Note: Obvious typos (missing spaces, misspellings, etc.) are not included in this list. Additional changes may be made to commented text changes to resolve grammar, acronyms, stylization, etc.

#	Commenter	Comment	LAI Response
1	Enable Midstream Partners	In Table 5, Page 23 of the subject report, the following generators connected to Enable Gas Transmission, LLC were omitted: Dell (679 MWs), Hamilton Moses (134 MWs), Lynch (175 MWs), Couch (123 MWs), Ritchie (860 MWs) and Hot Spring (630 MWs)	Dell, Hot Spring: Change accepted Couch, Hamilton Moses, Lynch, Ritchie: Change rejected, Entergy has confirmed that these plants are no longer active
2	Enable Midstream Partners	Page 23: Enable Mississippi River Transmission serves Trigen St. Louis(28MW) and the Dynegy Wood River Plant (446 MW)	Change accepted
3	Enable Midstream Partners	Page 54: Laclede Gas does not serve Trigen St. Louis	Change accepted
4	Enable Midstream Partners	Page 112: Need to add that Ameren Missouri holds 30,000 Dth of Rate Schedule FTS service to the Venice plant on MRT	Change accepted
5	Iroquois	Page A3-1: Pipeline capacities should be taken from Design Capacity report for Iroquois (the design receipt capacity, specifically) to reflect Iroquois' actual maximum receipt capacity under design conditions rather than physical flow on a particular peak day.	Change accepted
6	Iroquois	Page A3-7: Capacity should be 1,550 MDth/d for Waddington + Brookfield (instead of 1,350 MDth/d) to reflect Iroquois' actual maximum design receipt capacity rather than physical flow on a particular peak day.	Change accepted
7	Iroquois	Page A3-8: The Athens compressor station needs to be added between Wright and Dover (Name: Athens, Location: Athens, NY) to show all the compressors on Iroquois' system	Change accepted
8	Iroquois	Page A4-1: Pipeline capacities should be taken from Design Capacity report for Iroquois (the design receipt capacity, specifically) to reflect Iroquois' actual maximum receipt capacity under design conditions rather than physical flow on a particular peak day	Change accepted
9	Iroquois	Page A4-1: Iroquois' name should be "Iroquois Gas Transmission System" to be consistent with usage in Appendix 3	Change accepted
10	Iroquois	Page A4-5: Iroquois' name should be "Iroquois Gas Transmission System" to be consistent with usage in Appendix 3	Change accepted
11	Iroquois	Page A4-5: Capacity should be 1,550 MDth/d for Waddington + Brookfield (instead of 1,350 MDth/d) to reflect Iroquois' actual maximum design receipt capacity rather than physical flow on a particular peak day	Change accepted
12	Iroquois	Page E2-16: Footnote 48 should read "Consists of gas loaned at Waddington, transported <u>interruptibly</u> to any point on system, and then repaid at Waddington." Transport is done under the HUB rate schedule, not the ITS rate schedule.	Change accepted
13	Iroquois	Page E3-2: The Electronic Bulletin Board URL for Iroquois needs to be changed to "http://<u>www.</u>iroquois.com/informationalpostings/reports/". The link will not work without the beginning "www".	Change accepted

#	Commenter	Comment	LAI Response
14	Williams	Page ES-13: Added "Other pipelines give shippers with capacity obtained through capacity release the use of flexible receipt points within the path of the capacity."	Change accepted – reconciled with INGAA changes
15	Williams	Page ES-15: Replaced "~~state~~ FERC"	Change accepted – reconciled with INGAA changes
16	Williams	Page 11: However, the price ceiling for ~~short~~long-term pipeline transactions was not removed.	Change accepted
17	Williams	Page 65: Inserted "and/or secondary"	Change accepted – reconciled with INGAA changes
18	Williams	Page 66: "including primary firm transportation, secondary firm transportation and interruptible transportation shippers, as well as ~~secondary firm~~ customers	Change accepted – reconciled with INGAA changes
19	Williams	Page 67: For the Timely Cycle, nominations are due by 11:30 am, ~~scheduling is~~confirmations with interconnecting parties are completed by 3:30 pm, and scheduled quantities are reported by 4:30 pm for flow to begin at the start of the following gas day. Nominations for the Evening Cycle, which also schedules ~~volumes~~ quantities for the start of the following gas day, are due at 6:00 pm. Evening Cycle ~~scheduling is~~ confirmations are completed by 9:00 pm and scheduled ~~volumes~~ quantities are posted by 10:00 pm. Nominations for the Intra-Day 1 Cycle are due at 10:00 am, one hour after the beginning of the gas day. ~~Scheduling is~~Confirmations are completed by 1:00 pm, scheduled ~~volumes~~ quantities are reported by 2:00 pm, ~~And quantities are~~for flow effective at 5:00 pm Nominations for the Intra-Day 2 Cycle are due at 5:00 pm, ~~scheduled~~ confirmations are due by 8:00 pm, and scheduled quantities posted by 9:00 pm, ~~and~~ for flow effective at 9:00 pm.	Change accepted – reconciled with INGAA changes
20	Williams	Page 69: Once nominations have been submitted, the pipeline goes through the scheduling process to determine how much of the receipt and delivery volumes requested by its customers can be provided. The terms and conditions governing the scheduling priorities of nominated quantities are complex, multi-faceted, and vary significantly among pipelines within the Study Region, as well as within individual PPAs. Universally, the pipelines schedule FT nominations first. After confirmation of all primary FT nominations, the pipeline will schedule all secondary firm services. Secondary firm refers to transportation utilizing either secondary receipt and/or delivery points or in some cases, capacity within a rate zone which is outside of the primary path, and may also include transportation entitlements obtained via capacity release from the primary or secondary entitlement holder. After all primary and secondary firm transportation volumes have been scheduled, leftover pipeline capacity is made available to accommodate IT nominations. Once nominations utilizing secondary capacity are confirmed, based on FERC policy, they are considered on par with primary capacity for the remaining nomination cycles for that gas day.	Change accepted – reconciled with INGAA changes
	Williams	Page 69: "For ~~either~~ point-based pipelines that utilize the contract entitlements at receipt and/or delivery points,"	Change accepted

#	Commenter	Comment	LAI Response
21	Williams	Page 70: For example, Transco ~~has a zoned rate structure. Therefore, Transco does not appear to distinguish between~~considers any nomination within the path and within the contract entitlement as primary firm and nominations outside of the path or outside the contract entitlement as secondary firm. ~~flows in-the-path and out-of-the-path.~~ Transco also gives entitlements obtained through capacity release the same priority as the capacity on the originating contract be it primary and/or secondary.~~a secondary priority, on par with primary capacity entitlements using secondary receipt or delivery points.~~	Change accepted – reconciled with INGAA changes
22	Williams	Page 72: Curtailment occurs when conditions arise such that the pipeline cannot receive or deliver all previously scheduled quantities and has to reduce the receipts or deliveries. Under normal operating conditions, including cold snaps, the pipeline is designed and operated to ensure ~~timely scheduling~~availability of all ~~firm~~ primary firm transportation volumes. ~~Therefore the imposition of curtailments is generally limited to interruptible shippers [question – is this last part true?] as well as secondary firm shippers with flexible receipt or delivery points that are out-of-the-path.~~ The order of curtailment is generally the reverse of the order of the scheduling priority. Regardless of the curtailment priorities of a particular pipeline, interruptible service is always cut first. One notable difference between the order of curtailment and the scheduling priority for many pipelines is that all scheduled firm service generally has equal priority in curtailment, regardless of whether the priority ~~receipt and/or delivery points are~~ is primary or secondary. Since secondary firm once scheduled and confirmed gets bumped up to primary priority, the imposition of curtailments is generally limited to interruptible shippers.	Change accepted – reconciled with INGAA changes
23	Williams	Page 72: "The pipeline tariffs each contain a provision for primary firm shippers to request emergency relief"	Change accepted
24	Williams	Page 73: Receipt and Delivery Flexibility, Balancing and Penalties	Change accepted
25	Williams	Page 73: As explained previously, receipt and delivery volumes are scheduled on the basis of a 24-hour gas day beginning at 9:00 am. The pipelines track both positive and negative divergences between scheduled quantities and actual receipts and deliveries on a daily basis.	Change accepted
26	Williams	Page 73: Such trading can ~~often~~ take place up to 17 business days or more following the end of the month in which the imbalances occurred. Third, based on pipeline tariff provisions, some ~~the~~ customers can elect to resolve its imbalance through in-kind replacement via separate nominations of balancing quantities.	Change accepted

#	Commenter	Comment	LAI Response
27	Williams	Page 75: ~~Pipeline companies have OBAs with other pipelines where scheduled interconnect flow is required.~~ Over the last two decades, FERC's promulgation of open access policy set forth in Order No. 636 has resulted in more widespread use of OBAs across the Study Region. Pipelines and LDCs typically offer OBAs to ~~shippers~~ point operators (who may or may not be a shipper) in order to cover operating conditions when there is either an over- or under-receipt or an over- or under-delivery of all of the shipper~~'~~s' scheduled quantity of gas at the interconnecting location. An OBA sets the criteria for managing the differences that occur between scheduled volumes and actual received or delivered volumes at the location. An OBA often establishes minimum delivery pressure and gas quality specifications as well.	Change accepted – reconciled with INGAA changes
28	Williams	Page 75: In addition to interconnected pipeline companies, FERC has encouraged pipelines to enter into OBAs with direct connected gas-fired generation companies, ~~and~~ LDCs, and production locations.	Change accepted – reconciled with INGAA changes
29	Williams	Page 75/76: For shippers, the OBA specifies how imbalances are identified and the ~~shipper's~~ interconnecting point operator's options for resolving the imbalance. Hence, the conditions underlying a pipeline's ability to accommodate a permissible deviation from a ~~customer's adjusted~~point operator's confirmed ~~nomination~~ quantities are addressed within the OBA, including the financial mechanism to credit or debit the imbalance to their ~~customer's~~ account~~.~~ The OBA effectively protects the shippers from incurring imbalances. Usually, the OBA will specify the cost incurred by the ~~shipper~~ point operator for imbalance resolution in accord with varying tolerances contained within the pipeline's FERC-approved tariff.	Change accepted – reconciled with INGAA changes
30	Williams	Page 78: Some~~Most~~ ~~P~~pipelines ~~are required by FERC to~~ offer no-notice service. Generators could purchase no-notice service, but typically do not elect to do so, presumably because it is a premium service not deemed economic in relation to other transportation options. A generator covered under non-firm transportation service arrangements~~, whether secondary capacity rights or IT,~~ may see its daily confirmed volumes cut if other customers with higher priority service (including no-notice service) need to use their capacity~~the pipeline must subordinate the scheduling of a generation company's volumes in order to serve no-notice service customers~~.	Change accepted – reconciled with INGAA changes
31	Williams	Page 79: "Many pipelines offer ~~rates~~ service options that provide greater nomination frequency."	Change accepted – reconciled with INGAA changes
32	Williams	Page 79: "Transco does not provide for additional nomination opportunities within the gas day they do, however, provide shippers the ability to nominate directly after the end of that gas day (i.e. by 10 am)."	Change accepted

