Exhibit No.:Issue:T&D Maintenance and Infrastructure
Additions; Compliance with New
Vegetation Management, Reliability
and Infrastructure RulesWitness:William P. Herdegen, IIIType of Exhibit:Direct TestimonySponsoring Party:Aquila, Inc. dba KCP&L Greater
Missouri Operations Company
Case No.:Date Testimony Prepared:September 5, 2008

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2009-____

DIRECT TESTIMONY

OF

WILLIAM P. HERDEGEN, III

ON BEHALF OF

AQUILA, INC. dba KCP&L GREATER MISSOURI OPERATIONS COMPANY

Kansas City, Missouri September 2008

DIRECT TESTIMONY

OF

WILLIAM P. HERDEGEN

Case No. ER-2009-____

1	Q:	Please state your name and business address.
2	A:	My name is William P. Herdegen, III. My business address is 1201 Walnut, Kansas City,
3		Missouri 64106.
4	Q:	By whom and in what capacity are you employed?
5	A:	I am employed by Kansas City Power & Light Company ("KCP&L") as Vice President -
6		Transmission and Distribution. I also serve in that capacity for Aquila, Inc. dba KCP&L
7		Greater Missouri Operations Company ("GMO").
8	Q:	What are your responsibilities?
9	A:	My responsibilities include the engineering, design, construction, maintenance, and
10		operation of the transmission and distribution systems of KCP&L and GMO.
11	Q:	What is the distinction between the distribution and transmission systems?
12	A:	The distribution system is comprised of about 10,308 miles of line energized at 34.5kV
13		and below. The transmission system consists of approximately 1,551 miles of line,
14		mostly operating at 69kV and above. The 34.5kV system within the Missouri Public
15		Service territory is also part of the transmission system. The transmission system is also
16		distinguished from the distribution system by the fact it falls under the jurisdictions of the
17		Federal Energy Regulatory Commission ("FERC") and the North American Electric
18		Reliability Corporation ("NERC"). Both GMO's distribution and transmission systems
19		fall under my management responsibilities.

Q:

Please describe your education, experience and employment history.

2 A: I graduated from the University of Illinois, Champaign-Urbana in 1976 with a Bachelor 3 of Science degree in Electrical Engineering, and in 1981, I received my M.B.A. from The 4 University of Chicago. I was first employed at KCP&L in 2001. I have over 30 years of 5 experience in the electric utility industry. Prior to joining KCP&L, I served as chief 6 operating officer for Laramore, Douglass and Popham, a consulting firm providing 7 engineering services to the electric utility industry. Additionally, I was vice president of 8 Utility Practice at System Development Integration, an IT consulting firm focused on 9 development and implementation of technology systems. I began my utility career at 10 Commonwealth Edison and over a course of more than 20 years held various positions, 11 including field engineer, district manager, business unit supply manager, operations 12 manager and vice president - Engineering, Construction & Maintenance. 13 **Q**: Have you previously testified in a proceeding at the Missouri Public Service 14 **Commission or before any other utility regulatory agency?** 15 Yes, I have previously testified before both the Missouri Public Service Commission A: 16 ("MPSC") and the Kansas Corporation Commission ("KCC"). 17 **Q**: What is the purpose of your testimony? 18 A: The purpose of my testimony is to discuss the progress made, as well as the goals and 19 objectives of GMO's distribution and transmission investments and automation projects. 20 Additionally, I will discuss the goals and objectives of GMO's Distribution Inspection

- 21 Program. Furthermore, I will discuss the adjustment expense as GMO integrates current
- 22 operations to comply with the Commission's newly adopted rules relating to vegetation
- 23 management, reliability and infrastructure. Finally, I will discuss the proactive storm

