BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of	)	EO-2012-0336
The Empire District Electric Company's	)	
Submission of its 2012 RES Compliance Plan	)	

Comments on Empire District Electric Company's 2012 RES Compliance Plan and 2011 RES Compliance Report

NOW COMES Wind on the Wires, having reviewed the annual compliance filing made by The Empire District Electric Company ("Empire" or "utility"), pursuant to Section 393.1030 RSMO and 4 CSR 240-20.100 and files the following comments.

1. The facts within Empire's 2011 Annual Renewable Energy Standard Compliance Report (hereafter "filing" or "annual report") and 2012 Annual Renewable Energy Standard Compliance Plan (hereafter "Plan") indicates that the utility failed to comply with the requirements of the Missouri Renewable Energy Standard in that:

   a) The utility attempts to use ineligible "credits" from energy generated prior to the first year of the statutory Renewable Energy Standard ("RES") requirement.

   b) The utility attempts to use "credits" from energy generated from a hydroelectric-facility that does not qualify as a Renewable Energy Resource, as defined under the statute.

2. As a result of the deficiencies noted, the Commission should either order the utility to refile its Compliance Report if the utility can show the retirement of additional qualified Missouri RECs sufficient to meet the requirements or order that a hearing be held to determine the utility's compliance with the Missouri Renewable Energy Standard. In addition, the Commission should order the utility to amend and refile its RES Compliance Plan for 2012-2014 so that it uses credits that were affiliated with power sold to Missouri consumers and were generated after January 1, 2011. If a

deficiency is found that cannot be remedied, the Commission should take appropriate action and instruct its staff to file a complaint to pursue penalties.

DISCUSSION

The first annual report filed by the utility attempts to retire "credits" that do not qualify under Missouri law. This annual report is for 2011, the first year of the Missouri Renewable Energy Standard. Because this is the initial report the Commission will be providing important guidance on the proper interpretation of the Missouri RES law. The issues raised herein are: (1) can energy generated prior to 2011, the first year that the utility was required to generate or purchase Missouri RECs, be used to meet the RES requirements; and (2) can energy generated from a hydroelectric- facility that has a nameplate rating of greater than ten MWs qualify as Missouri RECs.

1. Empire Attempts to use Ineligible "Credits" from Energy Generated Prior to the First Year of the Statutory RES Requirement

Like all Missouri statutes, the Missouri RES must be understood within the context of the whole statute, creating an interpretation that is consistent within the act, other statutes and the constitution. In this case, the utility attempts to take out of context one provision of the RES and apply it so as to undermine the requirements of other provisions. Section 393.1030.2 states in part: "An unused credit may exist for up to three years from the date of its creation." The utility evidently interprets this section to mean that credits could have been **created** and "banked" prior to the first year that the utility was required to generate electricity from renewable resources. The requirement for Missouri utilities to produce or purchase qualified Missouri RECs did not begin until January 1, 2011. Section 393.1030.1 states in pertinent part:

> Such portfolio requirement shall provide that electricity from renewable energy resources shall constitute the following portions of each electric utility's sales:
> (1) No less than two percent for calendar years 2011 through 2013;
> (2) No less than five percent for calendar years 2014 through 2017;
> (3) No less than ten percent for calendar years 2018 through 2020; and

(4) No less than fifteen percent in each calendar year beginning in 2021.

Thus, 2011 is the first year that energy generated would have produced Missouri-qualified RECs. In its Compliance Report, the utility's takes three years of free, non-compliant "credits" to offset its first year obligation. Empire attempts to use 63,000 vintage RECs that were generated by Ozark in 2008 and 5,786 vintage RECs that were generated by the plant in 2008 and 2009. (Annual Report at 5-6) In addition, Empire claims to bank a total of 184,876 RECS from 2009 through 2011. (Id. at 6)

Such an interpretation, in essence, renders meaningless the requirement that in 2011 the utility show 2% of its sales coming from renewable energy resources. Under Empire's interpretation, the utility does not need any sales from 2011 to represent renewable energy; instead, it may simply show sales from three years prior to the requirement. Such an interpretation is contrary to the requirement that the utility provide a minimum percentage of its energy as renewable energy beginning in 2011. In order to qualify as a percentage of the Missouri RES requirement it must constitute a portion of the sales in 2011 or later. Prior to 2011 there is no requirement from which to generate excess Missouri RECs.

The utility is attempting to use the banking provision for a function it was not intended. The banking provision is designed to allow a utility to roll over excess RECs generated after 2010 from one year to the next. Missouri has an energy standard rather than a capacity standard. Energy production from particular types of generation are not always predictable, therefore, allowing the utility to bank Missouri RECs and draw on them up to three years after their generation date can help smooth out the variations in production. Allowing energy produced prior to the first year of the requirement, as Empire is attempting to do, is simply a circumvention of the requirement. The Commission should not allow this interpretation of the RES.

2. Empire Attempts to use "Credits" from Energy Generated from a Hydroelectric-Facility that does not Qualify as a Renewable Energy Resource.

In its Compliance Report and Compliance Plan, Empire uses the output from the Ozark Beach Hydroelectric Plant (hereafter "Ozark"). Ozark's total generating capacity exceeds the 10 megawatt limitation placed on the size of hydropower facilities in the statute.[1]

The use of nameplate capacity ratings are well known to the Commission. Nameplate ratings can refer to individual generators or facilities. Generally, the nameplate rating is provided in the context of the plant's use, such as the "nameplate rating of the generator" or the "nameplate rating of the plant." It is common for capacity ratings to be given for facilities as a whole. Wind farms, for example, have a nameplate rating according to the total of all of the generators at the farm. This is because it is the rating for the entirety of the facility which is important in determining its impact on the grid.

The determination of whether the nameplate rating qualification in the Missouri RES is per generator or is for the facility can be determined in part from Section 393.1025(5) which states in pertinent part:

> "…hydropower (not including pumped storage) that does not require a new diversion or impoundment of water and that has a nameplate rating of ten megawatts or less,…

In this provision of the statute, the term "hydropower" is modified with two restrictions: that it not require a new diversion or impoundment of water and a nameplate restriction. As discussed below the restrictions apply to the facility or plant not the size of the individual generators.