#	Commenter	Comment	LAI Response
33	Williams	Page 121: <u>Interstate pipelines are initially built to provide service of the primary firm entitlements, mainly LDCs. Through capacity releases and nominations, firm shippers can segment their capacity and utilize secondary firm entitlements.</u> LDCs typically use their <u>primary</u> firm pipeline entitlements fully or near fully to meet the needs of their core customers throughout the heating season. During the non-heating season, LDCs' core sendout materially declines, lessening their reliance on <u>primary</u> firm pipeline transportation arrangements. This provides an opportunity for LDCs to release some portion of their <u>primary</u> firm entitlements during the non-heating season. <u>In addition, LDCs can release their secondary firm entitlements.</u>	Change accepted
34	Williams	Page 121: Transco provided data for October, 2012 through September, 2013	Change accepted
35	Williams	Page 130: Transco has not been able to validate the capacity release statistics on its system	Change accepted – LAI has revised the statistics shown in the report
36	Vector	Page 118: Greenfield's contracts with Vector do not terminate 10/31/2018. Rather they terminate 3/31/2018 and 10/312023.	Change accepted – contracts referenced in draft report are on Union, expiration dates of Vector contracts added.
37	Vector	Page 79, Section 2.2.5 Ontario Service Options. There is no mention of the Vector system and we would suggest including the following for completeness: "Vector offers a wide range of service agreements for transportation of natural gas through its Canadian pipeline, including FT, FT Limited (FT-L), FT Hourly (FT-H) and Operational Variance Service (OVS). Gas-fired generators typically utilize FT-H and OVS. FT-H and OVS are specifically designed to assist gas fired generators."	Change accepted
38	PSEG Energy Resources & Trade	Page 109 includes a bullet describing several PSEG Power pipeline contracts, inadvertently leaving the reader with the impression that they are generator contracts.	Change accepted
39	PSEG Energy Resources & Trade	Exhibit 4 goes on to list a number of Texas Eastern and Transco firm transportation agreements, once again potentially allowing the reader to conclude that the listed generation stations have firm pipeline transportation dedicated to serving them.	Change accepted
40	National Grid	<u>Table A3-22. NYISO Generators Served by National Grid</u> NGrid-Long Island Brentwood - we believe this would be the PPL Edgewood plant which produces 88 MW NGrid-Long Island Pilgrim - we believe this would be the NYPA Pilgrim plant which produces 44 MW	Change accepted NGrid-Long Island Brentwood is the NYPA plant at Pilgrim State Hospital in Brentood. NGrid-Long Island Pilgrim is the PPL Edgewood plant, listed as Pilgrim in NYISO's Target 1 list. Footnotes have been added with the additional identifying information and capacities have been changed.
41	National Grid	<u>Table A4-21. ISO-NE Generators Served by National Grid</u> The Kendall plant is in Cambridge, Mass and is served by NSTAR Ipswich Power has a dual fuel plant rated at 9.5MW While the Mystic 8 and 9 units in Everett, Ma and the Manchester Street plant in Providence, RI are supplied directly from Distrigas and Algonquin respectively, National Grid owns, maintains and operates the pipeline between the LNG terminal and the Mystic Plants and between the Algonquin Citygate and the Manchester Street plants.	Kendall: Change accepted Ipswich: Change rejected – plant is <15 MW Mystic 8&9: Change accepted Manchester St: Change accepted

#	Commenter	Comment	LAI Response
42	INGAA	Page xvi: Along with the benefits associated with the use of a relatively clean and cost-competitive fuel, increased reliance on natural gas by electric generators raises questions about the interdependence of the gas and electric industries and the potential impact on bulk power system reliability from the lack of economic incentives inherent in the design of some PPA markets that can result in the interruption of natural gas deliveries. ~~has exposed the increasing potential impact on bulk power system reliability from events that can reduce or interrupt gas supplies and deliveries.~~	Change rejected – report is not intended to comment on market design
43	INGAA	Page xvi: Extreme cold weather often results in pipeline congestion when the pipeline is transporting at maximum capability, which can impact natural gas deliverability to ~~generation~~ generators relying on unavailable interruptible transportation throughout the Study Region.	Change accepted
44	INGAA	Page xvi: Even under more temperate weather conditions, many pipelines still run full or near full, or otherwise experience ~~constraints~~ temporary capacity reductions due to seasonal maintenance, typically during off-peak periods.	Change accepted
45	INGAA	Page xvii: In addition to the comprehensive mapping of electric generation, gas pipeline, storage, and LDC infrastructure across the Study Region, emphasis has been placed on ~~the delineation of~~analyzing whether ~~restrictive~~ pipeline and LDC tariff provisions ~~that~~ limit power plant scheduling flexibility~~, provide for imposition of penalties,~~ and influence generation company contracting norms.	Deletion of "restrictive" accepted. Other changes rejected - LAI believes the original language is an accurate characterization of the report content
46	INGAA	Page xvii: Target 2, 3 and 4 research objectives will provide LAI's assessment of the magnitude, frequency and location of the gas-electric interfaces that represent significant risk factors for bulk power ~~security~~ reliability during both the peak heating season and the peak cooling season.	Change accepted
47	INGAA	Page ES-1: The increasing reliance on gas-fired generators to serve electric loads, in conjunction with the limited firm transportation contracts held by these generators, creates the potential for generators relying upon interruptible or secondary market capacity to not be scheduled during peak demand conditions, such as those seen during the Polar Vortex and subsequent frigid weather events across the Study Region. In fact, generators that rely on interruptible pipeline transportation are unlikely to be scheduled during peak days for pipelines. ~~to be curtailed or interrupted during peak demand conditions, , causing a greater reliance on back-up fuel sources where available, including oil and kerosene, which are dependent on truck or rail deliveries.~~	First insertion accepted Second insertion rejected – LAI believes the first insertion makes this point sufficiently Deletion rejected – LAI believes that the language regarding back up fuels is relevant
48	INGAA	Page ES-8: Figure 7. Interstate Pipelines ~~Owned by~~in TVA	Change accepted
49	INGAA	Page ES-10, Table 2: The same data in Table 9 lists the total maximum withdrawal capability in IESO as 5,438. Which volume is correct?	Change accepted – the correct maximum withdrawal capability for IESO is 5,428 MMcf/d.
50	INGAA	Page ES-10, Table 2: Total Working Gas Capacity should equal 3,356 Bcf, as in Table 9.	Change accepted

#	Commenter	Comment	LAI Response
51	INGAA	Page ES-11/ES-12: Interstate pipeline and storage companies offer two basic services: firm transportation and/or storage, and interruptible transportation and/or storage. When built, p~~P~~ipeline and storage infrastructure capacity is sized ~~strictly~~ to meet the contractual demand of firm customers, with little or no reserve capacity. The firm customers are~~that is,~~ those entitlement holders who pay the FERC-authorized cost of service rate to ensure guaranteed deliverability under all circumstances, except *force majeure*. By contrast, interruptible transportation customers choose to contract for a lower priority service that depends on the availability of capacity and either may not be scheduled or may be interrupted. Historically, force majeure events are rare, and include only the most severe or unusual operating conditions that cannot be foreseen when mainline segments or compressor~~ion~~ stations are not available, thereby reducing a pipeline's physical delivery capability. These events are particularly disruptive because gas pipeline and storage infrastructure typically is not designed with redundant capacity during peak conditions, only the amount of capacity contracted by firm pipeline transportation customers, or shippers, and perhaps a small additional amount. This is in contrast to the bulk electric system design basis to ensure grid reliability by including a reserve margin to mitigate the impact of low-probability contingency events.	Change accepted
52	INGAA	Page ES-12: For example, a service may be seasonal, provide enhanced hourly flexibility, or be available on a no-notice basis to serve the firm transportation and peaking requirements of LDCs, small municipal and cooperative utilities that have historically leaned on the pipeline for deliverability assurance.	Change accepted
53	INGAA	Page ES-12: Hence, the majority of gas-fired generation at the local level behind LDC city-gates is furnished on a non-firm basis, exposing gas-fired generation to curtailments or interruptions during cold snaps or outage contingencies.	Change accepted
54	INGAA	Page ES-12: To ensure the systematic flow of natural gas from various producing basins and storage facilities to market centers across North America, pipelines and LDCs utilize the North American Energy Standards Board's (NAESB) Wholesale Gas Quadrant (WGQ) nomination, ~~and~~ confirmation and scheduling process.	Change accepted
55	INGAA	Page ES-12: ~~Since the mid-1980s when the pace of pipeline deregulation accelerated in response to FERC decisions and rulemakings, various scheduling modifications have been implemented in response to stakeholder grievances and technology progress.~~	Change rejected – LAI believes this is a relevant characterization, "grievances" changed to "feedback"

#	Commenter	Comment	LAI Response
56	INGAA	Page ES-12/ES-13: The gas industry has a national gas day running from 9 am to 9 am (central). Across the Study Region, pipelines must utilize at least four standard NAESB WGQ ~~(default)~~ daily nomination cycles, with the first nominations for the gas day due at 11:30 am (Central) the prior day before gas flows (referred to as the Timely nomination cycle), a second nomination opportunity at 6:00 pm the ~~prior~~ day before gas flows, and two intra-day cycles during the gas day, with nominations at 10:00 am and 5:00 pm.* By contrast, the electric operating day runs from midnight to midnight, generally according to each time zone. In addition, the schedule for ISOs and RTOs to post generators' day-ahead dispatch schedules varies by PPA. This timing results in an operational ~~and~~and planning gap between the gas and electric days, with Timely gas nominations generally due before the day-ahead electric market schedules are available. * The National Energy Board of Canada does not require Canadian pipelines to follow the NAESB WGQ Standards, however, TransCanada's Canadian pipelines generally follow the standards due to its numerous interconnects with US pipelines who are required to follow the standards.	Change accepted
57	INGAA	Page ES-13: ~~Generally, p~~Pipelines are open for business 24/7, with the same gas nomination procedures used on weekdays and weekends, subject to each pipeline's specific scheduling protocols.	Change accepted
58	INGAA	Page ES-13: Many pipelines in the region have made significant investments in software and automation to facilitate a streamlined nomination and scheduling process; however, as discussed in the body of this report, there remains a ~~scheduling process remains complex and can sometimes be unwieldy~~ mismatch between the gas and electric days and scheduling timelines.	Insertions accepted Deletion rejected – LAI believes that the characterization of the scheduling process as complex and sometimes unwieldy is appropriate
59	INGAA	Page ES-13: Secondary firm refers to transportation utilizing secondary receipt and/or delivery points, not specifically within the shipper's contract. Primary and secondary firm ~~and may also~~ may include transportation entitlements obtained via capacity release from the primary entitlement holder.	Change accepted
60	INGAA	Page ES-13/ES-14: FERC has implemented policies to require non-discriminatory open access and to grant shippers the ability to substitute receipt and delivery points and the right to segment capacity. One of the purposes of these policies has been to facilitate liquidity in the secondary market for pipeline capacity. ~~FERC has implemented policies that encourage open access, liquidity in the secondary market, flexibility in regard to the substitution of receipt and delivery points, and the right to segment capacity for trading purposes.~~	Change accepted

#	Commenter	Comment	LAI Response
61	INGAA	Page ES-14: With regard to capacity release transactions, the replacement shipper "steps into the shoes of the releasing shipper," in that the replacement shipper has the same primary firm service priority as the releasing shipper if it delivers gas to the receipt or delivery point(s) identified in the primary releasing shipper's contract. ~~Some~~ Pipelines, however, give capacity release transactions secondary point priority when the replacement shipper seeks to schedule natural gas at points that would be secondary receipt and delivery points under the releasing shipper's contract.~~pipelines give entitlements obtained through capacity release a secondary priority, on par with primary capacity entitlements using secondary receipt or delivery points. Other pipelines allow replacement shippers to elevate secondary points obtained through capacity release to primary points under certain conditions, thus potentially putting the released capacity entitlements on par with those of primary firm entitlement holders.~~	Change accepted, reconciled with Williams' changes
62	INGAA	Page ES-14: Shipper Balancing Opportunities and Operational Balancing Agreements	Change accepted
63	INGAA	Page ES-14: New paragraph order for this subsection	Change accepted
64	INGAA	Page ES-14: While pipelines and LDC firm and interruptible transportation tariffs typically require shippers, including generators, to schedule and take gas ratably, that is, approximately 1/24th of the daily quantity each hour, generator hourly gas demand profiles often call for non-ratable gas deliveries to meet early morning and late afternoon ramping requirements.	Change accepted
65	INGAA	Page ES-14: ~~OBAs may permit substantial deviations from the ratable take requirement when operating conditions warrant, perhaps limited to some fraction of the contractually-specified MDQ or the scheduled gas quantity.~~	Change accepted
66	INGAA	Page ES-14/ES-15: A pipeline or LDC may allow a gas-fired generator to exceed these limits if it does not interfere with providing service to other firm customers. In LAI's experience, generators typically enjoy this ~~scheduling~~ operational flexibility during the non-heating season, when slack pipeline deliverability conditions ~~often~~ may exist. However, per their tariffs, ~~virtually all~~most pipelines retain the right to require customers to adhere strictly to uniform hourly flows when required by peak demand conditions or operating contingencies arise.	Change accepted