1		response processes implemented along with the solid operational performance of GMO's
2		distribution business.
3		I. DISTRIBUTION AND TRANSMISSION PROJECTS
4	Q:	What were the different programs that comprised the GMO Plan for distribution
5		when Aquila operated and maintained the distribution system?
6	A:	The plan was comprised of four principle projects:
7		1. Inspection of the worst performing feeders;
8		2. Pole Inspection program;
9		3. Patrol of twenty percent of the distribution feeders; and,
10		4. Proactive Underground Residential Distribution ("URD") Cable Replacement
11		Program.
12	Q:	What progress has been made with respect to the worst performing feeder
13		program?
14	A:	GMO has identified and addressed laterals and circuits that had poor performance over
15		the past several years. Poor performing circuits have been inspected to identify conditions
16		affecting reliability. In the event vegetation conditions affected the circuit's performance,
17		corrective actions were taken.
18	Q:	What progress has been made on pole inspection program?
19	A:	During the past eight years, all three phase poles have been ground line inspected,
20		chemically treated, reinforced or replaced. Starting in 2006 the pole inspection program
21		was expanded to include all single phase and two phase distribution poles. It is estimated
22		that completion of the inspection of all one and two phase poles will take another five to
23		six years.

1 **Q**: Describe GMO's patrol of its distribution facilities. 2 A: An annual patrol of 20% of GMO's distribution feeders was started in 2007. It is a visual 3 patrol of the overhead and underground facilities to identify conditions that may affect 4 reliability, unsafe conditions and worn or damaged infrastructure in need of repair or 5 replacement. Based on the findings of the patrols, work requests are issued to make 6 necessary repairs and, if required, crews are assigned to address vegetation management 7 issues. 8 **Q**: Please describe the Proactive URD Cable Replacement Program. 9 A: GMO initiated a proactive Cable Replacement Program to maintain and improve URD 10 cable system reliability and increase customer satisfaction. The program takes into 11 consideration the type, age, design, number of failures experienced, and failure impacts 12 on customers. This analysis provides a means to perform targeted proactive cable 13 replacement, avoiding additional failures. 14 Are there programs related to distribution automation that GMO has started? **Q**: 15 A: GMO has identified and prioritized a portfolio of distribution automation programs. 16 What programs comprise distribution automation? **O**: 17 A: GMO is actively working the following Distribution Automation programs: 18 1. Distribution Substation Feeder Breaker Automation; 19 2. Distribution Substation Recloser Automation; and 20 3. Sectionalizing Device Automation. 21 Please describe the Distribution Substation Breaker Automation program. **Q**: 22 A: This program installs the capability to remotely monitor and remotely control feeder

23 breakers within substations. In many cases this requires replacing older electro-

mechanical control and equipment with modern controls, communications and sensing
equipment. 164 breakers have been identified under this program. At the beginning of
2008, 34 were completed and 130 breakers remained to be automated. Present plans are
to complete these installations over a four year period from 2008 to 2011.

5 Q: Please describe the Distribution Substation Recloser Automation program.

A: This program installs the capability to remotely monitor and remotely control feeders
with reclosers as their source protective device. This work typically resides in smaller,
mostly rural substations. In some cases this requires replacing older reclosers with more
modern electronically controlled models, along with communications and sensing
equipment to enable the automation. 152 reclosers have been identified under this
program. Aquila's original plan targeted completion of these over a four year period from
2008 to 2011.

Each of these recloser locations will be reviewed to determine if there are
synergies to be gained by applying distribution automation solutions already deployed in
other areas on KCP&L's system.

16 Q: Please describe the Sectionalizing Device Automation program.

17

A:

18 sectionalizing devices in feeders with peak load above eight megawatts. This work

- 19 typically requires installing automated switches with modern electronic controls, along
- 20 with communications and sensing equipment to enable the automation. Approximately 95

This program installs the capability to remotely monitor and remotely control

21 feeders have been identified under this program. Aquila's original plan targeted

completion of these over a 3 year period from 2009 to 2011.

