This presentation is Commission staff’s fourth Quarterly Update on Gas-Electric Coordination Activities, as directed by the Commission in its November 15, 2012 order in Docket No. AD12-12, and covers the period September 2013 to December 2013.

As noted in previous quarters, national trade organizations and their members continue to engage in discussions regarding gas-electric coordination with the RTOs and ISOs. Many of the trade associations’ individual members continue to also be involved in regional gas-electric working group efforts and regional studies. This report focuses on significant new national and regional developments since our last report, and briefly summarizes Commission initiatives, including the issuance of a Final Rule expressly authorizing the sharing of non-public operational information between natural gas and electric operators, highlights of the RTO presentations at the October Commission Meeting, and recent industry applications filed with the Commission.
Starting with national and interregional developments, members of the natural gas industry recently launched the Natural Gas Council Gas Day Initiative, to consider the benefits and consequences of potential modifications to the timing of the Natural Gas Operating Day and the nationwide schedule for natural gas nominations. A technical working group and steering committee for the initiative have been meeting since October to gather information and develop recommendations for consideration by the Natural Gas Council. The group is also conducting outreach with the electric industry.

NAESB’s Wholesale Electric Quadrant (WEQ) and Wholesale Gas Quadrant (WGQ) Executive Committee determined earlier this year that the Commission’s proposed rule on communications of operational information between natural gas pipelines and electric transmission owners would require no changes in current business practice standards. This task force will reconvene after the first of the year to consider whether the Commission’s November 2013 Final Rule on this subject (Order No. 787, noted later in this report) will require changes in the current business practice standards.

Progress continues on the multi-regional Eastern Interconnection Planning Collaborative (EIPC) Study involving ISO-NE, NYISO, PJM, MISO, Ontario IESO and TVA. EIPC selected Levitan & Associates to conduct the four-phase study, with each phase defined by a separate “target.” Target 1 will focus on establishing a baseline of existing natural gas and electric systems for the Eastern Interconnection footprint. Target 2 will explore infrastructure adequacy using natural gas and electric simulation models to explore a 5-10 year horizon. Target 3 will include a contingency analysis. Target 4 will explore dual-fuel capability.

The study plan was kicked off during the October 31- November 1 Stakeholder Steering Committee meeting. The study is in the data collection stage and participants will be
working on scenario and assumption development through the end of the year. The first draft study deliverable is scheduled for April 2014 and will include the results of Target 1.

The Eastern Interconnection States’ Planning Council (EISPC) conducted a Council Meeting on October 28 and 29. Progress continues on the ICF-led long-term Natural Gas/Electric Infrastructure Requirements Study. The study focuses on the target-year 2030 and is currently establishing the baseline natural gas infrastructure and scenarios for the analysis. In addition to pre-existing EIPC Phase II Scenario analysis, the study will analyze co-optimization of both the natural gas and electric systems for long-term infrastructure requirements. The final results are to be completed by Summer 2014.
Turning to regional initiatives, we start with the Northeast and Mid-Atlantic.

Since staff’s third quarter report, the New England States Committee on Electricity (NESCOE) Gas-Electric Focus Group commissioned Black & Veatch to provide a Hydro Imports Analysis, an extension to the September 2013 Incremental Hydropower Imports Whitepaper and based on the Phase III Gas-Electric Study assumptions. The hydro analysis, completed in the beginning of November, examined adding 3,600 MW of hydroelectric imports from eastern Canadian Provinces into the New England region. The analysis assumed incremental imports enabled by three (3) new 1,200 MW transmission lines from points in Canada into areas of the New England power grid, one from New Brunswick to Massachusetts, one from Quebec through New York to Connecticut, and a line from Quebec to Vermont. The study assessed the economic and electric sector emissions impacts on the New England electricity market likely to result from importing additional hydro from Eastern Canada, as one of the long-term solutions recommended in the Black & Veatch Phase III Gas-Electric Study.

