

LYNX ELECTRIC CURRENTS

September 2015

Editor's Notes:

As in previous Fall Newsletters there is mention of the changing leaves, the school buses taking the children back to school and of course the new football season, hoping your team has a banner year. What is not typical this year, is the current energy prices for electricity running around \$0.07 to \$0.08 per Kwh and natural gas staying under \$2.70 per MMBTU. All good news for consumers along with gasoline prices in the \$2.50 per gallon range, depending on your location and local taxes. Last year, in the aftermath of the "polar vortex" we addressed hedging strategies and providing value to our customer in order to retain them. Meanwhile state regulators responding to pressure from politicians made significant changes in how and what suppliers can market, changing customer contract language and generally making it more difficult for retailers..

Earlier this month the Lynx staff attended the Energy Marketing Conference in New York City. Our CEO Kevin Schoener was part of a panel discussion addressing changes, challenges, strategies and opportunities in the energy market. Some key points of the panel discussion included:

- Financial Impact on margins, customer participation and viability of many suppliers caused by the "Polar Vortex"
- New burdensome regulations and how to comply
- The need to contact and communicate with customers by keeping them informed not just once a year for signing contracts
- Competitive pricing for energy
- Concise contract language
- User friendly language for billing
- Providing value added benefits, "Time of Use" pricing, hedging, energy efficiency programs, renewable energy options

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Tip of the Month!

As the energy industry evolves within retail power markets, the roles of the various participants become more defined. We have wholesalers, brokers, suppliers, aggregators and depending on the ISO and state, there may be other titles to describe the players. Each group plays a role, has responsibilities, all crucial to providing electric power to the consumers. For those of you relying on brokers for your customer base, it is important to work with them, keep them informed and clearly identify the policies, goals and objectives for your business. Brokers typically have a book of business or customers that they can bring to you. They are paid a percentage of the margin as compensation for getting customers and in some cases actually signing them up. Brokers should be aware of the type and size of customers you are looking for including threshold such as minimum and maximum account size. They need to know the pricing and products you provide such as fixed or variable rates, and extra services available, be it energy efficiency, time of use rates, and any other offerings you may have. Brokers should be made aware of your policies and practices such as slamming, new regulations for door to door sales and protocol to follow in signing up customers. Previous fines imposed by FERC and state PSC makes it imperative that the broker and their salesforce are trained and comply with marketing rules. Brokers can be a valuable resource as long as they know you expectations and follow state regulations. Properly managed they can help you grow your business and allow you to focus on building a profitable business.

Editor's Notes continued...

- Using social media for billing and communicating with customers
- Education programs for customers to make them better informed and smarter consumers
- Collection strategies
- Billing
- Potential new ISO and state markets opening up
- Bundling energy with DR programs, back-up generators, and energy efficiency upgrades

A hot topic that arose in the discussion was whether 2016 would bring a bull or a bear market. The majority of the panelist felt the opportunities for retail power and related products will show growth. The few that felt the markets will have fewer opportunities, pointed to new regulations and constraints along with a sluggish economy as favoring a bear market. Meanwhile, we at Lynx look forward to working with our suppliers to help them with developing value added opportunities and strategies to retain their customer base.

US Energy

In a rare show of bipartisanship and to keep the "Energy Policy Modernization Act of 2015" moving forward, both the House and the Senate committees agreed to refrain from amendments to get closure on the bill. The Senate version contains additional provisions including: Energy Efficiency, DOE Loans, Petroleum Reserves, Approving oil exports and electric grid modernization. Neither House nor Senate Bill addressed the Keystone pipeline. Additional measures that will require amendments before reconciliation and become law including: LNG Permitting for exporting, provisions for fracking, baseload energy and capacity issues, coal ash, expanding navigable waters, and greenhouse gas regulations. The greenhouse gas emissions will clarify emission regulations thereby avoiding future clashed between EPA jurisdiction and US Supreme Court rulings trying to interpret what the Congressional bills mean and if the bills are Constitutional. Consequences of the final legislation will impact renewable energy including solar, hydro and wind providers, along with oil and coal suppliers, power generators nuclear generators, utilities, manufacturers of equipment and machinery used in generation and finally the consumers of energy.