1		This program will be reviewed to determine if there are synergies to be gained by
2		applying distribution automation solutions already deployed or planned for deployment in
3		other areas on KCP&L's system.
4	Q:	Are there plans to perform a Distribution System Inventory and Condition
5		Assessment program in the GMO territory similar to the program being performed
6		under KCP&L's Comprehensive Energy Plan ("CEP")?
7	A:	The CEP has many best practices that we will try to incorporate into GMO's operations.
8		For example, we are planning to perform a similar Inventory and Condition Assessment
9		program within GMO after completion of the KCP&L program. Lessons learned from the
10		KCP&L program will be incorporated into the GMO Inventory and Condition
11		Assessment, allowing for a significant jump start to this assessment program.
12	Q:	What programs comprise the plans established when Aquila operated and
13		maintained the transmission system?
14	A:	The programs involve system improvements and replacements both corrective and
15		preventive. Currently the plan includes the following programs:
16		• Wood Pole Replacement;
17		• 161 kV Transmission Pole and Arm Replacement;
18		• 345 kV Transmission Knee Brace Replacement;
19		• Sedalia West to Clinton 161 kV Transmission;
20		• High Reliability Transmission design for new 161 kV and 345 kV transmission;
21		• Replacement of 161 kV "H" frame arms with steel trusses; and
22		• 345 kV Circuit Breaker Replacement.
23	Q:	Please describe and give a status of the Wood Pole Replacement Project?

1	A:	This project involves replacement of wood poles that have deteriorated due to decay,
2		insect and woodpecker damage. Replacement limits pole structural failures and improves
3		system reliability. Ten to twelve year inspection cycles on the 345 kV and 161 kV
4		systems were completed. The 69 kV systems are scheduled to begin again in 2008
5		representing the beginning of the second inspection cycle for the 69 kV systems. The
6		2008 scheduled work will include inspection of approximately 4,400 poles on the Saint
7		Joseph 161kV and 69 kV systems and the Missouri Public Service 161 kV system located
8		north of the Missouri River.
9		The first cycle of the Saint Joseph 34.5 kV system was completed in 2007 and the
10		Missouri Public Service 34.5 kV system is in its first cycle and is continuing.
11	Q:	Describe the 161 kV Transmission Arm Replacement Project and its current status.
12	A:	The Maryville, Missouri, to Clarinda, Iowa, 161 kV line was built in 1948 and most of
13		the arms are original wooden arms-nearing end of their useful life. Replacement of the
14		wooden arms with steel trusses was started in 2008, after aerial inspection of the line
15		identified a pattern of severe deterioration. The project is targeted to span a three year
16		period, with about fifteen percent already complete.
17	Q:	Describe the knee brace replacement project on GMO's 345 kV transmission
18		system?
19	A:	Knee replacement on the 345kV transmission system began in 2004 and is a long-term
20		infrastructure improvement project with about fifteen percent of the project completed.
21	Q:	What is the Sedalia West to Clinton 161 kV Transmission project?
22	A:	The Sedalia West to Clinton transmission line was built in 1961 and most of the
23		structures were from the original installation. Both aerial and ground-line inspections

identified severe deterioration of the poles and arms, confirming that many structures
 were nearing end-of-life and required replacement to avoid failures. The project was
 started in 2006, includes pole and arm replacement, and is ninety-nine percent complete.

4

Q: Please describe the Transmission High Reliability design.

A: Through years of experience designing, operating and maintaining the GMO transmission
system, standard designs and materials have evolved and improved to address various
performance issues. All new 161 kV and 345 kV transmission lines are constructed with
steel structures, single pole, if possible, and non-porcelain insulators to provide improved
mechanical and electrical performance.

10 Q: Describe the 345 kV Circuit Breaker Replacement Program.

A: The Sibley 345kV substation has four 345kV circuit breakers installed in the 1960s. The
performance of these breakers has worsened in recent years. Due to the age and rarity of
this specific equipment, it has been difficult and costly to obtain parts and service
expertise for these breakers. In addition, the original substation design did not include
line switches which enable the ring bus to remain closed during a transmission line
outage.