With ISO-NE’s short-term Winter Reliability Program in place for this winter, and its multi-phase studies completed, NESCOE is now focusing on medium and longer term initiatives. The group is now working on combining the findings from prior commissioned studies into a final advisory recommendations report for consideration by entities with responsibility/authority for implementing such solutions. The report will:

• Describe agreed-upon challenges that emerged in Focus Group discussions/meetings;
• List electric market-related solutions ISO-NE is on course to implement;
• List gas system and/or gas market-related solutions the gas industry is on course to implement;
• Identify potential solutions that may have appeal to some stakeholders and/or states but that require further analysis before implications can be fully understood and judgments can be formed;
• Identify the appropriate entity able and/or willing to develop such analysis to inform future decisions;
• Identify those potential solutions on which market participants and states broadly believe there is adequate information available, but where there is no consensus to implement; and
• Identify those potential solutions on which there is adequate information available for decision-making and for which there is consensus to implement. This includes information about next steps, authority to implement, and a forward-looking process.

Representatives from NESCOE presented this outline along with findings from the Black & Veatch three-phase Gas-Electric Study and the recently completed hydro studies at NESCOE’s Restructuring Roundtable on November 15, 2013.

Also, on December 5, the Governors of six New England states signed an agreement, “New England Governor’s Commitment to Regional Cooperation on Energy Infrastructure Issues.” In this agreement, the Governors commit to continued development of regional energy infrastructure in a coordinated approach to maximize cost savings and system integrity while enabling the states to meet clean energy and greenhouse gas reduction goals. The states have directed appropriate staff to work together with NESCOE and ISO-NE, and to use recent regional energy infrastructure studies conducted by the States, ISO-NE, and other regional organizations to inform their work on energy infrastructure issues.

Beginning December 10, NYISO began using its “gas-visualization” video board in a new control room center to increase gas awareness of the pipeline conditions. NYISO plans on improving the video board to include real-time pipeline system alerts and operational flow orders and will soon be populated with real-time data. NYISO highlighted the 800-MMcfd New Jersey-New York pipeline expansion, which since it came online November 1 has and should continue to help alleviate natural gas constraints into New York City. Additional details on this project are provided later in the report.

PJM also noted the benefits of the New Jersey-New York pipeline expansion, along with supply area expansions in Pennsylvania, Ohio, and West Virginia, will benefit the PJM region as it has benefitted NYISO. Columbia Gas upgrades to existing infrastructure should also increase supply access to PJM and reduce supply constraints.
In the Midwest, the Electric and Natural Gas Coordination Task Force (ENGCTF) developed a draft issue paper examining whether locational marginal prices appropriately reflect gas generator dispatch costs, as well as any reliability impacts unique to natural gas as a generation fuel. Preliminary findings suggest that current business rules in MISO are sufficient to allow stakeholders to react in an appropriate and timely manner to natural gas and electric market conditions.

On December 6, MISO released findings from its Phase III Gas Electric Infrastructure study. The study examined historical and current natural gas pipeline flow patterns on major interstate pipelines in the MISO Midwest footprint. The study also addressed the infrastructure and conditions that impact gas deliverability to existing and forecasted gas-fired power generation in the MISO Midwest footprint, for a 20-year planning horizon. Final results indicate sufficient gas pipeline capacity and natural gas supply. However, the results indicate that future natural gas pipeline infrastructure expansion is still needed to move supplies into the region from the Northeast, and to address area-specific constraints. MISO also examined natural gas supply adequacy in its MISO South region with the integration of Entergy into its footprint. The findings suggest there is ample natural gas pipeline infrastructure and capacity to meet demand.

MISO's ENGCTF group continued to meet monthly over the past quarter. In October, MISO leadership agreed with the following recommendations of the Task Force:
- Investigate the impact of Reserve Shutdown hours on loss of load expectation (LOLE) study results.
- Examine capacity accreditation issues related to fuel availability.
- Investigate the adequacy of current Generating Availability Data System (GADS) cause codes to capture natural gas fuel disruption issues, specifically Lack of Fuel events.
• Investigate transitioning to a seasonal resource adequacy construct to address the winter peaking natural gas market as well as summer peaking electricity market.