The meaning of "hydropower" is the same as "hydroelectric power" according to the online Merriam-Webster dictionary which defines this term as: "of or relating to production of electricity by waterpower." (The Merriam-Webster Online Dictionary, *defining* hydroelectric))

[1] It is acknowledged that the Department of Natural Resources definition in 10 CSR 140-8.010(2)8 allows for the use of 10 MWs or less per generator. However, that interpretation is inconsistent with the intent of the statute and should not be viewed as binding upon this Commission.

The nameplate under this definition would refer to the power plant not individual generator ratings.

Another way to evaluate this provision is to look at the meaning of the statutory provision under its two potential interpretations – either an individual generator or the total hydroelectric facility. Substituting generator and plant in the statute with the two conflicting definitions suggested by the parties is enlightening.

> "… **a generator** (not including pumped storage) that does not require a new diversion or impoundment of water and that has a nameplate rating of ten megawatts or less,…"

in comparison to

> "…**a hydroelectric facility** (not including pumped storage) that does not require a new diversion or impoundment of water and that has a nameplate rating of ten megawatts or less,…"

The statutory provision does not make sense in the context of "a generator." A generator is not comparable to pumped storage, which is a type of facility not a type of generator. Pumped storage facilities, in fact, may have more than one generator. On the other hand, the substitution of the term "a hydroelectric facility" fits perfectly.

It is also helpful to examine the intent of this provision. It is clear that the language is intended to limit environmental impacts made by new hydropower and not reward those facilities that have caused significant impacts in the past. This component supports the meaning of "hydropower" as the hydroelectric plant. It is the size of the plant that primarily determines the environmental impact that the restriction of the statute is trying to mitigate. It is also the production benefits of the plant not the individual generators that justifies the expense of the building of the dam, condemnation of flooded ground and construction of the hydroelectric plant.

It is interesting to note that Empire itself represents to the Southwest Power Pool that the Osage hydropower facility is larger than 10MW (*See* Attachment A, slide 8; *referring* to the rating of the plant by its total nameplate not by individual generators).

The statutory definition of qualified hydropower is clearly intended to be limited to small plants that do not require a new dam or other diversion mechanisms. The utility's attempt to use a hydro-plant that is substantially in excess of the 10 MW capacity limit should be rejected.

CONCLUSION

WHEREFORE, Wind on the Wires, herein having filed the above comments to the utility's RES Compliance Report for 2011, move that the Commission accept these comments; find that the utility has not complied with the requirements of the Missouri RES; order the utility to amend its RES Compliance Report for 2011 if it has additional Missouri eligible RECs for the year 2011, or if it does not and cannot by amendment achieve compliance, that the Commission instruct its staff to file a complaint to pursue penalties; order the utility to amend and refile its RES Compliance Plan for 2012-2014 so that it uses credits that were affiliated with power sold to Missouri consumers and represents energy generated after January 1, 2011, or if it does not and cannot by amendment achieve compliance, that the Commission instruct its staff to file a complaint to pursue penalties.

Respectfully submitted,

____/s_____
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Regional Policy Manager

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DATED: May 29, 2012

Comments on Empire District Electric Company's 2012 RES Compliance Plan

and 2011 RES Compliance Report

Attachment A: The Empire District Electric Company – 2009-2013 Construction Plans

Wind on the Wires Comments
EO-2012-0336
Attachment A

The Empire District Electric Company

2009 – 2013 Construction Plans

November 4, 2007

SERVICES YOU COUNT ON

Presented by Sam McGarrah

Director of Engineering & Line Services

Presentation Summary

- Company Overview
- Generation Facilities
- Transmission Improvements
- Transmission Planning
- Planning Participation Information