#	Commenter	Comment	LAI Response
67	INGAA	ES-15: Imbalances are variances that occur at receipt or delivery points and are resolved based on applicable tariff provisions. There are many ways ~~daily or monthly~~ imbalances can be resolved. One primary mechanism is a cash-out provision when an imbalance exceeds a specified tolerance range. Cash-outs are usually tied to a percentage of a specified gas price index that is modified as the imbalance exceeds the tolerance. Pipeline companies and LDCs often have imbalance resolution provisions in their tariffs that ~~allow~~ provide shippers with innovative reconciliation methods, in particular, “netting” or trading gas volumes with third parties. When an imbalance reflects a greater take than the daily ~~nomination~~ scheduled quantity, the cash out price paid to the pipeline or LDC increases in general accord with the magnitude of the unauthorized overtake~~pull~~. When the imbalance reflects a volume less than the daily ~~confirmation quantity~~ scheduled quantity, the cash out price paid to the shipper decreases against the daily index price in general accord with the magnitude of the unauthorized undertake~~pull~~. Either way, the cash out provisions normally incorporated in ~~an OBA~~ the pipeline tariff or an Operational Balancing Agreement (OBA) deter the creation of imbalances on the system, thereby giving the pipeline company and/or the LDC the ability to maintain scheduling discipline on their respective systems.	Change accepted. Overtake/undertake rejected in favor of overpull/underpull – language preference.
68	INGAA	Page ES-15: ~~Gas-fired generator availability and performance in the Study Region is impacted by a pipeline company’s and/or LDC’s Operational Balancing Agreement (OBA) with the generator.~~ A second mechanism to resolve imbalances is an OBA. An OBA is a balancing mechanism to address~~es any~~ imbalances created when the actual physical flow differs from ~~the daily confirmed~~ scheduled nominations, thus resulting in a debit or credit to the point operator ~~shipper~~’s operational balancing account. An OBA does not create the right for a shipper to take additional gas that is not scheduled by the pipeline, but rather allows the pipeline and the point operator to address imbalances (overtakes and undertakes) at the point that may occur at the end of the day, or within the day, in order to get the point into balance on the system.	Insertions accepted Deletion of first sentence rejected – LAI believes this sentence is relevant to the discussion, moved to the end of the paragraph
69	INGAA	Page ES-15: In Order No. 587-G, the FERC required interstate pipelines to enter into OBAs with the point operators at all interstate and intrastate pipeline interconnects. The FERC also encouraged pipelines to negotiate OBAs with point operators at other interconnections. Not all pipelines have OBAs with generators. ~~Both p~~Pipeline and LDC OBAs with gas-fired generators are ~~formulated around~~ based on the character of service of each generator’s contract(s). While the provisions set forth in the OBA are generally the same based on NAESB’s recommended standards, a pipeline company has broad discretion in regard to its ability to negotiate the specific imbalance resolution provisions ~~terms~~ in each OBA.	Change accepted
70	INGAA	Page ES-15: INGAA notes that some pipelines have imbalance services with standard form of service OBAs that are public.	Change accepted

#	Commenter	Comment	LAI Response
71	INGAA	Pages ES-15/ES-16: Pipeline tariffs permit a pipeline to assess a shipper or OBA party a penalty for remaining out of balance on the system, if the imbalance is causing or has the potential to cause operational harm to the pipeline. Most pipelines, under non-critical operating conditions, allow shippers flexibility to get back into balance within a certain period without assessing a penalty. While imbalance penalties assessed during such normal operating conditions are small, the financial penalties assessed when Operational Flow Orders are in effect much greater because they are intended to deter shipper misconduct that could harm a pipeline's operational integrity and threaten the ability to meet its firm service obligations. The OFO may require customers to remain in contractual balance and adhere to ratable takes. OFOs are issued in extreme operating conditions. Pipelines typically issue OFOs after issuing other levels of critical notices advising customers of operational conditions and the need for receipts to equal deliveries. If a pipeline assesses a penalty to an offending shipper or point operator, FERC policy requires the pipeline to distribute the revenue from the penalty to non-offending shippers. The pipeline remains revenue neutral. ~~When imbalances are created during peak demand periods when Operational Flow Orders (OFOs) are in effect, shippers may be exposed to a range of financial penalties. Usually, the financial penalties are punitive in order to deter scheduling activities that impair pipeline reliability.~~	Insertion accepted Deletion of "punitive" rejected – LAI believes that it is accurate to characterize OFO penalties as punitive, language added in middle of insertion
72	INGAA	Page ES-16: Some pipelines across the Study Region offer tariff transportation services designed for generators that permit non-ratable takes or allow the shipper to consume gas during an eight to 12-hour period rather than a 24-hour period to coincide with electric usage. Many other pipelines have marketed similar services, but without success. Therefore, without customer support, these pipelines did not pursue offering these services.	First sentence of accepted Second and third sentences rejected – LAI has not independently verified
73	INGAA	Page ES-16: Pipeline transportation rates for interruptible service ~~are negotiable~~ may be discounted or negotiated by the pipeline with individual shippers~~, subject to state regulation~~. LDC transportation rates may be negotiated by the LDC based on value associated with the desired character of service.	Change accepted – reconciled with Williams' changes
74	INGAA	Page ES-17: During normal operating conditions, pipelines typically are flexible in allowing shippers the ability to resolve any imbalances on the pipeline during a certain period without assessing penalties, which may or may not necessarily require reconciliation by the end of the day. Any gas-fired generator engaged in unauthorized overtakes~~pulls~~ relative to scheduled volumes quantities during an OFO, which is instituted only during extreme operating conditions to maintain the integrity of the pipeline system, can be heavily penalized by the pipeline and/or LDC. The OFO notifies shippers to remain in contractual daily balance during the critical period. Multipliers applied to the daily gas or electric index price or the imposition of a large adder are standard operating practice.	Change accepted

#	Commenter	Comment	LAI Response
75	INGAA	Page ES-17: Pipeline tariffs include provisions allowing for the interruption or "bumping" of shippers relying on interruptible transportation before the second intraday nomination cycle, if a firm shipper wishes to deliver gas to that point. ~~Pipeline and LDC tariffs generally include provisions allowing for the interruption or curtailment of gas-fired generators on short notice.~~ Pipeline companies have established ~~curtailment~~ scheduling priorities that safeguard firm entitlement holders, thereby subordinating non-firm services consistent with FERC rules.	Change accepted – "before the second intraday cycle" not added because scheduling cycles haven't been introduced yet
76	INGAA	Page ES-17: LDC tariffs generally include provisions allowing for the interruption or curtailment of gas-fired generators on short notice.	Change accepted
77	INGAA	Page ES-17: In some cases, generators hold firm transportation rights that are limited to laterals, which means that the contract does not provide generators firm transportation rights on the mainline to the lateral nor does it provide the firm path back to a liquid supply point ~~in order to reimburse the pipeline for the cost of construction~~.	Change accepted
78	INGAA	Page ES-18: The limited number of merchant generators holding primary firm transportation contracts reflects the absence of a PPA requirement for generators to hold firm transportation in MISO, PJM, NYISO, ISO-NE as well as the absence of pricing in the PPAs' wholesale power markets that makes holding firm transportation capacity a viable option.	Change rejected – report is not intended to comment on market design
79	INGAA	Page ES-19: Many generators rely on oil storage capacity to provide fuel assurance when natural gas cannot be delivered. As noted above, in many cases this is a consequence of choices made by the generator or its fuel supplier about the quality of the natural gas pipeline or LDC service they have subscribed.~~Many generators rely on oil storage capacity to provide fuel assurance when . natural gas is not deliverable by pipeline companies and/or LDCs.~~	Change accepted
80	INGAA	Page ES-19: Over the last two decades, FERC has promulgated regulatory incentives that have fostered transparency~~, fairness and efficiency in the~~ and a vibrant secondary market ~~governing~~ for the release of primary entitlement holders' rights.	Change accepted
81	INGAA	Page ES-19: There is no price cap for capacity released by the assignor for releases of one year or less.	Change accepted
82	INGAA	Page ES-19: "Primary entitlement holders' recall rights ~~provide valuable option benefits, in particular,~~are valuable when unanticipated weather conditions occur or when use of primary receipt points in the Gulf Coast lessens curtailment exposure during a *force majeure* event." INGAA notes: It's unclear what this sentence means. Weather in the Gulf Coast would not be a force majeure event, unless you are talking about a hurricane.	Change rejected – language preference. Language revised to address comment regarding clarity.

#	Commenter	Comment	LAI Response
83	INGAA	Page ES-20: The pipeline industry believes that the pipeline and LDC penalty line is misleading. No one likes penalties, but even FERC agrees they are necessary to maintain the operational integrity of the pipeline system. They do not deter generators from doing business on a pipeline. Penalties in OFO situations are high but necessary to ensure all shippers abide by the OFO terms. Compliance ensures that the pipeline is able to deliver gas to firm shippers. Penalties in non-OFO situations are quite minor, and the pipeline rarely assesses them. In addition, OBAs specifically are designed to minimize pipeline penalties and allow for a variance in shipper takes.	Change rejected – LAI believes that the rationale behind the qualitative assessment has been sufficiently explained.
84	INGAA	Page ES-22/ES-23: Under normal operation conditions, pipelines typically do not require shippers to keep strictly to scheduled quantity levels or to uniform hourly flows, so long as any daily imbalance is resolved within a time frame agreeable to the pipeline, and any non-uniform hourly flows within the gas day are manageable by the pipeline. Further, pipelines typically do not assess penalties to shippers that take gas within a certain tolerance level above their scheduled quantities. Both LDCs and pipelines, however, have the ability to assess significant penalties during extreme operating conditions, when OFOs are in effect, ~~Regarding penalty charges for unauthorized overpulls, both pipelines and LDCs have restrictive tariff provisions memorialized in their respective OBAs to safeguard against scheduling conduct that degrades service to firm customers. Punitive penalties can be triggered, when~~ when a shipper's non-ratable takes or unauthorized overpulls overtakes, which diverge from the scheduling requirements set forth in the tariffs, threaten to harm pipeline operational integrity.	Insertions accepted Deletions rejected – LAI believes that the deleted language adds to the characterization of penalties. Description of tariff provisions as "restrictive" has been removed, description of penalties as punitive has been maintained.
85	INGAA	Page 2: Several recent studies have concluded that pipeline capacity constraints are the primary impediments to New England's ability to access increased Marcellus gas supplies.	Change accepted
86	INGAA	Page 3, footnote 8: If it can do so on a non-discriminatory basis, a pipeline can commingle natural gas that does not meet tariff specifications with other natural gas that exceeds the specifications in order to produce a blended gas stream that complies with the gas quality specification in its tariff.	Change accepted
87	INGAA	Page 3: ~~From time to time, problems have arisen, however.~~	Change accepted
88	INGAA	Page 4, footnote 10: ~~Non-primary firm nominations for deliveries to Texas Eastern's interconnection with Rockies Express in Clarington, OH were restricted in order to preserve reliable firm service on the system~~Texas Eastern took proactive steps to ensure that generators received their required gas quality without negatively affecting deliverability.	Change accepted
89	INGAA	Page 4: Since the natural gas industry was ~~deregulated~~ restructured in the mid-1980s	Change accepted

#	Commenter	Comment	LAI Response
90	INGAA	Page 4/5: After decades of efforts by Congress and FERC to decrease regulation and increase competition in the natural gas commodity markets, Order No. 636 represented a critical juncture in the evolution to open access and a competitive national gas commodity market. ~~Like railroad company common carriers, o~~Open access on interstate pipelines facilitated direct transactions between natural gas buyers and sellers~~the transportation of natural gas between buyers and sellers~~ throughout the U.S.	Change accepted
91	INGAA	Page 5: In Order No. 636, FERC sought to improve the competitive structure of the natural gas industry and at the same time maintain an adequate and reliable service~~to ensure that shippers can access the pipeline transportation grid to transact the most efficient deals possible~~. FERC also sought to achieve this goal in a way that continued to ensure consumer access to an adequate supply of gas at reasonable prices.	Change accepted
92	INGAA	Page 5: Open access rules, which began with Order No. 436, ensured that pipeline transportation could not be provided on more favorable terms to the pipeline's own merchant service to the detriment of competing sellers.* Order No. 636 sought to ensure that all shippers have meaningful access to the pipeline transportation grid so that willing buyers and sellers can meet in a competitive, national market to transact the most efficient deals possible.** * FERC Order No. 636 at 2. "This rule will therefore reflect and finally complete the evolution to competition in the natural gas industry initiated by those changes [FN omitted] so that all natural gas suppliers, including the pipeline as merchant, will compete for gas purchasers on an equal footing." ** FERC Order No. 636, page 7.	Change accepted
93	INGAA	Page 5: FERC also issued blanket sales certificates to interstate pipelines allowing them to offer firm and interruptible sales at market-based rates. Order No. 636 also introduced a new, unbundled no-notice firm transportation service and improve the quality of~~,~~ interruptible transportation service, and unbundled storage services.	Change accepted
94	INGAA	Page 5: This landmark order established structural changes to the secondary (capacity release) market, where owners of firm transportation rights (if performing capacity release, also referred to as "releasing shippers" or "assignors") could release unwanted capacity subject to the as-billed rate cap, thereby recouping part or all of their reservation charges~~margin~~ from replacement shippers (also referred to as "assignees").	Change accepted
95	INGAA	Page 5: To encourage market transparency, ~~efficiency through the capacity release mechanism,~~ FERC required pipelines to create Electronic Bulletin Boards ("EBBs") with standardized informational postings about pipeline capacity availability in order to facilitate equal and timely access to information regarding service availability on interstate pipelines. FERC also required pipelines to manage the capacity released program through their EBBs on behalf of their customers.	Change accepted Deletion of "efficiency" rejected