17 The first breaker will be replaced in the last half of 2008. Plans are to replace one
18 breaker per calendar year for the remaining three units. 345kV line switches are also
19 being installed to enable the ring bus to remain closed during a transmission line outage.
20 Q: KCP&L has presented its Asset Management Plan previously to the MPSC under
21 other dockets--particularly KCP&L's CEP. Does KCP&L have plans to integrate
22 the GMO programs previously discussed with the KCP&L Asset Management
23 Plan?

1	A:	KCP&L has a solid Asset Management Plan that includes components covering
2		Distribution Asset Management, Transmission Asset Management and Distribution
3		Automation. An important component of KCP&L's Asset Management plan, as approved
4		under the CEP, is the collection of additional asset and performance data available for
5		analysis. The data will be utilized to develop optimal maintenance programs and asset
6		management strategies that go beyond simple replacement strategies. Much of this data
7		and analysis will apply directly to the GMO system. However, since the history and
8		designs of the GMO systems vary from KCP&L's other jurisdictions, KCP&L will need
9		to supplement its data and analysis models with GMO specific data to determine how the
10		best practices can be incorporated into GMO operations.
11		The GMO programs previously outlined in my testimony are similar to programs
12		in place at KCP&L. KCP&L plans to establish a common portfolio of programs,
13		applicable to both KCP&L and GMO, facilitating efficient implementation and oversight.
14		However, we recognize the importance of program flexibility to address specific
15		requirements in each jurisdiction and the historical differences in system design.
16		Over time, KCP&L will transition from a <i>smorgasbord</i> of programs to a common
17		platform. However, individual programs will be examined and evaluated as opportunities
18		arise in order to insure that the best solutions are being implemented—ultimately
19		resulting in improved service for our GMO customers.
20	Q:	Has GMO implemented any new outage tracking systems similar to existing
21		KCP&L systems?
22	A:	Yes. GMO has adopted the existing KCP&L process in which all outages are reviewed
23		the next day. Operations personnel, including a reliability engineer, distribution

1		dispatching and supervisors, review all outages to ensure reporting time, customer count,
2		proper response time and confirm if any additional repair work is required.
3		II. <u>PRICE SENSITVITY</u>
4	Q:	Are there specific areas exhibiting price sensitivity that are impacting transmission
5		and distribution's construction and maintenance costs?
6	A:	Yes. Since 2003, world markets continue to experience dramatic price increases on
7		commodities driven by increased demand, investors hedging against inflation and the
8		weakness of the U.S. dollar. Fuel, oil, steel, copper, and aluminum are commodities that
9		have been and continue to exhibit price sensitivity at national and global levels due to
10		increased worldwide demandspecifically in China and India. Also, the weakness of the
11		dollar puts upward price pressure on these specific commodity prices.
12	Q:	How do the rising commodity prices directly affect GMO?
13	A:	The cost of transformers, overhead distribution equipment, switchgears, and cable used to
14		operate and maintain GMO's transmission and delivery systems are all highly sensitive to
15		the cost of oil, enclosure steel, silicon steel, copper and aluminum. For example, in May
16		of 2004, a 161/13.2kV substation transformer cost \$340,000, while today the same
17		transformer costs \$907,000. In addition to the higher costs, delivery times have now been
18		stretched from twenty-eight weeks in 2005 to sixty weeks in 2008.
19		GMO also has experienced a record-breaking rise in fuel prices, thereby greatly
20		increasing the cost to operate our large fleet of vehicles. Even beyond the direct impact of
21		higher fuel prices, the indirect impact of higher fuel prices is now reflected in the cost of
22		goods and materials GMO uses to operate and maintain its transmission and distribution
23		system.

Q:

What changes have you seen in supplier contracts with GMO?

A: The greatest change GMO has seen in supplier contracts rests in an unwillingness to
provide long-term, price fixed terms. As contracts are renewed, suppliers are requiring
monthly or quarterly commodity related price adjustments to the contracted price.

5 Q: How does the change in supplier contracts affect GMO?

A: It greatly affects our ability to manage operational costs and plan construction and
maintenance projects. A sudden and unexpected rise in cost for materials can require
either postponement or cancellation of projects.