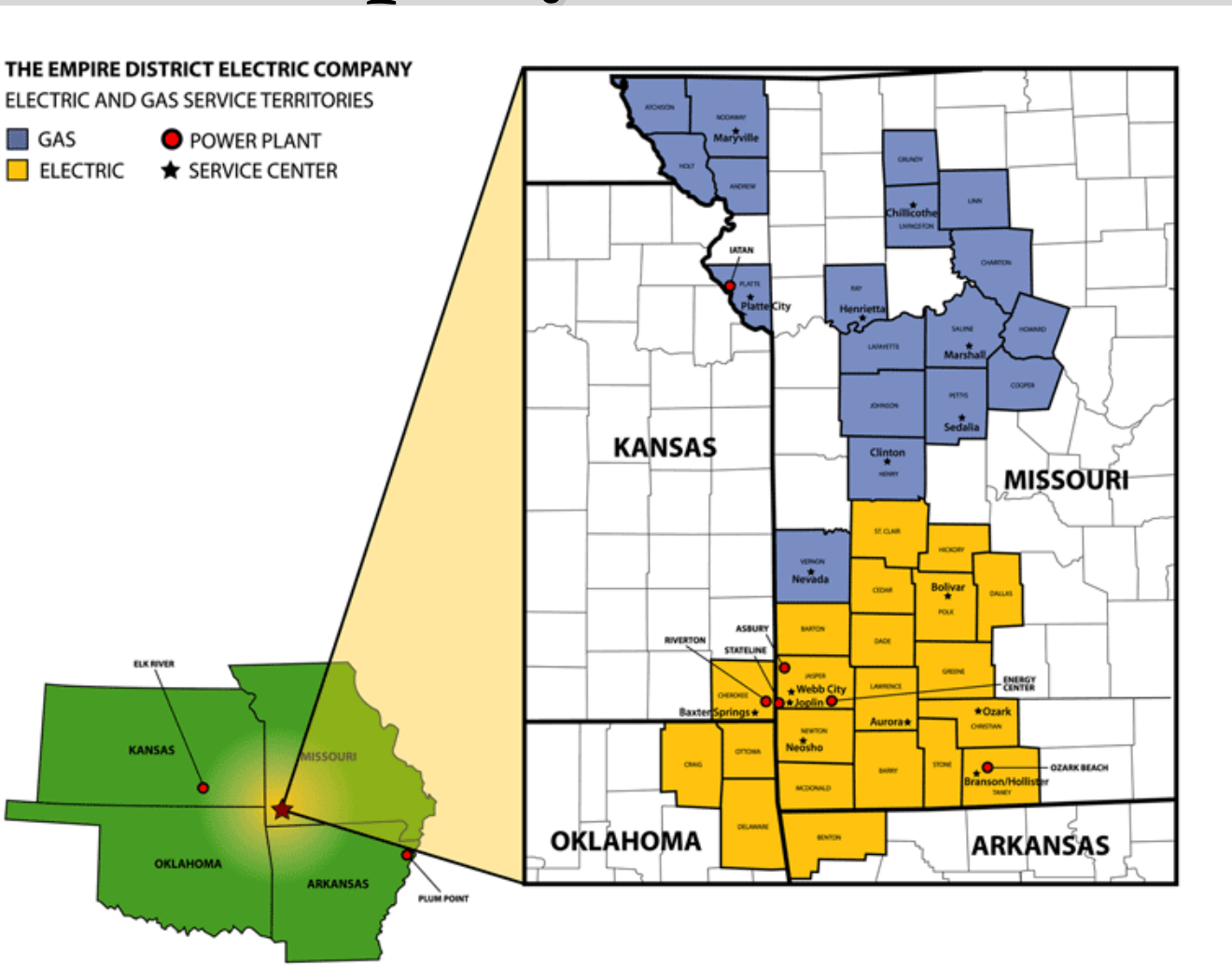
The Empire District Electric Company

- The Empire District Electric Company (EDE) is headquartered in Joplin, Missouri. EDE is an investor-owned utility providing services to approximately; 145,000 Southwest Missouri, 10,000 Southeast Kansas, 5,000 Northeast Oklahoma and 4,000 Northwest Arkansas customers for a total customer base of **165,000** customers.
- The Empire District Electric Company also provides retail natural gas services to approximately 48,000 customers through its subsidiary The Empire District Gas Company in Northwest Missouri.

The Empire District Electric Company

- EDE is a vertically integrated electric utility;
  - Generation
  - Transmission
  - Distribution
- EDE's transmission system is a mix of 34 kV, 69 kV, 138 kV, 161 kV, and 345 kV.

The Empire District Electric Company Service Area



The Empire District Electric Company History

- Prior to the founding of Empire, several small companies provided power to fuel the electric demand for the surrounding mining industry in the area.
- On October 16, 1909, papers of incorporation were filed in Topeka, Kansas bringing the Consolidated Light, Power and Ice Company; the Spring River Power Company; The Galena Light and Power Company, and the Joplin Light, Power, and Water Company together to form a Company that would be known as The Empire District Electric Company, under its parent company, Cities Services.

- At the time of its organization, Empire had 109 miles of transmission line, 8 megawatts of generating capacity, and 2,400 customers. Today, the Company utilizes over 1,200 miles of transmission line and over 1100 megawatts of capacity to serve over 164,000 customers.

The Empire District Electric Company Generation-Riverton

- 1905, work began on the Riverton Generating Station, in Riverton Kansas
- Today the Riverton Plant Consists of:
  - Unit 7 - 38 MW – 1949 Coal Fired
  - Unit 8 - 54 MW - 1954 Coal Fired
  - Units 9, 10, and 11 - 44 MW (total) – Gas Fired
  - Unit 12 - 155 MW 2007 Combustion Turbine – Gas Fired

The Empire District Electric Company Generation-Ozark Beach

- 1913, Ozark Beach Dam was completed in Taney County Missouri
- Today, Ozark Beach Dam produces 16 MW of hydro-electricity
- The Dam is located Between Table Rock and Bull Shoals

The Empire District Electric Company Generation-Asbury

- In 1970 Unit 1, a 193 MW coal unit at Asbury, came on line
- In 1986 Unit 2 was added- 17 MW unit (peaking)

The Empire District Electric Company Generation-Energy Center

- Unit 1 - 85 MW - 1978
- Unit 2 - 86 MW – 1981
- Unit 3 – 50 MW – 2003
- Unit 4 – 50 MW – 2003

The Empire District Electric Company Generation-State Line

- Unit 1 – 89 MW Simple Cycle CT – 1995
- State Line CC – 500 MW Combined Cycle – 2001 (300 MW Empire) (200 MW Westar)