#	Commenter	Comment	LAI Response
96	INGAA	Page 5/6: FERC ordered interstate suppliers to redesign their rates using Straight Fixed Variable rate design to ~~reflect the unbundling of service~~ maximize the benefits of wellhead decontrol by increasing competition for a national commodity market.* Under this rate design, all fixed costs, including the rate of return component are recovered in the reservation charge that a pipeline assesses a shipper regardless of that shipper's actual throughput. Variable costs are recovered in the usage rate, which does vary based on a shipper's actual throughput. ~~The majority of fixed costs were to be recovered through the reservation rates paid by firm customers. Variable costs~~. Pipelines design interruptible transportation rates based on a daily derivative of the firm transportation rate. Interruptible rates are ~~were~~ recovered through volumetric rates applied to gas actually transported~~, which would be paid by all transportation customers~~. * FERC Order No. 636, page 128.	Change accepted
97	INGAA	Page 6: "Like prior landmark FERC orders, particularly Order No. 436, Order No. 636 caused pipeline companies to incur significant transition costs that were deemed recoverable by FERC, including buy-out or continuation of legacy contracts, stranded cost liabilities associated with the provision of gas sales service, and the cost of new equipment, in particular, metering devices and EBB technology. Finally, Order No. 636 provided interstate pipelines with pre-granted abandonment authority under certain conditions." INGAA proposes deleting this paragraph. It does not seem to add to this discussion. Order No. 636 primarily had to do with the transition costs out of the merchant function.	Change rejected – LAI believes that the paragraph adds useful information
98	INGAA	Both i~~I~~ncremental and rolled-in pricing are determined in the FERC certificate when the FERC establishes initial rates. A pipeline may move from incremental rate design to rolled-in rate design in a rate case proceeding, but the pipeline must carry the burden of proof to do so. ~~is generally determined before a project begins, while rolled-in pricing may be determined after the project is complete when a pipeline company files a rate case before FERC.~~	Change accepted
99	INGAA	Page 7: FERC required pipeline companies to make an affirmative case regarding operational benefits, in particular, whether the expansion project will increase system or operational reliability, such as a resolving a capacity constraint, and whether a project can provide system benefits by increasing shippers' access to new supplies or markets ~~mitigating or resolving curtailments as well as debottlenecking congestion route segments~~.	Change accepted
100	INGAA	Page 7/8: ~~FERC allowed for pricing determinations for new facilities to be set through the certification process, including changes to the notional rate due to events that occur between certification and the first rate case.~~	Change rejected – sentence has been revised to remove reference to notional rate
101	INGAA	Page 8, footnote 27: If a project is designed for the benefit of existing customers, increasing existing customers' rates in subsequent section 4 rate processing to support the project is not considered a subsidy.	Change accepted
102	INGAA	Page 8: In PL99-3, FERC decided to no longer require ~~contracts~~ precedent agreements to demonstrate the need for a project	Change accepted

#	Commenter	Comment	LAI Response
103	INGAA	Page 9: Still, as a practical matter, FERC has not demonstrated any willingness to certificate a proposed pipeline where the applicant's demonstration of need is based on pure speculation or unsupported assertions of market demand; this is particularly true if there is evidence that the project will cause adverse effects.	Change accepted
104	INGAA	Page 9: In Order No. 637, FERC initiated a two-year trial in which it waived the price caps for capacity releases of less than one year. (The price cap had been the maximum reservation charge collected by the pipeline in the primary market.) ~~FERC waived price ceilings for short-term released capacity , which were originally set based on the pipeline's maximum annual rate, calculated on a pro-rata basis for monthly or daily transactions~~.	Change accepted
105	INGAA	Page 9: FERC found that pipeline capacity was not efficiently allocated, particularly during peak periods. FERC noted that "the use of the pipeline's maximum rate as the cap for capacity release transactions ~~stymied~~ can reduce the amount of release capacity available~~, particularly~~ during peak periods precisely when capacity is needed most" and therefore potentially more valuable than the as-billed rate cap for short term releases. Order No. 637 therefore paved the way for assignors and assignees to exchange capacity at market-based prices even if such market prices exceeded the cost of service.~~"~~* Order No. 637 also incorporated ~~a number of structural changes to traditional rate design, namely,~~a policy that permits pipelines to establish cost-based seasonal, peak/off peak and term-differentiated rates for firm transportation service. ~~FERC also endorsed the creation of voluntary auctions.~~ * FERC Order No. 637, page 67.	Change accepted
106	INGAA	Page 10: FERC noted that pipeline penalties and balancing systems may be creating arbitrage opportunities for shippers. In a policy shift, FERC called for pipelines to ~~narrow~~ issue penalties ~~for conduct detrimental~~only when needed to protect ~~to~~pipeline system integrity. In order to limit imbalances, FERC required pipelines to provide imbalance management services, such as ~~proposed more transparent communication of imbalances,~~ park and loan service~~s~~, expansion of trading provisions, and other measures to give shippers better access to information about their imbalance status as well as improved economic ~~opportunity~~ incentives to stay in balance~~to resolve imbalances~~. FERC also narrowed ROFR provisions to remove economic biases by limiting ROFR rights to long-term shippers contracted at maximum rates, and made changes to pipeline EBB reporting requirements, including format changes, transaction data about capacity release, and timing requirements for informational postings.	Change accepted

#	Commenter	Comment	LAI Response
107	INGAA	Page 11: Since Order Nos. 436 and 636, and confirmed in the Commission's Policy Statement, the Commission's general policy has been to permit pipelines to require shippers that fail to meet the pipeline's creditworthiness requirements to put up collateral equal to three months of reservation charges. The Commission stated that it would continue its policy of permitting larger collateral requirements for construction projects. For new construction, a pipeline needs sufficient collateral from non-creditworthy shippers to ensure, prior to committing significant resources to a project, that it can protect its investment. For mainline projects, the pipeline's collateral requirement must reasonably reflect the risk of the project, particularly the risk to the pipeline of remarketing the capacity should the initial shipper default. Because these risks may vary depending on the specific project, no predetermined collateral amount would be appropriate for all projects. The collateral, however, may not exceed the shipper's proportionate share of the project's cost.* * FERC Policy Statement on Creditworthiness for Interstate Natural Gas Pipelines and Order Withdrawing Rulemaking Proceeding, Proposed Rule; Withdrawal; Policy Statement; 111 FERC ¶ 61,412 (2005).	Change accepted
108	INGAA	Page 11: FERC's Policy Statement on Creditworthiness ~~heightened the provision of financial security requirements, thereby making it more~~made it more difficult for shippers with limited balance sheets or weak credit ~~capacity~~ to satisfy FERC's standards for subscribing for interstate pipeline service.	Change accepted
109	INGAA	Page 11: The order incorporated NAESB standards into FERC rules~~making~~	Change rejected – language preference
110	INGAA	Page 11: INGAA notes that NAESB standards are copyright protected. You must get permission from NAESB to reproduce its standards and cite NAESB accordingly.	Change rejected – quotations included in report are from FERC Order 698, not a NAESB document
111	INGAA	Page 12: FERC Order No. 712 was issued on June 19, 2008. Order No. 712 permanently waived the price cap for short-term capacity releases of one year or less that was temporarily lifted in Order No. 637. However, the price ceiling for short-term pipeline transportation transactions was not removed.	Change accepted
112	INGAA	Page 13/14: FERC defined the scope of permissible communications and provided examples of such communications. Yet, the FERC did not provide a finite list of permissible communications, ~~FERC did not specify what sort of communications would be permissible,~~ noting that transmission system operators should be allowed to determine what information would be helpful to share in order to maintain system reliability or promote operational planning.~~noting that informational needs should be left open to broad interpretation.~~ ~~due to changing grid characteristics, regional differences, and other factors.~~	Change accepted
113	INGAA	Page 14: FERC's intent is to give transmission operators the flexibility to share information with one another ~~without any obligation~~for the purpose of promoting system reliability and operational planning, subject to the No Conduit rule~~s~~.	Change accepted
114	INGAA	Page 14: The U.S. Department of Transportation's (DOT's) Pipeline and Hazardous Materials Safety Administration (PHMSA) Office of Pipeline Safety (OPS) is the federal authority for ensuring the safe~~, reliable, and environmentally sound~~ operations of the pipeline network.	Change accepted

#	Commenter	Comment	LAI Response
115	INGAA	Page 14/15: While the pipeline industry's safety performance generally has been outstanding over the last half century, a handful of catastrophic events in recent years have compelled PHMSA to examine the need for more stringent safety rules for natural gas transmission pipelines~~While the pipeline industry's track record of performance has generally been outstanding over the last half-century, there have been catastrophic events from time to time that have required PHMSA to step up enforcement of existing standards, while examining the need for more stringent requirements to ensure safe operation of interstate pipelines~~. ~~Comparatively recent pipeline failures in San Bruno, CA, and Allentown, PA, have placed the issue of pipeline safety in the national spotlight.~~	Change rejected – LAI believes that reference to specific events is appropriate, language has been expanded to reference the natural gas industry and distribution systems rather than specifically pipelines.
116	INGAA	Page 15: ~~In December 2011, Congress passed t~~The Pipeline Safety, Regulatory Certainty, and Job Creation Act (the "Pipeline Safety Act"), which set forth a number of upgraded pipeline safety measures, new pipeline safety studies, and new regulations. ~~The Pipeline Safety Act~~The new law doubled the maximum civil penalty for pipeline ~~management~~ violations from $100,000 per day and $1 million for ~~a string of~~ violations related to a series to $200,000 per day and $2 million for ~~a string of~~ violations related to a series, and called on PHMSA to create new regulations targeting specific areas of pipeline safety concern,	Change accepted
117	INGAA	Page 16: ~~Regulations requiring operators to report MAOP exceedances within 5 days, and~~ ~~Regulations for operators to consider seismicity in identifying and evaluating potential threats.~~	Change accepted
118	INGAA	Page 16/17: Under Section 7(c) of the Natural Gas Act, interstate pipelines must obtain from FERC a certificate of "public convenience and necessity" in order to construct ~~add~~ new or expand existing pipeline facilities, including laterals, new mainline facilities, or compressor stations. The Energy Policy Act of 2005 designated FERC as the lead agency for coordinating the environmental review of pipeline certificate applications under National Environmental Policy Act (NEPA).	Change accepted
119	INGAA	Page 17: The pre-filing process is designed to disseminate as much useful information to the public as possible in order to identify environmental concerns as well as to provide stakeholders with ample opportunity to share with ~~applicant~~ pipeline applicants their concerns over route segments. Stakeholders may include landowners, tribal governments, state and local governments, public interest groups, and other community groups. Once a pipeline has proposed a specific route, ~~relevant landowners are contacted and~~landowner easement negotiations begin. FERC holds p~~P~~ublic scoping meetings ~~are held~~ to create a forum for landowners, stakeholders, state or federal agencies, or any member of the public to raise concerns and ask questions. Necessary surveys and natural and cultural resource reports are ~~prepared~~ begun during this time.	Change accepted