A recent DOE report shows Data Centers consume 2% of all energy in the US. That translates into over 100 billion kWh of electricity. The DOE estimates there are over 3 million data centers in the US. If they use the new "DOE Better Building" recommendations energy consumption could be reduced by 25%. Major savings can be accomplished by using ASHRAE (American Society of Heating Refrigeration and Air Conditioning Engineers). Energy reduction is realized by using efficient HVAC equipment, improving building envelope (windows, insulation), more efficient servers, more efficient HVAC equipment including chillers, energy management systems, economizer air handlers, all technologies to lower space conditioning costs. Editor: Lynx Technologies, the parent company of Lynx EMS can help data facilities become more efficient and provide equipment, provide backup Cummins generators, help secure grants and assist in lowering data center operational cost.

NYISO Updates

NY-ISO has released their 2015 Power Trends Report. The report points out changes and challenges as consumer usage, regulatory statutes, technologies and environmental pressure converge to force changes. Overall energy consumption from the grid, across the country, remains relatively flat. However, peak demand shows higher spikes which impacts capacity market pricing and the amount of reserve demand needed by NY-ISO. The grid has added 11,600 MW of new generation since 2000. System reliability added 400 MW of power to reinforce the system. Power efficiency from generators and distribution systems has improved by 27% saving rate payers \$6.4 billion since 2000. Demand response programs provide 1,100 MW used to lower peak demand during periods of high usage. High voltage wires called transmission lines are being upgraded to improve efficiency and reliability. Records show that 80% of NY transmission lines were installed before 1980 and need to be upgraded. Smart Grid technology will allow better and faster distribution for moving power from high capacity generation to high demand regions. The Lower Hudson, the new FERC mandated Zone, along with NYC and Long Island consume over 60% of the state's energy while containing less than 50% of the state's generation. Additional transmission lines and retrofitting or repowering retired power plants are needed to ensure adequate capacity for downstate NY. The fuel mix used for power generation is also changing. Shale gas is replacing coal and fuel oil, and now accounts for 70% of the state's generation fuel mix. Renewable energy provided 35,756 gigawatt hours of energy, which is 25% of NY generation in 2014. While greatly reducing NOx, SOx and Carbon emissions, new EPA standards threaten NY capacity as the EPA baseline based on 2,005 statistics, does not factor in prior emission reductions nor facilitate fuel switching during extreme winter conditions. If demand is extremely high during extreme winter conditions, natural gas supply may be reduced which has dual fuel generators switch to fuel oil to maintain reliability and provide needed capacity. New distribution resources including DG/CHP (Distributive Generation Combined Heat and Power) and accounts for 57% of all DG resources, followed by solar, wind, biofuels, and energy storage resources. The REV program along with the DER program will change how energy is distributed, generated and priced. Consumers can expect price responsive demand. DG resources may also be providing supply capacity and ancillary services as the distribution platform evolves. Additional information can be found at: www.nyiso.com.

New York State Updates

NY-PSC has released proposals for regulating DER's (Distributed Energy Resources) as part of the REV (Reforming Energy Vision) program. Part of that proposal addresses UBP (Uniform Business Practices) for electric and natural gas retailers. Many components of DER markets are already in place including: "Utility Demand Response Programs" and customer shared participation with distributive energy resources". A code of conduct is being developed for commodity retailers, and participants in DER markets. Such participants must apply to NY-PSC to participate. The new UBP will spell out discipline for DER violators and define a pathway to get back into compliance, should they violate the regulations. Meanwhile system process and protocols are being developed by the PSC. Utilities are developing distribution platforms as they become compliant with REV regulations in 2016. Dispute resolutions between utilities and DER markets have been adopted by the NY-PSC. The transformation from current energy markets to the REV markets continues moving forward. Past experience with retail markets, net metering and DG projects, exposed numerous problems as utilities resisted and marketers began to carve out market niches. The lessons learned will hopefully be applied to the REV and DER programs to the mutual benefit of all participants.