The Empire District Electric Company Generation-Iatan

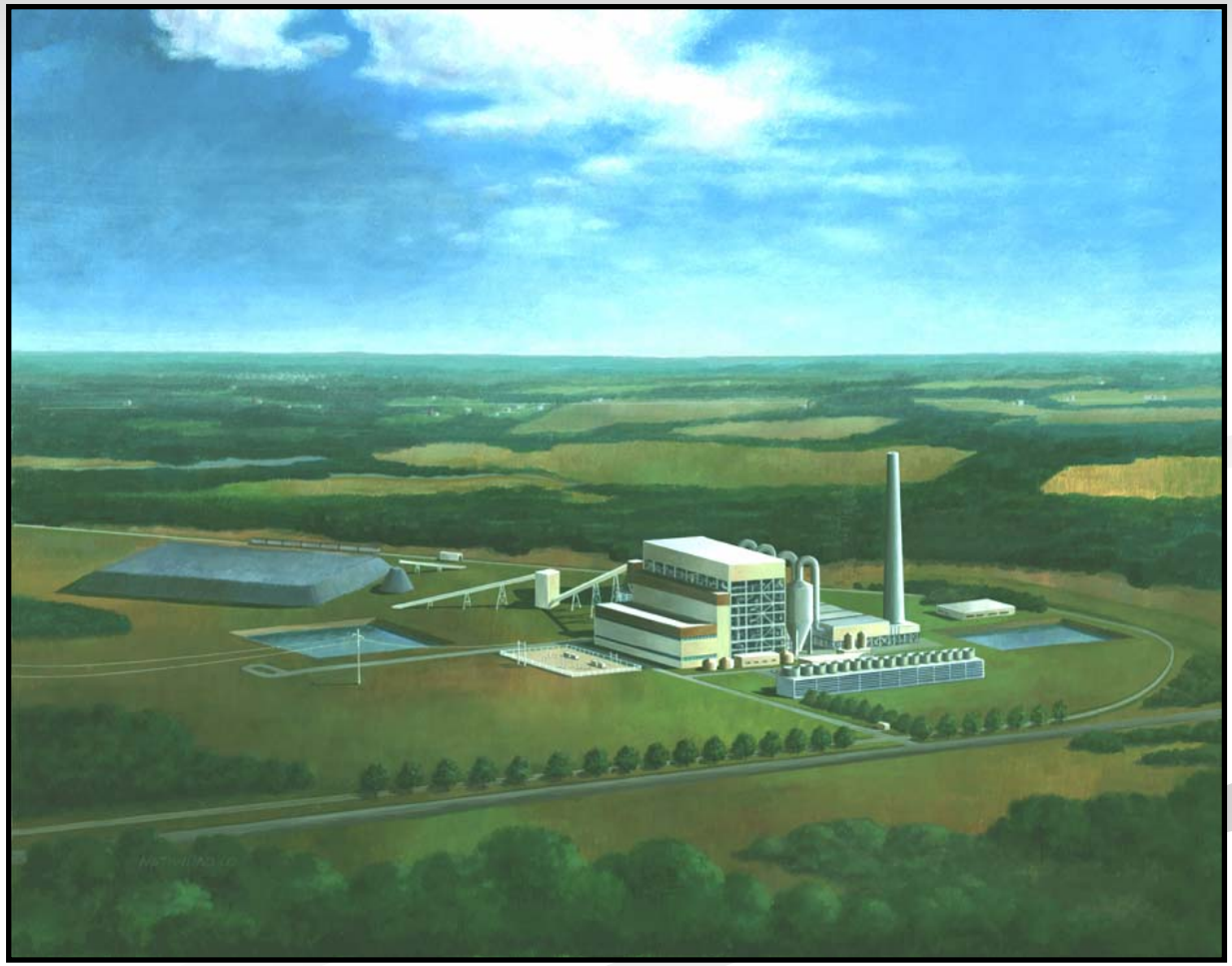
- Unit 1
  - 670 MW Unit– 1980
  - 81 MW Empire Share
- Unit 2
  - 850 MW Unit – 2010
  - 100 MW Empire Share

The Empire District Electric Company Generation Wind Farms

- Elk River 150 MW name plate capacity
- Cloud County 100 MW name plate capacity

The Empire District Electric Company
Generation-Plum Point

- 665 MW Unit (Plum Point Energy – 2010
  - 100 MW Empire participation



The Empire District Electric Operational Structure-Transmission

- EDE transmission mileages and voltage levels
  - 81 miles of 34 kV
  - 747 miles of 69 kV
  - 430 miles of 161 kV
  - 22 miles of 345 kV

The Empire District Electric
2009 Projects

1) 69 kV 12 MVAR Capacitor Bank at Quapaw #377 Substation (STEP 08)
2) 161 kV line from Ozark South to Riverside (STEP 09)
3) 69 kV line reconductor from Riverton #167 to Columbus #94 (Conductor Integrity)
4) 69 kV line terminal equipment replacement Joplin 10th St. #64 (STEP 15)

The Empire District Electric
2010 Projects

5) 161 kV 66 MVAR Capacitor Bank at Riverside #438 Substation (STEP 09)
6) 161 kV line reconductor Riverton #452 to Oronogo #110 (TSR & STEP 11)
7) Replace 75 MVA 161/69 kV auto-xfmr with 150 MVA at Oronogo #110 (TSR & STEP 11)

The Empire District Electric 2010 Projects Cont.

8) 161 kV line reconductor Neosho Jct. #184 to Neosho SPA #335 (TSR – STEP 10)
9) 69 kV line reconductor Nichols St. #170 to Sedalia-Marshfield #80 (AG? 10 – STEP 13)

The Empire District Electric
2011 Projects

10) 161 kV 66 MVAR Capacitor Bank at Aurora #124 Substation (STEP 11?)
11) 69 kV line reconductor Monett #376 to Monett #416 (STEP15)
12) 69 kV terminal equipment replacement Blackhawk #415 (STEP 12)

The Empire District Electric
2012 Projects

13) 69 kV line reconductor Oronogo #110 to Webb City #436

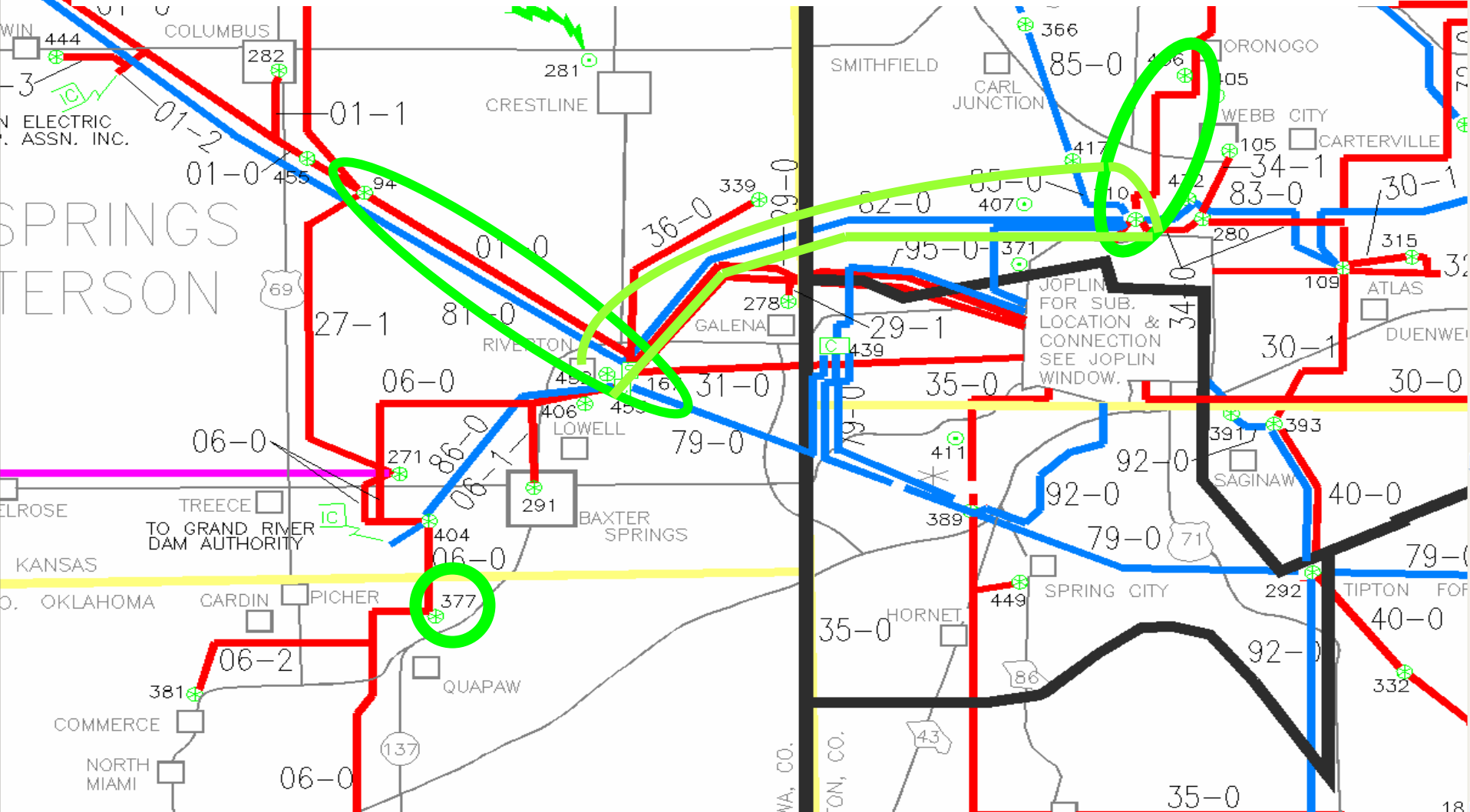
[2009 - 69kV line reconductor from Riverton #167 to Columbus #94]