#	Commenter	Comment	LAI Response
120	INGAA	Page 17: After the section 7(c) application is filed, FERC prepares an Environmental Assessment (-EA), ~~which is intended to determine whether a finding of no significant impact can be issued. If the EA~~or if FERC determines that impacts are significant, a ~~more extensive and~~ detailed Environmental Impact Statement (EIS)~~ must be prepared~~.* During ~~preparation of an EIS~~the NEPA review process, FERC ~~is required to~~ consults with ~~the~~ various federal agencies, as applicable, including the Environmental Protection Agency (EPA), ~~and other applicable agencies, including,~~ the Fish and Wildlife Service, National Marine Fisheries Service, Advisory Council on Historic Preservation, Bureau of Indian Affairs, Bureau of Land Management, Army Corps of Engineers, U.S. Forest Service, and state agencies with delegated authority. * Projects which meet certain *de minimis* requirements may fall under the "categorical exclusion" and meet the conditions for a blanket certificate.	Change accepted
121	INGAA	Page 17/18: Congress intended the FERC (and its predecessor the Federal Power Commission) to "occupy the field" to the exclusion of state law by establishing through the NGA a "comprehensive scheme of federal regulation of all wholesales of natural gas in interstate commerce." Therefore, f~~F~~ederal law preempts any state or local law that ~~duplicates or~~ obstructs federal law, such as local siting or zoning rules.	Change accepted
122	INGAA	Page 18: Upon completion of the environmental analysis and agency consultations, FERC staff issues a Draft EIS which includes staff's initial ~~recommendations~~ findings about the significance of the proposed route's environmental impact and recommendations for mitigation~~for approval or denial of the certificate~~. Issuance of the draft EIS also initiates a public comment period of at least 45 days, during which public hearings are held. Following the public comment period, FERC revises the Draft EIS as necessary, and issues the Final EIS with environmental recommendations~~ for approval or denial of the certificate~~. A final FERC Order granting or denying the certificate cannot be issued until at least 30 days after FERC publishes notice of availability of the Final EIS.	Change accepted
123	INGAA	Page 18: Under the NGA, a party to the proceeding that objects to a FERC order may seek rehearing within 30 days of issuance of the order. If FERC does not act on a petition for rehearing within 30 days of the petition having been filed, the rehearing is deemed to have been denied and the aggrieved party is free to seek judicial review of the FERC order in a federal appellate court. As a practical matter, FERC can preclude a matter from becoming ripe for judicial review by issuing a tolling order that grants rehearing for purposes of further consideration. The net effect of this procedural order is to provide FERC with an unspecified time within which to consider the merits of the rehearing petition. ~~There is no statutory time limit for FERC to consider or conclude a rehearing~~).	Change accepted

#	Commenter	Comment	LAI Response
124	INGAA	Page 18/19: Interstate pipelines typically undertake major planned maintenance activities during the spring shoulder season, when firm transportation customers are not utilizing their full contractual entitlements. Pipelines select dates for planned maintenance that minimize disruption to firm transportation customers; typically, planned maintenance has little or no effect on a pipeline's ability to serve its firm transportation customers. Of course, maintenance is conducted throughout the year as needed. Pipeline companies do not normally schedule maintenance during the heating season, November through March~~,~~. Pipelines, however, ~~but~~ are always quick to mobilize the requisite maintenance to expedite service restoration when outage contingencies occur. ~~Many p~~Pipelines post their planned maintenance schedules on their EBBs ~~or~~ and announce them during customer meetings. Hence, shippers are ~~generally~~ aware of upcoming planned maintenance events that result in ~~upcoming~~ capacity reductions and can plan accordingly. Large gas customers ~~sometimes~~ often work with pipelines to coordinate maintenance schedules in order to avoid simultaneous capacity reductions to the maximum practical extent. Frequent communication among pipeline companies, LDCs, state regulatory commissions, and generation companies reasonably assures stakeholder awareness of anticipated pipeline maintenance schedules, in particular, significant maintenance projects that have the potential to cause capacity reductions ~~delivery constraints~~ for several weeks, or months.	Change accepted
125	INGAA	Page 27: We note that the Bayonne Energy Center is directly connected to Transco. However, as part of the NJ-NY project, TETLP built a meter station there that serves PSEG. It does not directly tie to the energy center, but rather to a PSEG lateral that goes into the plant.	Change accepted
126	INGAA	Page 32: Natural gas storage facilitates the ability to meet core customers' needs throughout the heating season~~Reliance on gas storage capacity is central to LDCs' ability to serve core customers throughout the heating season~~.	Change accepted
127	INGAA	Page 32: ~~FERC has jurisdiction over gas storage facilities in the U.S. that are owned and operated by an interstate pipeline as well as independent storage facilities engaged in interstate commerce.~~ FERC deems interstate natural gas storage to be the equivalent of interstate natural gas transportation for purposes of exercising its jurisdiction under the NGA. Consequently, interstate natural gas storage is subject to the same open access requirements that apply to interstate natural gas pipeline transportation. Further, this is the case even if the storage is operated by an entity that is not an interstate natural gas pipeline.	Change accepted

#	Commenter	Comment	LAI Response
128	INGAA	Page 33/34: Interstate s~~S~~torage facilities, whether connected to interstate pipelines or not, are regulated by FERC. In 2006, FERC issued Order No. 678, which amended its regulations to establish criteria for obtaining market-based rates for storage services using a two-prong approach.* First, the market power analysis methodology was modified to include consideration of close substitutes to gas storage in defining the relevant market. Second, following EPAct 2005, which amended the NGA to add section 7(f), FERC developed regulations ~~were developed~~ to permit the authorization of storage providers to charge market-based rates for new capacity in the absence of a demonstration of market power. * http://www.ferc.gov/whats-new/comm-meet/061506/C-2.pdf	Change accepted
129	INGAA	Page 34, Table 9: The same data in Table 2 lists the total maximum withdrawal capability in IESO as 5,500. Which volume is correct?	Data in Table 9 is correct
130	INGAA	Page 35, Figure 19: This chart lists Texas Gas as a pipeline, but does not include Texas Gas' storage in PJM, MISO-North and MISO-South.	Change rejected. Texas Gas's storage facilities in IN and KY are not located in MISO and TVA, not in PJM.
131	INGAA	Page 36, Figure 20: This chart lists Texas Gas as a pipeline, but does not include Texas Gas' storage in PJM, MISO-North and MISO-South.	Change rejected. Texas Gas's IN and KY storage facilities that are in MISO North/Central are shown in this figure. Some KY facilities are in TVA and therefore shown in the TVA figure rather than the MISO figure.
132	INGAA	Page 37, Figure 21: This chart lists Texas Gas as a pipeline, but does not include Texas Gas' storage in PJM, MISO-North and MISO-South.	No change needed. Texas Gas's storage facilities in IN and KY are located in MISO North/Central, not in MISO South.
133	INGAA	Page 44, footnote: Since testing and commercialization of Northeast Gateway and Neptune, neither import terminal has been used significantly for regasification of LNG into the local market.	Change accepted
134	INGAA	Page 45, Figure 29: The Waterbury, CT LNG Satellite Tank appears to be missing.	Change accepted
135	INGAA	Page 46, Figure 30: East Tennessee is not correctly color coded. ETNG's facilities are navy blue, but in the legend ETNG is coded in brown.	Change accepted
136	INGAA	Page 46: In some instances, a pipeline located wholly within a single state that receives natural gas from interstate sources may remain subject to state jurisdiction if it satisfies the criteria to be a Hinshaw pipeline exempted from the Natural Gas Act. In particular, if the gas received by such a pipeline is consumed entirely within its state and if the pipeline is subject to state regulation, it will qualify for a statutory exemption from FERC regulation. ~~an intrastate natural gas pipeline may also be classified as a "Hinshaw" pipeline. Although such pipelines receive all of their supplies from interstate pipeline sources, and therefore fall within FERC's regulatory purview, they have been exempted from its jurisdiction because the gas they deliver is consumed totally within the state in which they operate~~.	Change accepted

#	Commenter	Comment	LAI Response
137	INGAA	Page 49: As previously discussed, PHMSA is ~~primarily~~ responsible for developing, issuing, and enforcing pipeline safety regulations. Through delegation by PHMSA, ~~partnership with PHMSA,~~ state pipeline safety agencies may assume all or part of the inspection and enforcement responsibilities for intrastate pipelines under an annual certification process.* To qualify for certification, states are required to adopt at least the minimum federal regulations, and may implement additional or more stringent regulations as long as they are compatible with federal regulations. ~~A state must also provide for enforcement sanctions substantially the same as those authorized by the federal pipeline safety regulations.~~ A state agency that does not satisfy the criteria for certification may enter into an agreement with PHMSA to undertake certain aspects of the pipeline safety inspection program for intrastate facilities on behalf of OPS.** While a ~~PHMSA-certificated~~ state with a Section 60106 agreement ~~agency~~ will conduct inspections to ascertain compliance with federal safety regulations, probable violations are reported to OPS for enforcement action. * *See* 49 U.S.C. § 60105 ** *See* 49 U.S.C. § 60106	Change accepted
138	INGAA	Page 50, Figure 31: It appears that interstate pipelines are included in the next several figures, not just LDCs. Suggest review of figures.	Change accepted
139	INGAA	Page 62, Figure 37: East Tennessee is not correctly color coded. ETNG's facilities are navy blue, but in the legend ETNG is coded in brown.	Change accepted

#	Commenter	Comment	LAI Response
140	INGAA	Page 67: When built, p~~P~~ipeline and storage infrastructure capacity is sized ~~strictly~~ to meet the demand of firm customers, ~~that is~~with little or no excess capacity. Firm customers are ~~,~~ those entitlement holders who pay the FERC-authorized cost of service rate to ensure guaranteed deliverability under all circumstances, except *force majeure*. *Force majeure* events are rare, and include only the most severe or unusual operating conditions when mainline segments or compression stations are not available~~,~~ and the pipeline cannot meet its firm service obligations, thereby reducing a pipeline's delivery capability. In exchange for this level of service reliability, firm customers must pay a fixed monthly fee designed to reimburse the pipeline for its fixed capital costs and ~~fixed~~ operating expenses and a rate of return component. This fee is referred to as a reservation charge, and is ~~calculated~~ charged ~~to compensate the transporter for 100% of its fixed costs~~ to render service irrespective of ~~throughput levels~~whether the shipper uses its firm contract or not. Firm transportation customers also pay a usage fee which compensates the pipeline for variable costs that vary with throughput. A shipper only pays the usage fee if it transports gas. Pipelines may, but are not required to, discount the firm transportation rate. In contrast, interruptible service is available only when and if there is sufficient pipeline capacity after the needs of firm customers, on a primary and secondary priority, have been scheduled. Interruptible customers pay a ~~variable~~ volumetric rate only when they use the service~~proportional to actual usage~~. The volumetric rate paid by interruptible shippers for a lower quality of service in terms of delivery priority may be discounted~~is negotiated~~ by the pipeline. The level of interruptible transportation discounting across the Study Region varies ~~and the shipper and varies by location across the Study Region~~.	Change accepted
141	INGAA	Page 67: In the secondary capacity market, shippers holding unused ~~primary~~ firm capacity can release this capacity for sale to other shippers. Secondary firm capacity would ~~may~~ have a priority of service lower than primary firm transportation service if the assignee delivers gas to a different point than specified in the assignor's contract, but higher than interruptible service. These nuances are addressed in more detail in Section **Error! Reference source not found.**.	Change accepted – reconciled with Williams' changes

#	Commenter	Comment	LAI Response
142	INGAA	Page 68: To ensure the systematic flow of natural gas from various producing basins and storage facilities to market centers across North America, pipelines and LDCs must utilize the standardized NAESB Wholesale Gas Quadrant (WGQ) nomination, confirmation and scheduling -process that is the product of stakeholder review and ~~periodic modification~~FERC approval.* ~~. These modifications have been implemented from time to time beginning in the mid-1980s when the interstate pipeline industry was restructured.~~ Under the current protocol, all shippers – including primary firm transportation, secondary firm transportation, ~~and~~ interruptible shippers, and shippers obtaining primary and secondary capacity through capacity release ~~as well as secondary firm customers who obtain capacity rights through each pipeline's capacity release arrangements –~~ must first submit a nomination ~~to inform~~ to the pipeline ~~regarding~~ requesting the amount of gas they want ~~to have delivered~~a pipeline to deliver (from what receipt point to what delivery point)**. Shippers must have associated quantities of gas supply to support its requested transportation nomination. * The NAESB WGQ develops the standards which interstate pipelines must comply with once the FERC incorporates the standards into the Code of Federal Regulations. ** For no-pathed pipelines, a shipper would not need to identify the receipt and delivery points.	Change accepted – reconciled with Williams' changes
143	INGAA	Page 68: NAESB WGQ has established four standard nomination cycles for each gas day: Timely and Evening, which occur the day before the start of the gas day, and Intra-Day 1 and Intra-Day 2, which occur during the flowing gas day.	Change accepted
144	INGAA	Page 68: We note that the nomination and confirmation requirements for no-notice service vary by pipeline.	Change rejected – LAI believes this sentence is misleading, because no-notice nominations are, by definition, not required, only perhaps requested.
145	INGAA	Page 68: Interconnect Confirmation – TSPs confirm with upstream and downstream point operators the quantity of gas that the pipeline will transport from the receipt point to the delivery point and confirm that the shipper has injected sufficient volumes of gas to support its nomination. ~~TSPs confirm with upstream and downstream pipeline operators that sufficient volumes have been nominated and allocated capacity~~	Change accepted
146	INGAA	Page 69: NAESB WGQ Standard	Change accepted
147	INGAA	Page 69: Shippers have the option to submit single-day or multi-day nominations through their interstate pipeline EBB accounts~~,~~. ~~and pipelines, for the most part, configure their staffing schedules to accommodate expected levels of shipper weekend / holiday scheduling needs~~. Pipelines operate seven days a week, 24 hours a day, including holidays and weekends.	Insertions accepted Deletion rejected - LAI believes that the reference to pipeline staffing is relevant here
148	INGAA	Page 69, Figure 40: Correction: The Intraday 2 schedules are posted at 9:00 pm (not 8:00 pm) for gas flow at 9:00 pm. Consistent with the text description.	Change accepted