SPP’s planned Gas-Electric Coordination Summit has been delayed. The Summit will bring together the SPP Gas Electric Coordination Task Force and members of the gas industry for an overview of current coordination conditions in the SPP footprint, and to promote collaborative development of a plan for any remaining needed improvements.

ERCOT participated in the Texas Energy Reliability Council (TERC) conference call on November 12 to review the winter outlook. Texas natural gas pipelines and suppliers reported that storage facilities were near full going into the winter season and that no significant supply or delivery problems were anticipated. Pipeline improvements have been made in North Texas to address local capacity issues, and electric generators reported that no unusual outages are anticipated for the coming winter.

Finally, ERCOT reported that a Non-Disclosure Agreement (NDA) has been finalized that allows the sharing by both industries of detailed gas infrastructure information, such as detailed information of the physical gas pipeline system, from gas pipelines and suppliers, and detailed electric infrastructure information from ERCOT, transmission and distribution companies, and black start resources. The NDA enables natural gas pipelines to work closely with ERCOT in the black start planning process for 2014-2015.
Turning to the West, in the second week of December, the West experienced extreme cold, leading to surging natural gas demand and well freeze-offs. In Southern California, constrained pipelines in the San Diego and the Southern Los Angeles basin could not meet the surging demand from home heaters and natural gas generators, which were exacerbated by the shutdown of the San Onofre Nuclear Generating Station. In a coordinated effort, CAISO redispached generation, enabling both gas and electric customers to be served. CAISO maintained communications with both natural gas providers, Pacific Gas and Electric and SoCal Gas, throughout the cold spell, often hourly, building on protocols developed two years ago, that include daily calls on the outlook for power plant gas demand and conditions on the gas systems.

Also in the West, there are a number of sub-regional natural gas-electric coordination initiatives.

In the Pacific Northwest, the Pacific Northwest Utilities Conference Committee (PNUCC) Power and Natural Gas Planning Task Force continues to provide a platform for natural gas pipelines and electric utilities to discuss enhanced communications and coordination issues.

For example, the Western Interstate Energy Board’s (WIEB) Natural Gas – Electric and System Flexibility Assessment is underway. The study is being conducted by a consulting team consisting of Energy and Environmental Economics (E3) and DNV GL (formerly GL Noble Denton), and supervised by a Technical Advisory Group (TAG) consisting of Western electric and natural gas utilities, natural gas pipeline companies, and state officials. In their latest meetings the TAG has been working on establishing the study subregions in the Western Interconnection, vetting data sources, developing the scenarios and contingencies for the study, and reviewing preliminary results. After receiving industry feedback on the scenarios in November, E3, the contracted consultant for the study, is now proceeding with the model
runs. The pipeline working group plans to convene in January 2014, when the group will begin to more fully engage in Phase 2 activities.

WIEB reports that the study is ahead of schedule. The Phase 1 report is expected to be completed in February 2014, with preliminary results anticipated in late December, which will allow the process of identifying the areas to target for Phase 2 to begin. Preliminary work on Phase 2, including model development and pipeline outreach, is underway. The pipeline working group will begin meeting in January 2014.

Since last quarter, the Desert Southwest Pipeline Stakeholders Task Force conducted discussions with various pipelines, marketers and producers to receive feedback on its summary of problems and proposed solutions for addressing reliability, market, and long-term capacity needs. The Task Force is in the process of preparing a whitepaper that summarizes its position and plans to file this document with the Commission before the end of January 2014.
As required by the Commission's November 2012 Order, representatives from each RTO and ISO, including ERCOT, appeared before the Commission in October to share their continued progress in providing better coordination between the natural gas and electric industries and ensure adequate fuel supplies. The RTOs and ISOs reported no significant issues this summer. They also reported on their Winter 2013-14 reliability plans. The RTO and ISO meeting presentations are posted on the Commission's website.