FERC Updates

The EPA's CPP (Clean Power Plan) has federal agencies trying to coordinate efforts to maintain reliability for the grid, as generators struggle to comply with the latest "plan". As a result, DOE (Department of Energy), EPA (Environmental Protection Agency) and FERC (Federal Energy Regulatory Commission) are expected to work together to lower carbon emissions, while maintaining reasonable costs, and grid reliability. The three federal agencies will be charged with monitoring states as they develop statutes by state and regions to comply. The goals and focus for monitoring are: grid reliability which includes smart grid, grid hardening against natural damage, cyber attacks, terrorist activities and lowering the carbon emissions from generation. The DOE will be providing technical assistance to utilities to ensure compliance with CPP. FERC will focus on the impact of CPP on utility reliability with the addition of new and smart grid infrastructure and making sure ISO's and RTO's have the ability to import power from neighboring power systems. EPA will monitor state progress in lowering carbon emissions against a baseline of 2005 to make sure the various groups are compliant and provide information to the entities regarding their progress with CPP goals.

PJM Updates

The proposed merger of Exelon and Pepco has hit a road block with the Washington DC PSC denying the merger. The PSC stated that a potential conflict of interest existed despite assurances from Exelon and Pepco claiming they would adhere to all the rules of the PSC. Exelon, a major generator, has a history of reluctance and opposition to supporting DG systems. The PSC felt that Exelon would go against the PSC's goal of having 50% renewable energy consisting mainly of renewable DG. As a result, the merger would not be considered a merger that would support the PSC goals and stated mission, for DC customers. Based on historical opposition to DG, net metering and renewable energy, therefore the PSC is opposed to the merger of Exelon and Pepco.

US Marketing

After tracking retail energy markets for 20 years the Compete Coalition issued their report on retail versus monopoly utility markets. The report confirms that retail choice markets provide consumers with:

- Better pricing
- Results in increased investment in distribution, infrastructure and generation
- Increased reliability for the grid.

With 13 states having completed retail market programs are compared to states with utility monopoly format, the customer choice retail markets had a 4.5% below inflation adjusted increase. The utility monopoly model shows an 8.5% above inflation increase for their rates. Utilities in the monopoly markets have stated that retail states have higher energy prices above inflation rates, which at face value is true. However the retail market states are primarily located in regions were rates started higher before retail markets started. In addition labor costs are higher, taxes are higher and most of the fuel sources (coal, oil and natural gas) is imported. Currently retail market sales account for 20% of all kWh sold in the lower 48 states in the US, serving 19 million customers. Infrastructure including generators, reliability measures and transmission/distribution systems show that billions of dollars of investment in more efficient and reliable grid infrastructure has happened in retail market areas. The report authored by Illinois Commerce Commissioner Philip O'Conner and ICC Commissioners Erin O'Connell-Diaz concludes that 2 decades of data supports the benefits of power choice retail markets are better than traditional utility monopoly markets. The categories measured in the report include: Price per kWh, Reliability, Investment in infrastructure and the growth of consumer participation when given a choice.

ISO-NE Updates

The NECAE (New England Coalition for Affordable Energy) has raised concern over economic impact of inaction in the region, should the ISO and state regulatory agencies fail to address energy infrastructure. The NECAE report projected that NE consumers cost could be \$7.5 billion in higher without changes. Natural gas pipelines and electric transmission lines can mitigate much of the higher capacity costs. Neighboring ISO regions are also impacted by the infrastructure and fuel supply progress, as gas prices and imported electric capacity prices spike in New England. ISO-NE claims they have sufficient infrastructure. Meanwhile large generators point to the need for long term commercial contracts for natural gas. While the debate goes on, the 2015-2016 heating season approaches without resolution as the region hopes for a mild winter. Hope is not a strategy to move forward when an action plan and implementation of that plan is what is needed.