9 Q: How will future increases in costs affect future projects?

A: While future increases are difficult to predict, we can look at the trend since 2003 and the
prevailing forecasts throughout the commodity industry as an indicator. Transformer oil
is up 500%, enclosure steel is up 147%, silicon steel is up 153%, copper is up 400%, and
aluminum is up 161%.

14 Q: Are you requesting an adjustment based on these higher costs for materials and15 fuel?

16 A: We normalized transmission and distribution maintenance expense, excluding the 17 impacts of "New Rules" discussed later in this testimony, based on a multi-year average 18 indexed for price escalations. The index used was the Handy-Whitman index, a highly 19 recognized independent source of historical escalation factors widely used as a standard 20 measure of historic escalation. We projected the Handy-Whitman index used in this 21 normalization process through January 1, 2009 to take into consideration the price 22 sensitivity issues discussed above. The resulting adjustments to transmission and 23 distribution maintenance are included as part of Adjustment CS-27. See further

1		discussion of the Adjustment CS-27 in the Direct Testimony of GMO witness Ronald
2		Klote. As part of the true-up process in this rate proceeding we will utilize the most
3		currently available Handy-Whitman index information.
4		III. <u>NEW RULES</u>
5	Q:	Has GMO requested an adjustment to test year distribution and transmission
6		operation and maintenance expense concerning the recently promulgated vegetation
7		management and infrastructure inspection rules?
8	A:	Yes. A \$5,515,694 adjustment is requested and is detailed in Adjustment CS-77,
9		herewith incorporated by reference. This amount includes both GMO service territories
10		formerly served by Aquila Networks-MPS ("GMO-MPS") and Aquila Networks-L&P
11		("GMO-L&P").
12	Q:	What is represented in the requested adjustment?
13	A:	The adjustment represents the incremental increase over the test year for GMO to comply
14		with Missouri's newly published rules regarding vegetation management and
15		infrastructure inspection standards.
16	Q:	Was an assessment completed by GMO's vegetation conditions in its service
17		territory?
18	A:	Yes. Last year as part of its due diligence process, Great Plains Energy Incorporated
19		commissioned Environmental Consultants, Inc., ("ECI") to perform an assessment of
20		Aquila, Inc.'s vegetation conditions associated with its Missouri operations distribution
21		system. Based on the results of that study, the estimated incremental increase is
22		reasonable and included as part of this rate case filing.

1		IV. <u>VEGETATION MANAGEMENT</u>
2	Q:	Describe GMO's plans regarding initiating the newly published vegetation
3		management rule.
4	A:	GMO filed its vegetation management compliance plan with the MPSC on July 5, 2008,
5		and is waiting for Commission review and approval of the plan. GMO's plan addresses
6		and incorporates the changes required under the vegetation management rule.
7	Q:	What are some of the changes that will be made?
8	A:	As GMO integrates operations with KCP&L, its vegetation management response will
9		include oversight by KCP&L's manager to oversee the vegetation management program.
10		The manager's focus is to ensure compliance with the vegetation management rules for
11		the transmission and distribution systems. Other changes will include improved customer
12		communications, increased patrols, development of a mid-cycle patrol program for urban
13		laterals and rural lines, annual reporting to the Commission on vegetation management
14		status, and maintenance on minimum 4-year cycles for urban locations and 6-year cycles
15		for rural locations.
16	Q:	How is GMO improving communications with customers regarding vegetation
17		management?
18	A:	GMO will embrace KCP&L's established practice of arborists and foresters planning
19		work in advance of the crews, allowing customers the opportunity to discuss any
20		concerns regarding their trees. In addition to GMO's current practice, information will
21		now be available on KCP&L's Website. Also, a dedicated e-mail address for vegetation
22		management questions and concerns has been established. Additionally, door-hangers
23		now provide information on how to directly contact the manager of vegetation