Additionally, in November, the Commission issued a Final Rule allowing interstate natural gas pipelines and electric transmission operators to share non-public, operational information with each other to promote the reliability and integrity of their systems.

In brief, the Final Rule authorizes interstate natural gas pipeline and electric transmission operators to voluntarily share non-public, operational information. To protect against undue discrimination and ensure that the shared information remains confidential, the rule also adopts a No-Conduit Rule that prohibits recipients of the information from disclosing it to an affiliate or a third party. The Final Rule takes effect on December 23, 2013.
Our last area to cover is applications that have been filed with the Commission. We highlight previously reported filings to expand pipeline capacity serving electric generation that have been the subject of recent Commission action as well as projects affecting natural gas-fired generation that became operational in the last quarter.

In the Mid-Atlantic regions, introduced last quarter, Eastern Shore Natural Gas Company received approval for its White Oak Lateral Project first filed on June 13, 2013. The proposed project will enable it to provide 55,200 dekatherms per day (Dth/d) of firm transportation service for Calpine Energy Services, L.P. supporting gas-fired generation in Kent County, Delaware.

Another project approved since staff’s last quarterly report is the Transcontinental Gas Pipe Line Company, LLC (Transco) Virginia Southside Expansion Project. The project will enable Transco to provide 270,000 Dth/d of incremental firm transportation service to Virginia Power Services Energy Corp., Inc. (Virginia Power) and Piedmont Natural Gas Company, Inc. (Piedmont).

Staff would like to highlight a project that was recently placed in service in the Mid-Atlantic, the Columbia Gas Transmission, LLC (Columbia) VEPCO Lateral Project. The project will enable Columbia to provide up to 224,000 Dth/d of firm transportation service to Virginia Power in the summer months (April through September) between Columbia Gulf Transmission Company’s (Columbia Gulf) delivery point to Columbia at Leach, Kentucky and the primary delivery point situated at the VEPCO power station. The project will also allow Columbia to provide up to 246,000 Dth/d of firm transportation service to Virginia Power during the winter months (October through March) between Columbia’s interconnect with Transcontinental Gas Pipe Line (Transco) near Rockville, Maryland and the primary delivery point situated at VEPCO’s power station.
In the Northeast, Staff notes Eastern Shore Natural Gas Company’s Greenspring Expansion Project placed in service November 8, 2013. The project will enable Eastern Shore to provide up to 15,040 Dth/d of additional firm transportation service for two divisions of a local distribution company and an electric generator (NRG Center Dover LLC (13,440 Dth/d), Chesapeake Utilities-Delaware Division (1,100 Dth/d), and Chesapeake Utilities-Maryland Division (500 Dth/d)).

Another project placed on-line in the Northeast, is Spectra Energy’s Texas Eastern Transmission, LP New Jersey - New York Expansion Project (NJ-NY Project). On October 4, 2013, the Spectra Energy Companies requested authorization from to place the Project facilities in service with the request granted on October 17, 2013. The facilities placed in-service on November 1, 2013 will provide 800,000 Dth/d of firm transportation service into the Borough of Manhattan, New York. The NJ-NY Project enable significant volumes of gas from multiple upstream production areas to reach the New Jersey and New York metropolitan market area new and existing gas consumers such as utilities and electric generators.

In the Gulf Coast, Phase I of the Gulf Crossing Pipeline Company LLC (Gulf Crossing) Panda Power Lateral Project went online on December 3, 2013. The lateral will be capable of providing up to 278,400 Dth/d of firm transportation service from Gulf Crossing’s Sherman Compressor Station near Sherman, Texas, to an interconnection with Panda Sherman’s electric power plant under construction. Gulf Crossing entered into a transportation agreement with Panda Sherman to provide up to 125,000 Dth/d of firm service to the power plant for a term of 20 years.