[2009 - 69kV 12 MVAR Capacitor Bank at Quapaw #377 Substation]

[2010 - 161kV line reconductor Riverton #452 to Oronogo #110]

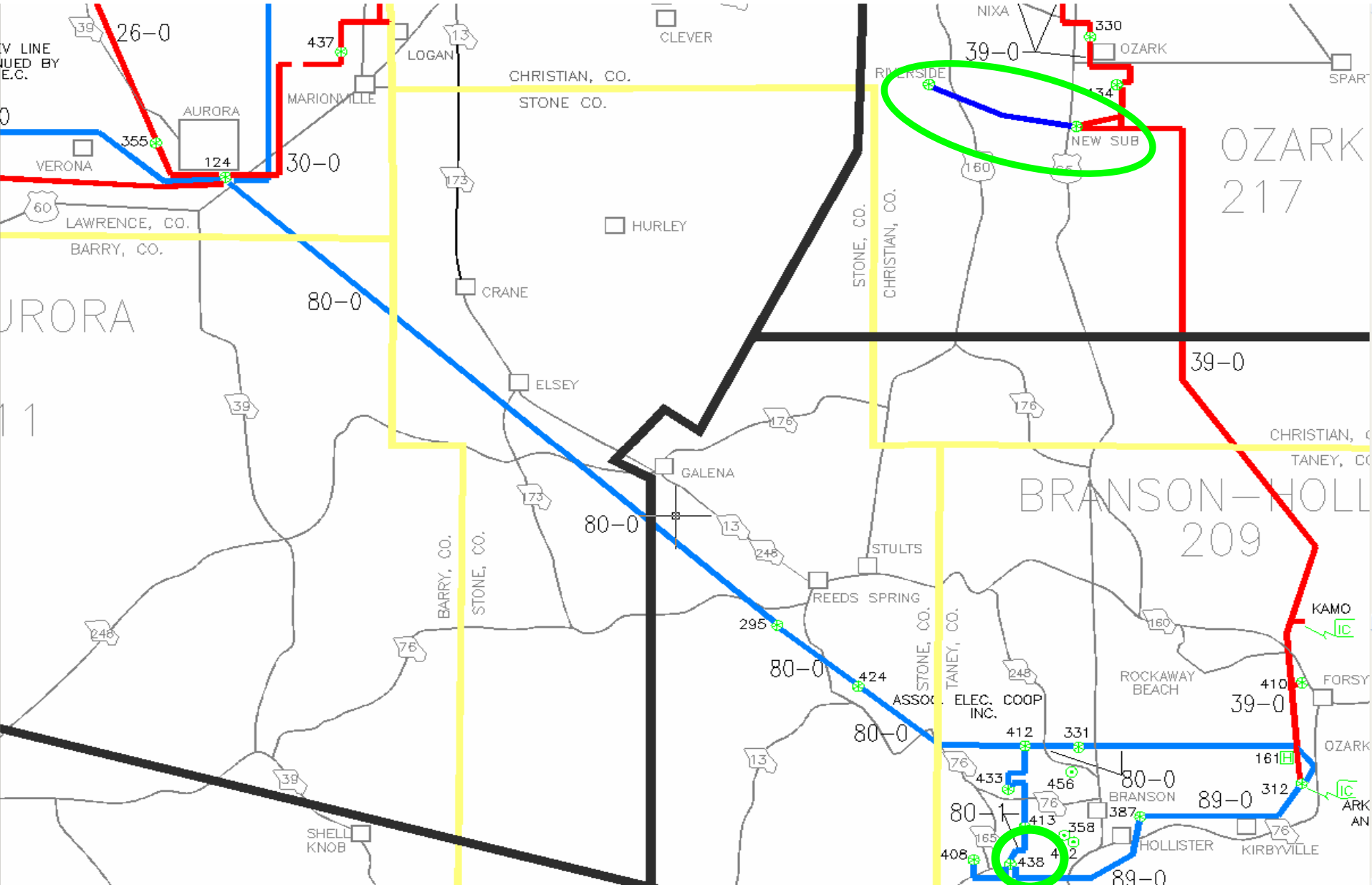
[2010 – Replace 75 MVA 161/69kV auto-xfmr with 150 MVA at Oronogo #110]

[2012 – 69kV line reconductor Oronogo #110 to Webb City #436]

