, Mark							
Village of Fairport	Municipalities and Coops	Hegarty , Matt	✓Wentlent, Chris	Cordeiro, Mark							
Village of Rockville Centre	Municipalities and Coops	Andreas , Philip	Valenzano , Michael	✓Rudebusch, Tom							
Village of Solvay	Municipalities and Coops	Hawksby , Joe	✓Wentlent, Chris	Cordeiro, Mark							
Village of Westfield	Municipalities and Coops	Thompson , Andrew	✓Wentlent, Chris	Cordeiro, Mark							
American Wind Energy Association	Environmental	Reynolds , Anne	Reeder , Mark	Beck , Betsy	Goggin , Michael	Grace , Gene					
Environmental Advocates	Environmental	Bambrick , Conor	Farmer , Miles	Morris, Jackson							
Environmental Defense Fund	Environmental	Christian , Rory	Stein , Elizabeth								
Natural Resources Defense Council	Environmental	Farmer , Miles	Morris, Jackson	De Costanzo , Donna							
PACE Energy & Climate Center	Environmental	Musgrove , Sheryl	Taylor , Geordi	Farmer , Miles							
Riverkeeper	Environmental	Gallay , Paul	Jones , Abigail	Doran , Erin							
AEP On-Site Partners, LLC	Non Voting	Jansen , Joel	Kakodkar , Guatam								
AES ES Holdings LLC	Non Voting	Hillman , Sharon	Kumaraswamy , Kiran								
Acadia Center	Non Voting	Howland , Jamie	Howe , Cullen								
Acadia Energy Corporation	Non Voting	Rappaport , Jason	Bay , John								
Alliance for Clean Energy New York	Non Voting	Reynolds , Anne	Dufresne , Zach	Reeder , Mark							
Anbaric Northeast Transmission Development Co.	Non Voting	Sanderson , Barry	Kosel , Howard								
Appian Way Energy Partners East, LLC	Non Voting	✓Levy , Tal	Klein , Abram	Shen , Dong	Westlund , John	Laich , Marcus					
Ardor Energy LLC	Non Voting	Breen , Erika									
Avangrid Renewables, Inc.	Non Voting	Kilgallen , Kevin	Sokolski , Adam								
Boston Energy Marketing & Trading	Non Voting	✓Kramek , Mike									
Bruce Power	Non Voting	Jain , Anshul	Meyer , Sandra								
Caithness Energy LLC	Non Voting	Keevill , Gary	Alvarez , Asavari	Garber, Mitchell							
Calpine Energy Solutions	Non Voting	Sun , Jungsuk	Nakhonthap , Jade	✓Sunga , Leonard							
Canandaigua Power Partners, LLC	Non Voting	Keene , John	Gaddes , Caleb								
Cubit Power One Inc.	Non Voting	Powell , Alan	Powell , Leighton	Singer, Leonard							
Customized Energy Solutions	Non Voting	✓Mancini, Rick	Fernands, Stephen	Rexrode, Caryn	✓Ackerman, Alan						
Cypress Creek Renewables	Non Voting	Kohlstedt , Kevin	Kemp , Melissa	Salehian , Afshin							

Organization	Sector	Representative	Alternate1	Alternate2	Alternate3	Alternate4	Alternate5	Alternate6	Alternate7	Proxy	Guest
Earth Networks	Non Voting	Crawford , Jaden									
Energya VM	Non Voting	Garcia , Francisco	Maeso , Manual	Lopez , Ana	Corvillo , Cristina						
Fluent Energy	Non Voting	Acampora , Peter	Doll , Ed								
GI Energy	Non Voting	Falcier , Peter	Robinson , James								
Hudson River Energy Group	Non Voting	Radigan, Frank	Canfield, Richard								
Hydro-Quebec TransEnergie	Non Voting	Prevost , Michel									
ITC Mid-Atlantic Development LLC	Non Voting	Wrenbeck , Tom	Benedict , Nathan								
Institute for Policy Integrity at NYU School of Law	Non Voting	Unel , Burcin	Noll , Bethany								
Key Capture Energy	Non Voting	Fitzgerald , Dan	Bishop , Jeff								
MAG Energy Solutions, Inc.	Non Voting	Pelletier , Simon	VeZina, Alexandre								
NRG Curtailment Solutions, Inc.	Non Voting	✓Popova , Julia	Ainspan , Malcolm	Pieniasek , Marie							
NY-BEST Consortium	Non Voting	Acker , William	Sheehan , Denise								
NYS Department of Public Service	Non Voting	Paynter , Thomas	✓Evans , Adam								
National Fuel Gas Distribution Corporation	Non Voting	Novak , Michael	Eck , Robert								
New Athens Generating Co. LLC	Non Voting	Tripp , Hank									
North America Transmission, LLC	Non Voting	Willick , Lawrence	York , Joshua								
Northeast Clean Heat & Power Initiative	Non Voting	Venkataraman , Sree	Brown, Ruben	Cinadr , Matt	Dwyer , Herb						
Northline Utilities LLC	Non Voting	McKinney , Jeff	Danskin , Susan								
NuEnergen	Non Voting	Hamilton , Sandy	Korczykowski , Ryan								
Power Supply Services LLC	Non Voting	Phillips , Gabriel	✓Abend , Erik								
RBC Energy Services, LP	Non Voting	Burnham , Steve	Fraiture , Christian	Doolittle , Robin							
RENEW Northeast	Non Voting	Pullaro , Francis	Krich , Abigail								
RES Americas, Inc.	Non Voting	Fernandes , John	Boyd , Dan								
Red Wolf Energy Trading, LLC	Non Voting	Christian , Adam									
Richard P. Felak	Non Voting	Felak, Rich									
STEM, Inc.	Non Voting	Ko , Ted									
Saracen Energy East LP	Non Voting	Peebles , Andy									
Siemens Energy, Inc.	Non Voting	Feltes , James									
Stephentown Spindle, LLC	Non Voting	Hebert , Chris									
Taylor Biomass Energy, LLC	Non Voting	Taylor , Jim	Page , Allan								
Teichos Energy, LLC	Non Voting	Maclearnsberry , Kirk	VanCoeving , Darrel								
Tesla Motors, Inc.	Non Voting	Burson , Kate	Van Cleve , Sarah	Watson , Betty							
TransAlta Energy Marketing (U.S.) Inc.	Non Voting	Nivolianitis , Ted									
Transmission Developers Inc.	Non Voting	Jessome , Donald	Helmer , William	✓Dave , Suresh							
Transource New York, LLC	Non Voting	Burkholder , Joshua									
William P. Short	Non Voting	Short, William	Schaefer, Marc		Savage, Paul	Verna, Jim					

NYISO Employees

Nelson, Emilie

Bissell, Garrett

Johnson, Shaun

Pike, Robb

Mukerji, Rana

Eckels, Debbie

Dixon, Kirk