The Commission also approved another Gulf Coast project, the NET Mexico Pipeline Partners, LLC (NET Mexico) Border Crossing Project. NET Mexico proposes to construct approximately 1,400 feet of 48-inch diameter pipeline extending from a point in Starr County, Texas to the international border. The pipeline will be installed using a horizontal directional drill under the Rio Grande River. The facility will have a design capacity of 2.1 Bcf/d and will provide supply to the expanding natural gas demand from gas-fired power generation in Mexico.
Staff also notes four (4) natural gas projects pending before the Commission. In the Northeast, the Transcontinental Gas Pipe Line Company, LLC (Transco) Woodbridge Delivery Lateral Project will enable Transco to provide 264,000 Dth/d of incremental firm natural gas transportation service. The new delivery lateral will extend 2.4 miles from Middlesex County, New Jersey to the Woodbridge Energy Center, an electric generating station currently being developed by CPV Shore, LLC (CPV) also in Woodbridge, Middlesex County, New Jersey.

In the Gulf Coast/Southeast, mentioned last quarter, Transco’s Mobile Bay South III Expansion Project is still pending. Transco filed on July 18, 2013, proposing to add 225,000 Dth/d of firm transportation capacity to serve power generation in the Southeast and Florida.

Another filing pending before the Commission is the Florida Gas Transmission Company (FGT) Pompano Compressor Station 21.5 Project. FGT proposes to construct, own and operate compression and auxiliary facilities in order to provide increased pressure for deliveries of natural gas at the Florida Power and Light Company (FPL) Port Everglades Next Generation Clean Energy Center, which is currently under construction. The FGT project has been designated as the FGT Pompano Compressor Station 21.5 Project (Project) and is designed to meet the needs of the new FPL Port Everglades Next Generation Clean Energy Center.

In the Gulf Coast, Houston Pipe Line Company, LP (HPL) proposed the Border Crossing Project. This project will support the abovementioned Border Cross Project. HPL proposes to extend its intrastate pipeline system by constructing approximately 23 miles of pipeline, among other facilities, from a point on its existing 24-inch Edinburg Lateral in Hidalgo County, Texas (Edinburg Extension) (non-jurisdictional facilities) to the FERC-approved Border Crossing Project; and a short stub line on the Mexico side of the International Border which will redeliver natural gas supplies into the Pemex Pipeline, which is owned by Pemex Pipeline, S.de R.L. de C.V.
In addition, two interstate natural gas pipelines made filings to provide increased service flexibility. On September 3, 2013, Gulf South Pipeline Company, LP filed a revised tariff record to adjust the nomination and confirmation deadlines for Additional Enhanced Nomination Service Nomination Cycle 3 to better align the nomination cycles and facilitate more timely reporting of scheduled quantity information to customers. (Docket No. RP13-1310-000). On September 24, 2013, the proposal was accepted for filing by delegated order, effective October 3, 2013.

On September 16, 2013, Southeast Supply Header, LLC filed revised tariff records to allow shippers additional nomination opportunities beyond the four standard NAESB nomination cycles. (Docket No. RP13-1329-000). On October 15, 2013, the proposal was accepted for filing by delegated order, effective October 16, 2013.
Recent filings made by the electric industry to address increasing reliance on natural gas-fired generators, as well as previously-reported filings that have been the subject of recent Commission action, are highlighted on this slide.

Updating on the previously reported Dominion Energy Marketing and ISO-NE filing [Docket Nos. ER13-1291, EL13-72 and ER13-2149], on November 7, 2013, the Commission accepted ISO-NE’s compliance revisions allowing resources to submit a filing pursuant to section 205 of the FPA to recover fuel and other variable costs in extraordinary circumstances where they are dispatched beyond their day-ahead schedules to meet critical reliability needs, effective June 25, 2013 (November 7 Order). The November 7 Order reaffirmed that out-of-market cost recovery should be appropriately tailored to allow resources to recover costs when called upon to address critical reliability concerns in extraordinary circumstances, while limiting market distortions and ensuring that supply offers remain financially binding. Also on November 7, 2013, the Commission denied Dominion’s request that the Commission grant rehearing of its determination that ISO-NE must submit tariff revisions to allow resources to submit a section 205 filing to seek cost recovery, including cost recovery of fuel and variable operation and maintenance costs in specific circumstances. Rather, Dominion requested that resources should be allowed to recover costs when dispatched for reliability reasons “regardless of how ISO-NE characterizes the reliability reason.”