#	Commenter	Comment	LAI Response
149	INGAA	Page 70: For the Timely Cycle, nominations are due by 11:30 am, ~~scheduling is~~confirmations are ~~completed~~ due by 3:30 pm, and scheduled quantities are reported by 4:30 pm for gas flow at 9:00 am ~~to begin at the start of~~ the following gas day. Nominations for the Evening Cycle, which also schedules ~~volumes~~ quantities for gas flow at the start of the following gas day, are due at 6:00 pm. Evening Cycle confirmations are due ~~scheduling is completed~~ by 9:00 pm and scheduled volumes are posted by 10:00 pm. In addition, there are two nomination opportunities during the gas day, for gas flow the same gas day. Nominations for the Intra-Day 1 Cycle are due at 10:00 am, one hour after the beginning of the gas day. Confirmations are due by ~~Scheduling is completed by~~ 1:00 pm, scheduled ~~volumes~~ quantities are reported by 2:00 pm, ~~And quantities are effective~~for gas flow at 5:00 pm Nominations for the Intra-Day 2 Cycle are due at 5:00 pm, confirmations are due by~~scheduled by~~ 8:00 pm, and scheduled quantities are posted by 9:00 pm, for gas flow starting ~~and effective~~ at 9:00 pm.	Change accepted – reconciled with Williams' changes
150	INGAA	Page 70: A second complicating factor is that gas-fired generators in all PPAs, other than NYISO, do not necessarily know when they have been scheduled to run before Timely Cycle nominations are due. (NYISO posts its dispatch schedules before Timely gas nominations are due.) Other PPAs are reviewing whether to move their dispatch schedules to earlier in the day, prior to the Timely gas nomination deadline at 11:30 am CCT. Across the Study Region, the (Day-Ahead Market) DAM bidding schedules are as follows (all times are CCT):	Change accepted
151	INGAA	Page 70: In 2012, FERC launched an initiative to ensure that outages~~, fuel availability,~~ and reliability problems are not the result of the lack of coordination between the electric and gas industries, especially as electric sector dependence on natural gas increases. One aspect of this coordination effort is an examination of the alignment of the electric and gas operating days across the country.* In April 2013, FERC held a technical conference to discuss natural gas and electric industry scheduling, and issues related to whether and now natural gas and the electric industry schedules and practices could be harmonized in order to achieve the most efficient scheduling systems for both industries. * Request for Comments of Commissioner Moeller on Coordination between the Natural Gas and Electricity Markets, February 3, 2012, http://ferc.gov/about/com-mem/moeller/moellergaselectricletter.pdf.	Change accepted
152	INGAA	Page71, footnote 115: ~~On January 28, 2014, the Natural Gas Council, as part of its Gas Day Initiative, presented a straw-man proposal for changes to the gas day to electric sector repesenstatives (including the ISO/RTO Council).~~	Change rejected – the meeting and proposal were reported in the press, and the presentation is posted on MISO's website, therefore LAI believes it is appropriate to reference that the meeting took place.
153	INGAA	Page 71: The natural gas industry is coordinating with the electric industry to discuss possible modifications to the gas and electric schedules that would benefit both industries.	Change accepted

#	Commenter	Comment	LAI Response
154	INGAA	Page 71: Although the pipelines must ~~allow~~ offer at least the four standard nomination cycles, pipelines may elect ~~they may also~~ to provide greater flexibility in their nominating procedures. In light of heightened pressure on gas-fired generators to obtain natural gas on a timely basis in accord with various ISOs/RTOs' scheduling requirements in the DAM, many pipelines in the Study Region have ~~recently~~ implemented greater scheduling flexibility to accommodate daily scheduling uncertainty in regional power markets.	Change accepted
155	INGAA	Page 71: We put the pipelines in alphabetical order.	Change accepted
156	INGAA	Page 71, footnote 117: The 11:00 am cycle is for 4 hours.	Change accepted
157	INGAA	Page 71: These Spectra pipelines listed offer 42 nomination cycles for each gas day.	Change accepted
158	INGAA	Page 72: Once nominations have been submitted, the pipeline goes through the confirmation ~~scheduling~~ process to determine how much of the receipt and delivery ~~volumes~~ quantities requested by its customers can be provided, and to confirm that the shipper has the supply to inject into the pipeline to support its nomination. The terms and conditions governing the scheduling priorities of nominated quantities are complex, multi-faceted, and vary significantly among pipelines within the Study Region, as well as within individual PPAs. Universally, the pipelines schedule FT nominations and capacity release at primary receipt and delivery points first. After ~~confirmation~~ scheduling ~~of~~ all primary FT nominations and capacity release nominations at primary points, the pipeline will schedule all secondary firm services. Secondary firm refers to transportation utilizing secondary receipt and/or delivery points, and ~~may also~~ includes transportation entitlements obtained via capacity release from the primary entitlement holder if the assignee moves to a different receipt or delivery point than that in the assignor's contract. After all primary and secondary firm transportation ~~volumes~~ quantities have been scheduled, leftover pipeline capacity is made available to accommodate IT nominations. On some pipelines, ~~The pipelines'~~ detailed scheduling priorities may further differentiate among various services offered within the broader categories of firm and interruptible service. Once nominations utilizing secondary capacity are scheduled, based on FERC policy, they are considered on par with primary capacity for the remaining nomination cycles for that gas day.	Change accepted – reconciled with Williams' changes
159	INGAA	Page 73: Other pipelines have similar, but by no means identical, scheduling priorities. For example, Transco considers any nomination within the path and within the contract entitlement as primary firm and nominations outside of the path or outside of the contract entitlement as secondary firm. ~~has a zoned rate structure. Therefore, Transco does not appear to distinguish between flows in-the-path and out-of-the-path~~. Transco also gives entitlements obtained through capacity release the same priority as the capacity on the originating contract, be it primary and/or secondary ~~a secondary priority, on par with primary capacity entitlements using secondary receipt or delivery points~~. In contrast, Tennessee's tariff permits ~~allows~~ replacement shippers to elevate secondary points obtained through capacity release to primary points under certain conditions	Change accepted – reconciled with Williams' changes

#	Commenter	Comment	LAI Response
160	INGAA	Page 74: On some pipelines, e~~E~~ven after their nominated quantities have been scheduled, interruptible customers are potentially subject to being "bumped,"	Change accepted
161	INGAA	Page 74: Interruptible ~~customers~~ transportation service and unauthorized overrun service have the lowest~~are at the bottom of the totem pole in terms of~~ scheduling priority. However, on some pipelines, interruptible customers can avoid being bumped by other interruptible customers paying a higher rate by agreeing to match the higher rate being paid by the other interruptible customer. Of course, there is no similar protection against being bumped by firm customers. Currently, bumping is not allowed during the Intraday 2 Cycle. The *de facto* no-bump feature of the Intraday 2 cycle means that an IT customer that was scheduled in Intraday 1 and has not received a bump notification by 2:00 pm is assured that they will not be bumped for that gas day. Hence, they may continue to take their scheduled quantities until 9:00 am the next morning. On some pipelines, i~~I~~f an interruptible customer agrees to match the higher rate paid by the other interruptible customer and then the pipeline is required to curtail or interrupt service, such curtailment is generally implemented *pari passu*, *i.e.*, on equal footing.	Change accepted
162	INGAA	Page 75: Curtailment occurs when conditions arise such that the pipeline cannot receive or deliver all previously scheduled quantities and has to reduce receipts or deliveries. Under normal operating conditions, including cold snaps, the pipeline is designed and operated to ensure ~~timely scheduling~~availability of all -primary firm transportation ~~volumes~~quantities. A pipeline only will schedule nominated volumes that the pipeline believes it can deliver based on current operating conditions. If a pipeline does not schedule a nomination, it is not considered a curtailment. There may be cases, however, such as during an unexpected outage, when a pipeline may need to curtail previously scheduled gas. The order of curtailment generally is the reverse of the order of scheduling priority. Therefore the imposition of curtailments is generally limited to interruptible shippers as well as secondary firm shippers with flexible receipt or delivery points that are out-of-the-path. ~~The order of curtailment is generally the reverse of the order of scheduling priority.~~ Regardless of the curtailment priorities of a particular pipeline, interruptible service is always cut first. One notable difference between the order of curtailment and the scheduling priority ~~for many pipelines~~under the Commission's policies is that all scheduled firm service generally has equal priority in curtailment, regardless of whether the receipt and/or delivery points are primary or secondary.	Change accepted – reconciled with Williams' changes

#	Commenter	Comment	LAI Response
163	INGAA	Page 75: Some ~~The~~ pipeline tariffs ~~each~~ may contain a provision for firm shippers to request emergency relief from curtailment when necessary to prevent irreparable injury to life or property (including environmental emergencies) or to provide for minimum plant protection, for example if a generator with firm capacity needs additional time to ramp down to avoid equipment damage. In such cases, the pipeline will adjust its curtailment / interruption of all other customers on a *pro rata* basis as necessary to deliver the quantities required to avoid or mitigate the threatened or actual emergency. (Unlike LDCs, interstate pipelines do not have end use curtailment and cannot select which customers to serve. Pipeline restrictions and curtailments are made according to priority of service.) Tariff provisions typically indicate that shippers will have at least two hours from the time the curtailment notice is issued to when it is effective. Penalties ~~are~~ also may be levied if a customer fails to comply with a curtailment order and continues to take gas in excess of their curtailed volume. These penalties are designed to discourage unauthorized takes which could impede the pipeline's ability to deliver gas to other customers and harm the integrity of the pipeline system.	Changes accepted Insertion of "and harm the integrity of the pipeline system" rejected – LAI believes that the point has been adequately made without this language
164	INGAA	Page 75/76: Under the broad categories of firm and interruptible service, there is a wide range of service options offered by the interstate pipeline and storage companies, which are tailored to their customers' needs.	Change accepted
165	INGAA	Page 76: While pipelines have tariff authority to charge ~~The charges or~~ penalties associated with these overruns, most pipelines do not charge penalties for overruns that are within the tolerance range. ~~are rarely punitive, and are typically equal to the daily 100% load factor rate.~~	Change accepted
166	INGAA	Page 76/77: In contrast to pipeline's ability to permit overruns under normal conditions, ~~this relative laxity under normal conditions regarding overruns,~~ under extreme operating conditions that threaten the integrity of the pipeline system or the ability of the pipeline to provide firm service, the pipelines require strict adherence to contractual terms. In this case, the pipeline may give notice to one or more customers, through an OFO, Flow Day Alert, Critical Notice or Action Alert, posted on the pipeline's EBB, requiring that customers bring receipts and deliveries into balance. OFOs are issued during extreme operating conditions typically after the pipeline has issued other critical notices about pipeline operations. Issuance of such restrictive orders or alerts generally limit takes to scheduled quantities, while informing the shipper of required pipeline action(s) to maintain system integrity. Failure of the customer to comply with the pipeline's directives will trigger substantial penalties or necessitate a pipeline to use flow control, if available, to restrict a customers' unauthorized use of gas in order to maintain system integrity. ~~.~~ For example, Algonquin stipulates a penalty of three times the daily high spot market gas price for any gas taken in excess of the customer's hourly or daily entitlements only during OFO situations.	Change accepted