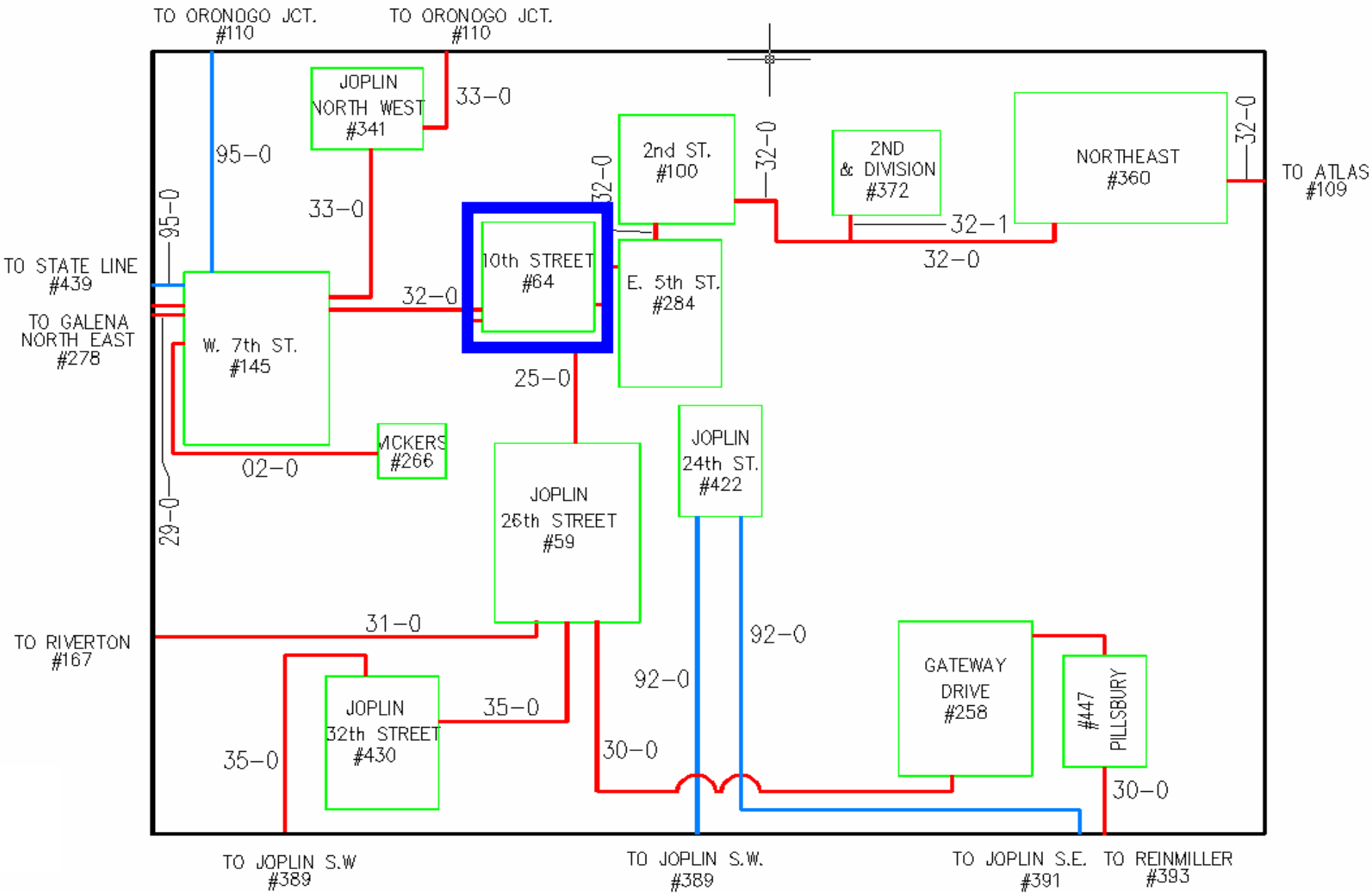


[2009 - 161kV line from Ozark South #434 to Riverside]

[2010 - 161kV 66 MVAR Capacitor Bank at Riverside #438 Substation]