On the previously noted ISO-NE Winter Reliability Program (Docket No. ER13-1851), since last reported, the Commission issued an order on September 16, 2013 accepting the proposed Winter Reliability Program to become effective September 6, 2013 through February 28, 2014, as requested, and the proposed tariff provisions regarding market monitoring to become effective September 6, 2013, as requested, subject to a compliance filing allocating costs to Real-Time Load Obligation and revising ISO-NE’s tariff to remove referenced dates from Appendix K (September 16 Order). On October 15, 2013, ISO-NE and NEPOOL filed tariff
revisions to comply with the September 16 Order (October 15 Compliance Filing). On October 16, 2013, the Retail Energy Supply Association (RESA) and TransCanada Power Marketing Ltd. (TCPM) filed separate requests for rehearing of the September 16 Order. On November 13, 2013, ISO-NE’s and NEPOOL’s October 15 Compliance Filing was accepted for filing by delegated order, effective September 6, 2013. RESA and TCPM’s requests for rehearing are pending before the Commission.

Additionally, the Commission issued an order on October 7, 2013 accepting the results of ISO-NE’s Winter 2013-2014 Reliability Program bid selection process, subject to a compliance filing further detailing its evaluation process in selecting winning bids and to update the bid results to reflect the corrected bids of Essential Power Massachusetts and Exelon (October 7 Order). On October 15, 2013, ISO-NE filed further information on each of the Commission’s outlined points, in response to the October 7 Order (October 15 Compliance Filing). In the October 15 Compliance Filing, ISO-NE proposes to accept 1.95 million MWh (81.3% of its targets MWh) at a cost of $75.1 million. On November 6, 2013, TransCanada Power Marketing Ltd. (TCPM) filed a request for rehearing of the October 7 Order. On November 13, 2013, ISO-NE’s October 15 Compliance Filing was accepted for filing by delegated order. TCPM’s request for rehearing is pending before the Commission. (Docket No. ER13-2266-002).

On October 3, 2013, the Commission conditionally approved ISO-NE and NEPOOL’s proposal in Docket No. ER13-1877-000 allowing market participants to change their energy market offers in real-time during the operating day, effective December 3, 2014. Commission approval was made subject to ISO-NE submitting a compliance filing within 60 days to address potential inconsistencies between ISO-NE’s intended application of the new market power mitigation rules and the proposed tariff language (October 3 Order). On October 21, 2013, ISO-NE and NEPOOL filed a motion for an extension of time to comply with the October 3 Order. On October 30, 2013, an extension of time was granted to and including January 17, 2014.

On September 4, 2013, ISO-NE and NEPOOL jointly submitted two alternative proposals to revise ISO-NE’s tariff to expand the definition of what constitutes a Shortage Event for resources with Capacity Supply Obligations (CSO) in the Forward Capacity Market (FCM) for the purposes of measuring performance and assessing penalties to include any deficiency of Thirty-Minute Operating Reserves for 30 or more contiguous minutes to incent resource availability during reserve deficiencies (Docket No. ER13-2313). The Commission issued an order on November 1, 2013 approving ISO-NE’s proposal to modify the definition of a Shortage Event to incent better performance during periods of system stress, to become effective November 3, 2013, as requested (November 1 Order). The November 1 Order found that the ultimate goal of the revisions is to ensure that resources needed for reliability are available during reserve shortages to address reliability concerns.
Staff’s next quarterly report is due in March. Staff will continue regular outreach with national and regional entities and with regulated entities regarding their efforts on gas-electric coordination.