NYSERDA PON Updates

Many of these PON's have expiration dates in 2015 or when funds are exhausted. If you or your customers have any plans for energy projects we urge you to act now. LYNX is developing some partnerships to assist you with NYSERDA funding, feasibility studies and developing projects which could be eligible for funding. You can call our office for more information if you have or are thinking about an energy project. For our Con Ed customers we can provide Cummins Generators for DR programs with funding available from ConEd and NYSERDA. Current PON's (Program Opportunity Notices), which are available to qualified customers from NYSERDA, are listed below.

- PON 1219 Existing Buildings: Provides rebates and performance incentives for existing buildings including lighting, motors, generators, HVAC equipment etc. through 12-31-2015. This PON has added natural gas incentives.
- PON 1601 New Construction Financial Incentives: Provides incentives for new and remodeled buildings, paying for architectural and engineering services, rebates on electric equipment, appliances, HVAC equipment, and building envelope, through 2015.
- PON 1746 Flex Tech: Provides funding for a variety of feasibility and energy related studies through 12-31-2015.
- PON 2112 Solar PV Program Financial Incentive: This PON has funding through 2015
- PON 2439 Wind Turbines: This PON pays incentives to certified installers of DG windmills under 2 MW through 2015.
- 2456 Industrial and Process Efficiency Program: This PON is can pay up to \$4.5 Million per project through Dec. 2015.
- 2568 CHP Acceleration: Funding for onsite generation with heat recovery (DG/CHP) packaged units through 2015.

NYSERDA PON Updates continued....

- PON 2689 Emerging Technologies and accelerated Commercialization through Dec. 2016
- PON 2701 Combined Heat and Power CHP Performance Program through Dec. 2016
- PON 2828 Renewable Portfolio Standard Customer-Sited Tier Anaerobic Digester Gas to Electricity Through 2015
- PON 3010 NY Biomass Boilers pays for Biomass fueled thermals through 2018
- PON 3016 Plug-In Electric Vehicle Enabling Technologies Demonstration Program through 7/14/2015
- PON 3082 NY SUN Commercial/Industrial Incentive Program through 12/2023



NYISO SCR Curtailment Program

Proposed changes by the NYISO will impact SCR customers. The latest changes move test times into March and changed times for establishing baselines. Lynx will work to keep you informed and updated as changes get approved. Prices for participation in DR programs are up as Governor Cuomo is getting behind peak load reduction programs and dramatic changes coming from the REV program. Third party aggregators for DR and curtailment will no longer be selling their capacity into the NYISO markets. Only those entities that are purchasing capacity/supply from the NYISO will be able to receive credit from NYISO for their capacity reduction efforts. Lynx is providing assistance for our customers with event notification and supplying documentation to the NYISO verifying results. Many customers willing to participate in NYISO programs need help in determining what items can be curtailed and to determine the kW value of those items to be shut off. Lynx can help your customers determine kW loads that can be curtailed. In addition Lynx can provide Cummins Generators, which can be used for curtailment purposes along with providing protection for property and life during emergencies. Lynx will work with you to get customers registered in a NYISO program. So help your customers get some cash for shedding electric loads during peak load emergency events. ESCO's or suppliers will also earn funds. With Lynx guidance you can avoid costly pitfalls and potential fines. Call Lisa Klein or Bert Spaeth in our Lynx office at 716-774-1341.

Green Energy (REC's) Renewable Energy Credits

As state mandates are phased in, suppliers or ESCO's will be required to purchase REC's (Renewable Energy Credits) and show documented proof of purchase. Some states require a percentage of Solar REC's or offshore wind depending on the host states social policies. Each category, whether it is called Tier or Class has different pricing and some states mandate a mix. Suffice it to say, Solar is the most expensive and Tier or Class II is the least expensive. Failure to purchase green energy or AEPS (Alternative Energy Portfolio Standard) or REC's will result in a default REC. PJM customers would pay Alternative Energy Credits (AEP) at \$500 per credit. Connecticut has a default rate as well. Lynx will assist you in locating cost effective green REC's to meet your needs. In addition, Lynx can handle your reporting and assist you in purchasing REC's. The percentage of renewable energy is expected to increase up to 27% in certain states by 2025.