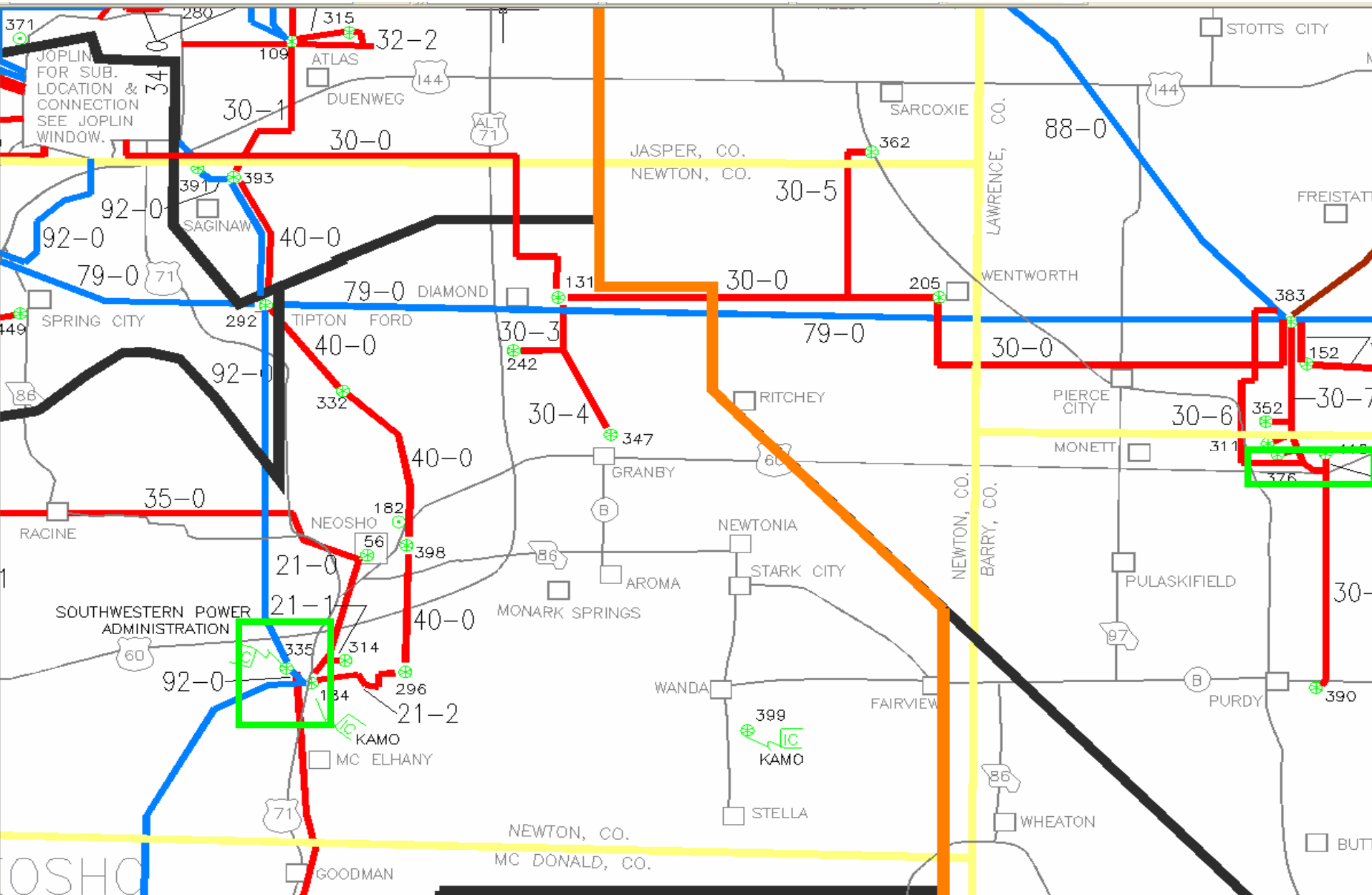


2009 - 69kV line terminal equipment replacement Joplin 10th St. #64



[2010 - 161kV line reconductor Neosho Jct. #184 to Neosho SPA #335]

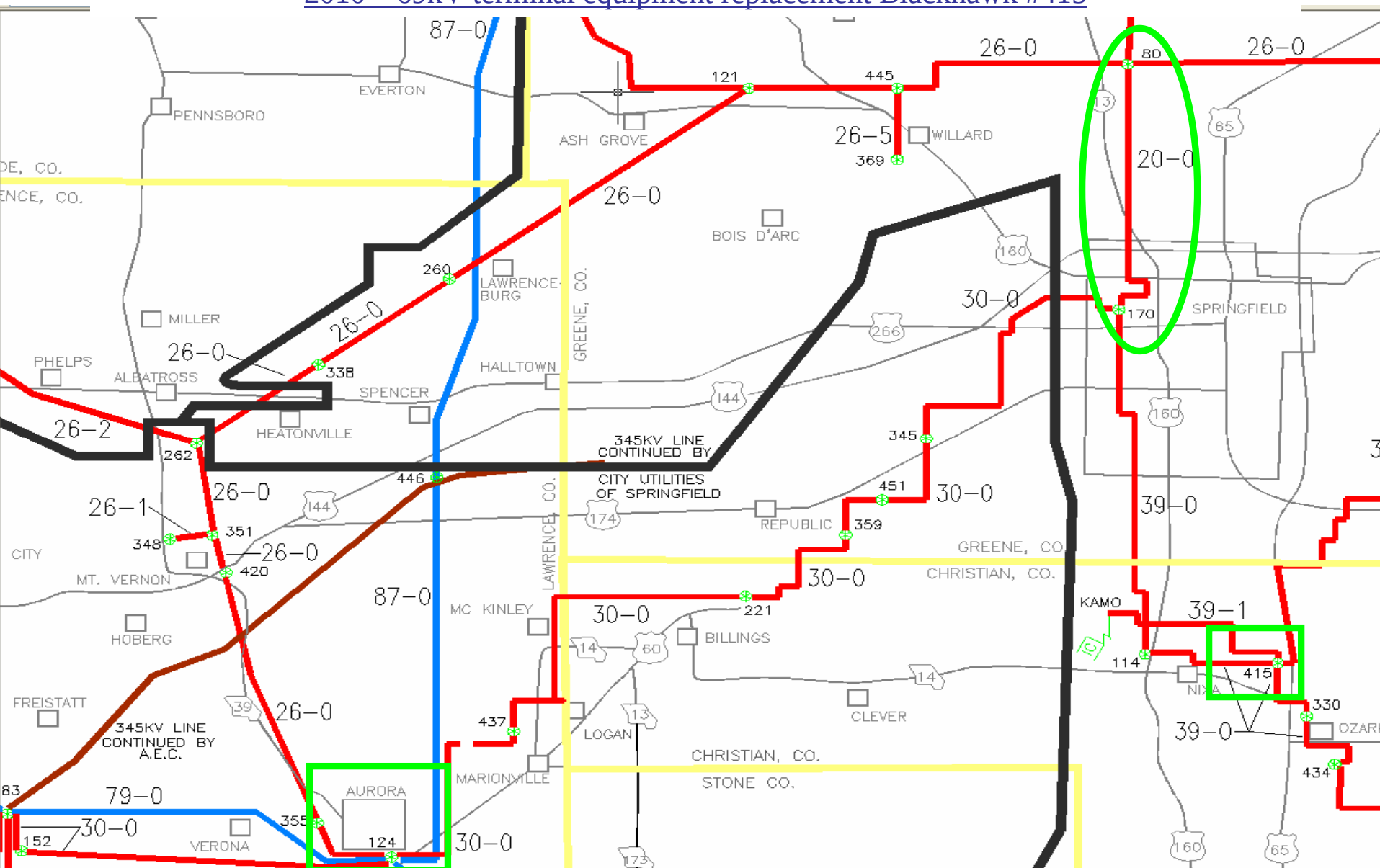
[2011 – 69kV line reconductor Monett #376 to Monett #416]