#	Commenter	Comment	LAI Response
167	INGAA	Page 77: In all cases, the penalties are intended to be sufficiently large to deter overruns and ensure the operational integrity of the pipeline system and maintain adequate pressure and flow across the system to enable pipeline deliveries for all customers.~~ensure that the pipeline's daily inventory of line-pack will not be degraded in order to maintain adequate pressure and flow across the system~~.	Change accepted
168	INGAA	Page 77: ~~With few exceptions, scheduled quantities are assumed to flow uniformly throughout the gas day.~~ Pipeline tariff provisions typically state that scheduled volumes must be taken ratably throughout the day, *i.e.*, 1/24th of the daily volume per hour. However, in practice, pipelines permit shippers to flow non-ratably when operationally possible. ~~In fact~~That being said, most pipeline tariffs require that the flow be uniform within certain tolerances.	Change accepted
169	INGAA	Page 77: ~~Pipeline companies often enter into an OBA with large customers to define the daily tolerance levels and the cashout mechanism or in-kind resolution procedure. More detail about OBA conventions is presented in Section **Error! Reference source not found.**.~~	Change rejected – language moved to an earlier paragraph where it fits better in context
170	INGAA	Page 77: ~~Pipeline tariff provisions typically state that scheduled volumes must be taken ratably throughout the day, *i.e.*, 1/24th of the daily volume per hour.* In other cases, t~~The tariff may allow for variations in hourly takes according to the needs of the customer, ~~* Tariffs typically do not include specific penalties for taking gas non-ratably.~~	Change partially accepted and partially rejected – footnote is retained in new text location
171	INGAA	Page 78: However, virtually all pipelines retain the right to require customers to adhere strictly to uniform hourly flows when needed to safeguard the operational integrity of the pipeline and pipeline deliverability. ~~firm shippers rights in light of a pipeline's limited ability to pack and draft the system within the gas day, for example during periods of pipeline congestion when Flow Day Alerts or OFOs are posted.~~	Change accepted
172	INGAA	Page 78: FERC Order No. 698 incorporates by reference NAESB WGQ and Wholesale Electric Quadrant standards	Change accepted
173	INGAA	Page 78: The standards also required electric transmission operators and generators to sign up to receive from connecting pipelines OFO and other critical notices.	Change accepted
174	INGAA	Page 78: This usually requires gas-fired generators to submit hourly burn profiles of their expected gas consumption to the pipeline.	Change accepted

#	Commenter	Comment	LAI Response
175	INGAA	Page 78/79: In Order No. 587-G, FERC required interstate pipelines to enter into OBAs with other interstate pipelines and intrastate pipelines at all interconnection points.* Pipeline companies have OBAs with other pipelines ~~where scheduled interconnect flow is required~~at interconnects in order to account for variances between actual flow and nominated quantities at a point. Not all pipelines have OBAs with generators. OBAs are useful operational tools for pipelines and their shippers because under these agreements, shippers are not affected by variances in deliveries. Rather, the variances are resolved between the parties to the OBA. Over the last two decades, FERC's promulgation of open access policy set forth in Order No. 636 has resulted in more widespread use of OBAs across the Study Region. Pipelines and LDCs typically offer OBAs to point operators or shippers in order to cover operating conditions when there is either an over- or under-receipt or an over- or under-delivery of the shipper's scheduled quantity of gas. An OBA does not give a shipper the right to be out of balance on the pipeline. Rather, a~~A~~n OBA is a balancing mechanism that sets the criteria for managing the differences that occur between scheduled volumes and actual delivered quantities~~volumes~~ at the end of the day or another period determined by the pipeline. ~~An OBA often establishes minimum delivery pressure and gas quality specifications as well.~~ * See FERC Order No. 587-G: Standards for Business Practices of Interstate Natural Gas Pipelines, 31,062 at 30,676 (1998).	Change accepted – reconciled with Williams' changes
176	INGAA	Page 79: ~~In Order No. 587-G, FERC required interstate pipelines to enter into OBAs with other interstate pipelines and intrastate pipelines at all interconnection points.*~~ ~~* See FERC Order No. 587-G: Standards for Business Practices of Interstate Natural Gas Pipelines, 31,062 at 30,676 (1998).~~	Change accepted
177	INGAA	Page 79: In addition to interconnected pipeline companies, FERC has encouraged pipelines to enter into OBAs with production points, direct connected gas-fired generation companies and LDCs.	Change accepted – reconciled with Williams' changes
178	INGAA	Page 79: For shippers, the OBA specifies how imbalances are identified and the ~~shipper's~~ interconnecting operator's options for resolving the imbalance (The interconnecting operator may be a generator). Hence, the conditions underlying a pipeline's ability to accommodate a permissible deviation from a customer's ~~adjusted confirmed nomination~~ scheduled quantity are addressed within the OBA, including the financial mechanism to credit or debit the imbalance to the customer's account. The OBA effectively protects the shippers from incurring imbalances.	Change accepted – reconciled with Williams' changes
179	INGAA	Page 80: Customers that hold firm capacity entitlements may choose to release all or a portion of their contracted entitlements ~~them~~ rather than utilize them.	Change accepted
180	INGAA	Page 80: Subject to the terms the releasing customer places on the released capacity, the replacement customer, or "assignee," acquires entitlements that are ~~generally~~ equal in character and priority to ~~those of any other customer holding entitlements under the same rate schedule and paying the same rate~~the releasing shipper.	Change accepted

#	Commenter	Comment	LAI Response
181	INGAA	Page 80: As discussed in Section 2.4, very few generation companies actively participate in the regular assignment of capacity rights in the secondary market, opting instead to rely on gas marketers, financial entities, and/or gas suppliers for a bundled service delivered to the citygate or plant meter at the local level, or on interruptible transportation. ~~.~~	Change accepted
182	INGAA	Page 81: When pipelines expand their system to serve new customers, the cost of expansion is often rolled-in to the existing tariff rate if the expansion provides operational flexibility or relieves system congestion to the entire system~~s~~. However, when the expansion is a new lateral line to serve one or only a few customers, FERC rate policy typically assigns the incremental cost of the lateral to the benefited shipper, who is charges an incremental rate~~then assigned cost responsibility for the lateral under a separate rate schedule~~.	Change accepted
183	INGAA	Page 81, footnote 134: ~~A pipeline's sale of leftover capacity on the mainline or lateral to an interruptible shipper generally results in a revenue credit to firm customers on the mainline or lateral. The allocation of net revenue derived from these sales between firm customers and the pipeline varies among pipelines in the Study Region.~~	Change accepted
184	INGAA	Page 81: Usually, the benefited no-notice customer is able to modify ~~increase~~ daily ~~and hourly consumptio~~quantities ~~n~~ relative to the nominated gas quantity. Characteristics of no-notice services vary by pipeline.	Change accepted
185	INGAA	Page 81: For example, some pipeline companies offer no-notice service that do not require nominations.	Change rejected – LAI believes this sentence is misleading, because no-notice nominations are, by definition, not required, only perhaps requested.
186	INGAA	Page 81: Pipelines typically rely on line-pack and/or storage to ~~accommodate the variations between receipts and deliveries~~support their no-notice services.	Change accepted
187	INGAA	Page 82: Pipelines are not required by FERC to offer no-notice service.	Change accepted – reconciled with Williams' changes
188	INGAA	Page 82: Apart from no-notice service, this is usually accomplished by either relaxing the requirement for uniform takes during the gas day or by increasing the frequency with which nominations may be submitted beyond that offered by the four standard NAESB cycles, or by permitting the generator to consume all of its gas within an eight to 10 hour period rather than over 24 hours.	Change accepted
189	INGAA	Page 83: Many pipelines offer rate schedules that provide greater nomination frequency.	Change accepted – reconciled with Williams' changes
190	INGAA	Page 83: Gas-fired generators ~~seek enhanced pipeline services~~would like additional pipeline flexibility as a means to help meet the highly variable intra-day profile of gas deliveries associated with electricity production but generators in competitive wholesale electric markets are unwilling to pay for these premium services.	First insertion accepted Deletion rejected – language revised to include only those generators who may be seeking, not all generators Second insertion rejected – report is not intended to comment on market design
191	INGAA	Page 129: The twelve month period of data provided by Columbia Gas was for October 2012 through September 2013.	Change accepted

#	Commenter	Comment	LAI Response
192	INGAA	Page 142, footnote 183: Customers may incur additional transportation charges under Texas Gas's Hourly Overrun Transportation (HOT) if such customers exceed their hourly rights. ~~Texas Gas's Hourly Overrun Transportation (HOT) charge can trigger costly imbalance resolution charges for released capacity, a portion of which may be avoidable when obtaining capacity directly from the pipeline under the interruptible transportation rate schedule.~~	Change rejected – language based on TVA's market experiences
193	Calpine	The Draft reflects an incomplete understanding of the "firm" gas delivery services available to electric generators. The draft EIPC Report repeatedly suggests that only those electric generators that hold firm entitlements on interstate natural gas pipelines or local distribution company ("LDC") systems have secured firm gas supplies. For example, the Draft observes that "most gas-fired generators in the Study Region do not have firm transportation rights from a liquid sourcing point to the plant gate in their own name." (Draft at ES-15). Based on an assessment of available pipeline, storage and LDC services, the draft concludes that "the majority of gas-fired generators in the Study Region obtain non-firm transportation and/or storage services under various service classifications available in the market." (Draft at ES-12). The draft's analysis, however, is incomplete because it ignores the firm delivered gas supply products that many gas-fired generators currently receive from gas marketers or asset managers. At one point, the Draft incorrectly depicts the service received by gas-fired generators from marketers as generally "non-firm," (Draft at ES-20) and refers to the reliability of gas delivery services under marketing arrangements and Asset Management Agreements by characterizing them as "short term" services delivered on a "just-in-time" basis. (Draft at ES-17). The Draft's characterization of marketer-driven supply arrangements' reliability is difficult to square with its observations that (1) marketers hold much of the firm capacity entitlements on new pipeline capacity from shale formations (Draft at ES-1) and (2) gas marketers are the most active assignees of released firm capacity, much of which they presumably obtained from "the most active assignors across all PPAs," i.e., the LDCs. (Draft at ES-17). The Draft further fails to quantify what difference, if any, having electric generators "step into the shoes" of marketers, either in terms of pipeline firm capacity entitlements or capacity release transactions, would make to the reliability of generators' gas supplies, particularly during periods of extreme pipeline/LDC system stress like the Polar Vortex. In short, the Draft should be revised to include a much more complete assessment of the marketer-based, firm delivered gas supply products and AMAs available to gas-fired electric generators.	Change accepted – expanded language regarding the availability of firm supply and transportation arrangements with third-parties has been added to the report

#	Commenter	Comment	LAI Response
194	Calpine	The Draft incorrectly suggests that cost-minimizing gas-fired generators have "chosen" not to "firm up" their natural gas supplies. The EIPC Report discusses at length various firm pipeline and LDC transportation options (including capacity releases, OBAs and "enhanced" firm service for electric generators) supposedly available to gas-fired generators, but maintains that generators have "chosen interruptible service" to avoid either "the high cost of local facility improvements" (Draft at ES-12) or the competitive pressure to "clear based on price" in wholesale power markets. (Draft at ES-16). This reasoning is flawed in several respects. First, it provides the impression that generators hold little to no firm transportation capacity. This is simply false. Calpine holds a significant amount of firm transport in its own name, and many other gas generators do as well. Second, the Draft fails to acknowledge the firm delivered nature of many marketer-based supply arrangements. Finally, the Draft fails to examine the availability or the purported beneficial impact, of options like OBAs or enhanced services during critical periods on a pipeline or LDC system. With regard to LDCs, the Draft maintains that "LDCs have the ability to provide local service to gas-fired generators on a firm basis." (Draft at ES-12). This carefully worded statement, though, ignores the reality that some LDCs do not offer firm transportation behind the citygate to generators. In other instances, such "firm" capacity comes subordinated to the LDC's system needs, effectively rendering it an interruptible service at a premium rate. Similarly, while LDCs frequently release capacity, those releases typically remain subject to recall. During critical periods, such releases are of little value if state-imposed obligations to serve require utilities to recall capacity. The Draft should also address the fact that in many cases, firm transportation capacity is not immediately available. Many pipeline systems are fully subscribed, leaving only released capacity as an option for shippers seeking pipeline access, but there is insufficient released capacity to meet all demand. Pipeline expansions are an option, but even if the cost and term of service were not a factor, expansion projects typically require three years to complete. Therefore, in many instances, the delivered gas market is a necessary and effective way for gas generators to fuel their plants. Calpine urges EIPC to more carefully examine the actual availability and reliability of the "firm" options that the Draft claims are readily available to generators before concluding that generators have "chosen" to bypass those options in favor of lower-cost, less reliable services.	Change accepted – clarifying language added to reflect issues addressed by Calpine