Note: To ease the burden of purchasing annually and the large cash expenditure, Lynx is recommending purchasing REC's on a quarterly basis to avoid higher prices at the end of the reporting period.

September 2015

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8 PJM Bill Issued	9 NYISO ICAP Monthly Auction	10 NYISO ICAP Monthly Auction	11	12
13	14 NYISO ICAP Results	15	16	17	18 PJM Bill Issued	19
20	21	22 Certification	23	24 NYISO ICAP Spot Auction	25 NYISO ICAP Spot Auction	26
27	28 NYISO ICAP Results	29 Strip Auction for Winter 2015-16	30 Strip Auction for Winter 2015-16			

Future Dates

October:

9-12 NYISO ICAP Monthly Auction
 22 Certification
 26-27 NYISO ICAP Spot Auction

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Commodity Pricing

Historical - Flat DAM

	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15
NYISO-A	23.39	28.91	24.60	29.31	27.88	26.56
NYISO-F	26.64	26.23	20.63	26.05	28.00	26.78
NYISO-J	27.53	30.35	24.95	30.01	31.10	32.45
NYISO-K	30.39	35.24	30.72	41.92	36.18	35.58
PJM-PSEG	28.08	31.84	25.50	27.89	27.23	28.41
PJM-JCPL	27.23	31.67	25.26	27.46	26.88	26.52
PJM-APS	32.34	34.47	31.09	32.93	29.89	29.55
PJM-PECO	25.89	31.50	24.76	26.81	26.05	26.54
PJM-PPL	26.31	32.22	24.45	26.39	25.96	25.68
PJM-DLCO	31.22	34.44	30.35	31.35	28.65	28.62
PJM-PENELEC	29.41	33.06	28.56	31.21	29.25	28.93
PJM-METED	26.29	33.94	24.40	26.12	26.28	25.67
PJM-BGE	40.70	40.82	43.53	42.59	36.25	36.15
ISONE-CT	27.98	25.23	21.89	26.88	30.27	30.79

Current Projections

	Oct-15	Nov-15	Dec-15	Oct-15 to Sep-16		
	Flat	Flat	Flat	Flat	Peak	Off Peak
	28.75	30.79	36.55	35.70	44.84	27.71
	31.59	40.50	58.07	45.41	53.28	38.54
	33.88	41.29	55.92	46.61	56.15	38.28
	46.82	52.06	63.77	59.06	68.58	50.74
	30.95	33.06	42.08	39.25	47.15	32.35
	29.31	32.15	39.35	37.72	45.20	31.19
	33.09	34.35	37.79	38.45	45.30	32.47
	29.00	31.45	38.11	36.49	43.72	30.17
	28.82	31.27	37.86	36.32	43.57	29.98
	32.29	32.84	34.45	35.87	42.01	30.51
	32.25	33.61	37.24	37.65	44.63	31.55
	29.44	31.39	37.96	36.55	43.81	30.21
	40.61	42.30	46.86	47.85	56.46	40.32
	40.28	50.64	64.62	49.92	58.12	42.76

Glossary of Acronyms

ABACCUS - Annual Baseline Assessment of Choice in Canada and the US	CRP - Comprehensive Reliability Plan	DG - Distributed generation	REC - Renewable Energy Credits
AEC - Alternative Energy Credits	DEFG - Distributed Energy Financial group	DR - Demand Response	REV - Reforming Energy Vision
AEPS - Alternative Energy Portfolio Standard	DER - Distributed Energy Resources	LNG - Liquid Natural Gas	
		NEPOOL New England Power POOL	