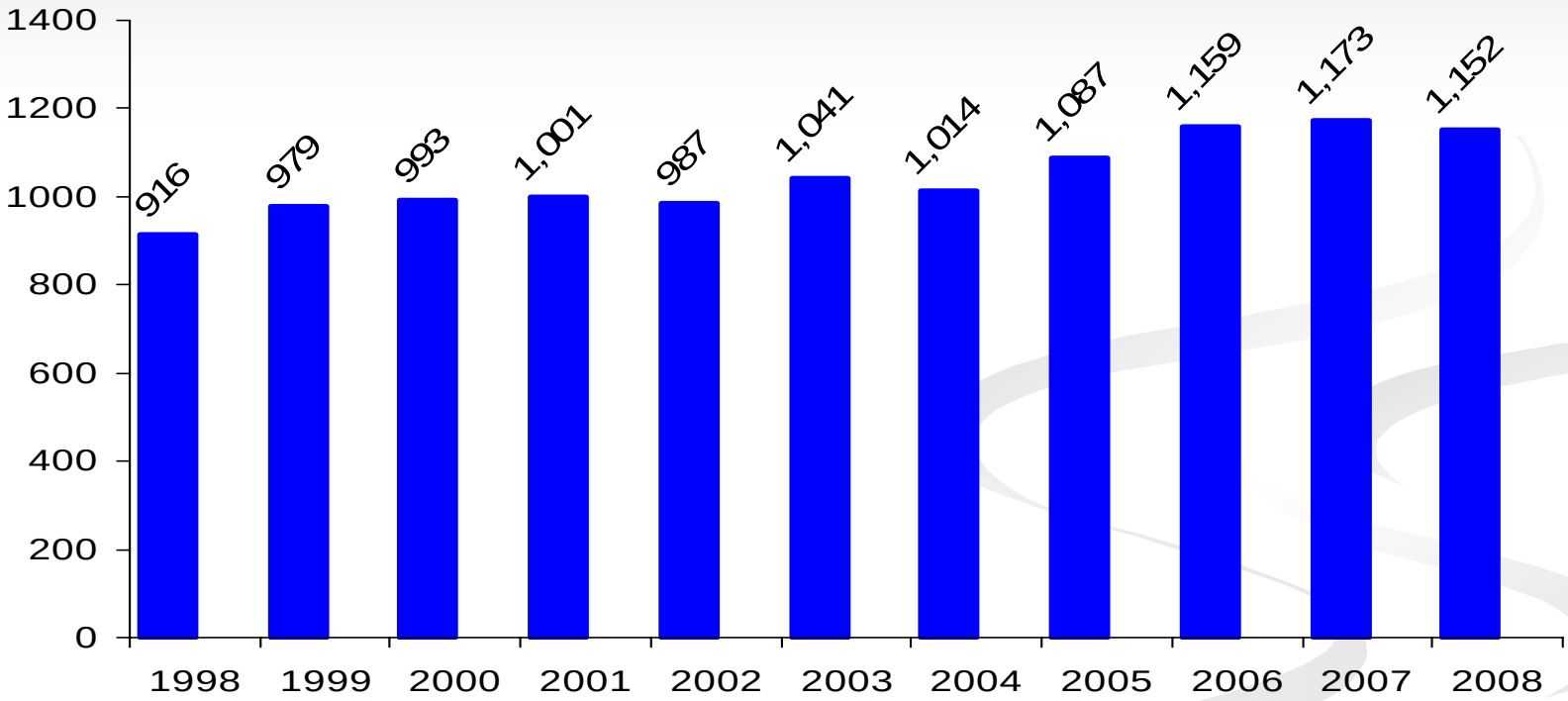
2010 – 69kV line reconductor Nichols St. #170 to Sedalia-Marshfield #80

2010 – 161kV 66 MVAR Capacitor Bank at Aurora #124 Substation

2010 – 69kV terminal equipment replacement Blackhawk #415



The Empire District Electric Company Summer System Peak



The Empire District Electric Company
Load Forecast

- Peak load forecast developed by Empire's Strategic Planning Department.
- Historic substation demand records (MW & MVARS) are trended to predict future demand.
- Substation demands are normalized to the peak system load.

The Empire District Electric Company
Base Case Planning Criteria

Under base case situations with the system in normal operating configuration and with firm transmission service requests:

- Line and equipment loading shall be within normal (Rate A) rating limit or contract limit depending upon which is more restrictive.
- Reactive resources must be sufficient to maintain voltage levels within 0.95 to 1.05 p.u.
- All customer demands shall be supplied, and all contracted firm (non-recallable reserved) transfers shall be maintained.

The Empire District Electric Company
N-1 Planning Criteria

Under the loss of a single element ("Bus to Bus" if switches are installed which allow for switching the element) with firm transmission service requests:

- Line and equipment loadings shall be within emergency (Rate B) rating limit.
- Reactive resources must be sufficient to maintain voltage levels within 0.92 to 1.05 p.u. for 161 kV or greater and within 0.90 to 1.05 p.u. for less than 161 kV systems.
- No loss of customer demand (except as noted in NERC Table I, Footnote b), nor the curtailment of contracted firm (non-recallable reserved) transfers shall be required.
- Cascading outages shall not occur.

The Empire District Electric Company Planning Criteria

Under the loss of two or more elements ("Breaker to Breaker", "Double Circuits", "Bus Outage") with firm transmission service requests. These outages will be studied to determine if mitigation is required.

It is standard practice for EDE to recommend replacing a circuit breaker when the current through the breaker due to a fault exceeds 100% of its reclosing adjusted interrupting rating. The interrupting rating is determined by applying a de-rating factor to the nameplate rating due to reclosing.

EDE loops transmission line or installs new breakers in existing lines depending upon the amount of load served, critical nature of the load, or the extent of transmission line exposure.

The Empire District Electric Company
System Planning

- Empire performs its own studies on EDE owned transmission facilities annually during May in which evaluation of contingencies of multiple circuits on common towers, common right of way, and breaker to breaker contingencies is performed.
- System Planning prepares contingency plans for System Operators for potential trouble areas.
- Empire actively participates in the SPP STEP process.

The Empire District Electric Company Planning Participation

- Stakeholders can participate through
  - SPP STEP process
  - SPP AG process
  - Contact Bill Eichman at 417-625-5116
  - Contact Sam McGarrah at 417-625-6526
    smcgarrah@empiredistrict.com
- EDE has meetings with Wholesale customers; however, there is not an established formal local area planning meeting.
- Transmission Plans are NOT located on an EDE Website due to security issues.

Questions?