#	Commenter	Comment	LAI Response
195	Calpine	The Draft properly recognizes the extent to which gas-fired generation is located behind LDC citygates. The EIPC Report makes a valuable contribution by demonstrating the extent to which gas-fired electric generation is located behind LDC citygates. In PJM, for example, the Draft states that fully 55% of the gas-fired generation units larger than 15 MW are located behind LDC citygates (Draft at ES-2). In MISO, the figure is 34% (Draft at ES-4), NYISO is at 70% (Draft at ES-6) and ISO-NE is at 23% (Draft at ES-7). This data is important for at least two reasons. First, it demonstrates that requiring generators located behind an LDC citygate to acquire firm capacity on interstate pipeline systems may not result in more reliable gas supplies. Second, it suggests that much more attention must be paid to the interplay of state-level regulatory requirements and the reliability of generator gas supplies. Delivering gas to a citygate during critical periods is a useless exercise if the LDC's behind-the-citygate transportation service has been curtailed due to other state-imposed service obligations. The Draft should be further refined to give greater consideration to the implications of the location of gas-fired generators.	Change accepted – language added to the Executive Summary to reflect these dynamics
196	GE	On page ES-13 in the Executive Summary, can definitions or explanations of "in-the-path" and "out-of-path" be provided?	Change accepted
197	GE	In the discussion of FERC Order No. 637 on page 9, can a definition or example of "park and loan" services be provided, or refer the reader to section 2.3.5 on page 81?	Change accepted
198	GE	In Section 4, the discussions regarding capacity release and secondary markets would benefit from statistics or a diagram that explain the quantities released in terms of the capacity of the relevant pipelines. Further information about the seasonality of these releases (by count and quantity released) would also be informative.	Change rejected – the available statistics do not lend themselves to this type of analysis
199	Kinder Morgan	In accordance with INGAA initiatives in the gas-electric coordination proceeding and pursuant to your request, attached are proposed revisions to Exhibit 2 submitted on behalf of the following Kinder Morgan Interstate Pipelines: Horizon, Kinder Morgan Illinois, Kinder Morgan Louisiana, Midcontinent Express Pipeline, NGPL, Southern and Tennessee.	Change accepted
200	Columbia	Page xvii, last paragraph: Clarify the ten-year study period	Change accepted
201	Columbia	Page ES-5, Figure 4: Columbia Gulf does not appear in the correct place or is missing from map; Reference accurate map on pg 22; Fig 15.	Change accepted
202	Columbia	Page ES-8, Figure 7: Columbia Gulf does not appear in the correct place or missing from map; Reference accurate map on pg 22; Fig 15.	Change accepted
203	Columbia	Page ES-8, Figure 7: Title Change - Interstate Pipelines Operating in TVA ... not "owned by" TVA	Change accepted
204	Columbia	Page ES-11/ES-12: Suggested change to sentence (add the word "firm") ..."These events are particularly disruptive becaues gas pipeline and storage infrastructure is not designed with rudundant capacity, only the amount of firm capacity contracted by pipeline transportation customers, or shippers."	Change accepted – reconciled with INGAA changes
205	Columbia	Page ES-12: Paragraph 2; No-notice service is not only offered to small municipal and cooperative utilities.	Change accepted – reconciled with INGAA changes

#	Commenter	Comment	LAI Response
206	Columbia	Page ES-15: Suggested change to sentence (add the word "firm") ..."A pipeline or LDC may allow a gas-fired generator to exceed these limits if it does not interfere with providing service to other firm customers."	Change accepted, reconcile with INGAA changes
207	Columbia	Page ES-15: Suggested change to sentence … "However, virtually all pipelines retain the right to require customers to adhere strictly to uniform hourly flows when operational flexibility does not exist."	Change accepted – reconciled with INGAA changes
208	Columbia	Page ES-15: Suggested change to sentence (should be Federal, not State) … "Pipeline transportation rates for interruptible service are negotiable by the pipeline, subject to federal regulation."	Change accepted – reconciled with INGAA changes
209	Columbia	Page 2, Figure 11: This map does not appear to accurately represent current flow patterns in today's market	Change accepted – map revised
210	Columbia	Page 20, Table 4: For Columbia Gas, the Chesapeake plant should be removed, and the Chesterfield, Red Hill, West Lorain, Yankee, Gilbert and Warren County (New) plants should all be added. Some of these plants are reflected elsewhere in the report, but should be designated as direct connects to Columbia Gas.	Change accepted
211	Columbia	Page 20: West Deptford is also interconnected to TCO, not just Transco	Change accepted
212	Columbia	Page 23, Table 5: : Interstate-Served MISO Generators list for Columbia Gulf is incomplete, and the MW capacity of the Evangeline plant is not shown. Additional plants that should be added are Gallatin (TVA), Teche (CLECO) and Doc Bonin (Lafayette Gas).	Change accepted Gallatin is listed in TVA, plant is not located in MISO.
213	Columbia	Page 35, Figure 21: Large portion of CGT map is missing. Reference accurate map on pg 22; Fig 15.	Change accepted
214	Columbia	Page 40, Figure 26: Large portion of CGT map is missing; Reference accurate map on pg 22; Fig 15.	Change accepted
215	Columbia	Page 109: Sentence Correction … "Virginia Power Services Energy holds 40 MDth/d of capacity on Columbia Gas from the Leach interconnection with Columbia Gulf to the Elizabeth River plant."	Change accepted
216	Columbia	Page 122, Table 21: Data appears to be inaccurate and not fully representative of all releases on Columbia Gas	Change accepted – LAI has revised the reported statistics
217	Columbia	Page 123: Text referencing WGL release activity on Columbia Gas is incorrect, and appears to be based on inaccurate information from Table 21.	Change accepted – LAI has revised the reported statistics
218	Columbia	Page 51, Figure 123: Title of the map currently indicates "Intrastate Pipelines Serving MISO Generators" The pipes shown on the map appear to be Interstate pipelines. Map or title should be changed.	Change accepted
219	Columbia	Page 120: Twelve month peroid of data provided by Columbia Gas was for Oct/12 - Sept/13.	Change accepted
220	Equitrans	Page A1-15: In December 2013, Equitrans leased the Allegheny Valley Connector facilities, which have a transportation capacity of 452 MDth/d, from Allegheny Valley Connector, LLC.	Change accepted
221	Equitrans	Page A1-15: Also, the map incorrectly shows a portion of the system that was abandoned and transferred to EGC/Peoples in December 2013.	Change accepted
222	Equitrans	Page E1-1: Changes provided to table	Change accepted

#	Commenter	Comment	LAI Response
223	Equitrans	Page E2-6: Changes provided to table	Change accepted
224	Equitrans	Page 29: the Nomination Deadline for the Intraday 1 Cycle should be 10:00 AM	Change rejected – this page reference seems to be wrong, LAI was not able to identify the language this comment is correcting.
225	Equitrans	Page 33: Although no longer our pipeline, I don't believe that Big Sandy has underground storage facilities.	Change rejected – Big Sandy is shown on the map, along with all interstate pipelines, but no storage facilities are shown attached to it, so this seems to be a misunderstanding of what is shown in the figure.
226	Dominion	Exhibit 1: The listed DTI storage fields for the PJM area are correct. However, Levitan did not include DTI's Quinlan and Woodhall pools since they are in the state of New York and not served by PJM. However, DTI would note to Levitan that DTI operates storage as integrated pools, not on a regional basis.	Change accepted – a footnote has been added with Dominion's operational clarification.
227	Dominion	Exhibit 2: DTI FT Service: Note 30, as drafted, is misleading. To be clear, any service performed under DTI's FT Rate schedule is firm. We believe that the Note 30 was derived from DTI's Curtailment and Interruption Section (GT&C Section 11.3A), which does indicate that there may be an interruptible portion of Rate Schedule FT. However, generally, this reference deals with "authorized" overruns, which DTI views as interruptible for curtailment purposes. Accordingly, DTI would delete Note 30 in its entirety.	Change accepted
228	Dominion	Exhibit 2: DTI FTNN Service: Note 34, as drafted, is incorrect. It should be revised to delete: ",and only available during the Winter Period", as follows: 34- No-notice service only available up to customer's firm storage service entitlements,~~and only available during the Winter Period~~	Change accepted
229	Dominion	Exhibit 2: DCP ISQ Service: As noted above, ISQ (along with note 36) is listed as a rate schedule. Technically, this is incorrect because ISQ is part of the Rate Schedule LTD-1. Dominion suggests the following: That ISQ be deleted from the rate schedule listing and the current note 36 (Service may be interrupted for Cove Point to provide Firm Peaking Service to other customers), be modified to read as follows and included on the LTD-1 line: 36- **Includes ISQ service. ISQ s**ervice may be interrupted for Cove Point to provide Firm Peaking Service to other customers.	Change accepted
230	Dominion	Exhibit 4: Levitan did not include the Chesterfield power plant. This is a 42,500 dt/day, FTNN contract, for VPEM.	Change accepted
231	NYSERDA	Can you please define a "shipper". It's a term used primarily Section 1.1.1 and it's not clear if it's a pipeline or a marketer.	Change accepted
232	NYSERDA	Section 1.1.3 seems to describe the certification process for the typical "pull" projects. Is the process any different for "push" projects and , if so, can you please describe the differences.	Change accepted

#	Commenter	Comment	LAI Response
233	NYSERDA	In many instances the figure key is located below the illustration and in other instances over a portion of the illustration. Would it be possible for the key to be located below the illustration for all figures. This covered area may not appear to be important, but for those not familiar with the area, it's distracting and possible a missed opportunity to learn more about the region that is covered. Also there seems to be inconsistency in the level of detail provided. For example in some areas the LCDs are included in a key but others they are not.	Change accepted
234	NYSERDA	Can LAI provide some statistics on the distribution of gas purchased directly from a pipeline, shipper, primary marketer, third party marketers, AMAs, and others?	Change rejected – statistics regarding gas purchases are not publicly available
235	Williams	Exhibit 1: Changes to storage field data	Change accepted
236	LDCs	Local Distribution Companies (LDCs) request additional discussion and consideration of "Table 3 – Qualitative Assessment of Gas-Electric Interface Attributes" located on page 18. The table presents interstate natural gas pipeline and LDC penalties for gas overruns and/or imbalances as "unfavorable" gas-electric interface conditions in U.S. electric market regions. This demonstration is at least misleading and should be removed. Penalties for unauthorized overruns and/or lack of uniformity during certain periods (i.e. operational flow orders demanding +/- variations in scheduled flow volumes) are in place to protect the natural gas system (i.e., are reliability requirements). The Federal Energy Regulatory Commission has explicitly recognized the need for penalties as a means to protect gas system reliability and has adopted policies and regulations that permit pipelines to implement penalties to the extent needed to deter gas customer conduct that is detrimental to the system.* Conceptually, the same is true for LDCs. Moreover, all customers, both generators and non-generators, are exposed to these sorts of imbalance penalties as a means to encourage the proper use of natural gas system so that it can remain in reliable operation. Accordingly, such natural gas system reliability requirements should not be presented as "unfavorable" for electric reliability. Instead, requirements that are designed to preserve gas system reliability should be considered favorable by all customers. * *See, e.g., Regulation of Short-Term Natural Gas Transportation Services and Regualtion of Interstate Natural Gas Transportation Services*, Order No. 637, 90 FERC ¶ 61,109.	Change rejected, LAI believes that the rationale behind the qualitative assessment has been sufficiently explained.
237	LDCs	In addition, under the "Dual Fuel Requirements" heading on page 98, the sentence "[a]ll New York LDCs require dual fuel capability under their electric generation service classifications" should be revised and/or deleted. This statement is inaccurate, not every LDC in New York has this requirement.	Change accepted
238	Maine	If I could pass on one minor critique, it is that in many sections of the report, the terms "shipper" and "customer" appear within the same paragraph. I am not sure that they are entirely synonymous. If so, that should be made clear, and perhaps only one of the two terms should be used. If they are not entirely synonymous, then the differences should be outlined.	Change accepted
239	Williams	Exh. 1 – Underground Storage Fields – changes to storage field information	Change accepted
240	Maxim Power	Exhibit 7: Pawtucket Power is dual fuel capable with the primary fuel being natural gas and the secondary fuel being Distillate Fuel Oil.	Change accepted