1		management. Furthermore, development of a contact list with cities and counties has
2		been prepared and is being used to inform municipal stakeholders of vegetation
3		management activities that will be affecting their jurisdictions.
4	Q:	What costs are included in the adjustment GMO is requesting for compliance with
5		the vegetation management rule?
6	A:	The costs included are:
7		1. A greater duty to remove trees that indicate an imminent threat to reliability—
8		including trees that are out of the right-of-way;
9		2. An expanded scope of mid-cycle inspection to GMO's entire system—
10		including laterals and rural circuits;
11		3. Increased spot trimming resulting from expanded mid-cycle inspections;
12		4. A more stringent debris removal standard;
13		5. Broadened notification requirements to include county and municipal entities;
14		6. Shortening of the urban/metro lateral lines vegetation maintenance cycles from
15		5-years to 4-years;
16		7. More rigorous standards requiring consideration of additional removal of
17		overhang on backbone; and
18		8. Increased reporting and recordkeeping requirements.
19	Q:	What is the progress of GMO's vegetation management program prior to and
20		beyond the newly authorized rule?
21	А.	GMO was on a three year cycle for trimming of three phase feeders and a five year cycle
22		for laterals.

1	Q:	Do you expect the new vegetation management rules to reduce tree related
2		disruptions?
3	A:	It is difficult to accurately predict the new rule's impact on the reliability of GMO's
4		system, but we are confident that with the additional resources devoted to vegetation
5		management and adoption of the infrastructure and reliability rules, we will see continued
6		improvements in GMO's service reliability.
7	Q:	What are some of the challenges GMO faces regarding vegetation management and
8		effectively managing vegetation management costs?
9	A:	Tree density and accessibility in GMO's service area affects vegetation management and
10		its cost. Also, the trees in urban areas are generally inaccessible to bucket trucks. Trees
11		not available for bucket work require manual crews, driving costs 30-40% higher.
12	Q:	Please describe "leveraging contractor competition."
12 13	Q: A:	Please describe "leveraging contractor competition." GMO will adopt KCP&L's performance-based contracting and regular performance
	-	
13	-	GMO will adopt KCP&L's performance-based contracting and regular performance
13 14	-	GMO will adopt KCP&L's performance-based contracting and regular performance evaluations with competing line clearance contractors. This approach creates a
13 14 15	-	GMO will adopt KCP&L's performance-based contracting and regular performance evaluations with competing line clearance contractors. This approach creates a competitive atmosphere among contractors. GMO, as part of KCP&L's operations, will
13 14 15 16	-	GMO will adopt KCP&L's performance-based contracting and regular performance evaluations with competing line clearance contractors. This approach creates a competitive atmosphere among contractors. GMO, as part of KCP&L's operations, will continually evaluate the success of the contractors meeting vegetation management
13 14 15 16 17	-	GMO will adopt KCP&L's performance-based contracting and regular performance evaluations with competing line clearance contractors. This approach creates a competitive atmosphere among contractors. GMO, as part of KCP&L's operations, will continually evaluate the success of the contractors meeting vegetation management specifications and their adherence to species-specific clearance guidelines. The
13 14 15 16 17 18	-	GMO will adopt KCP&L's performance-based contracting and regular performance evaluations with competing line clearance contractors. This approach creates a competitive atmosphere among contractors. GMO, as part of KCP&L's operations, will continually evaluate the success of the contractors meeting vegetation management specifications and their adherence to species-specific clearance guidelines. The competitive environment promotes contractors not only meeting the standards but
13 14 15 16 17 18 19	-	GMO will adopt KCP&L's performance-based contracting and regular performance evaluations with competing line clearance contractors. This approach creates a competitive atmosphere among contractors. GMO, as part of KCP&L's operations, will continually evaluate the success of the contractors meeting vegetation management specifications and their adherence to species-specific clearance guidelines. The competitive environment promotes contractors not only meeting the standards but maintains a downward pressure on price.

Q: How do FERC and NERC rules affect vegetation management of transmission lines?

3	A:	As a result of the Energy Policy Act of 2005 and the resulting regulatory authority given
4		to FERC over the reliability of the bulk power system, NERC established standards
5		governing the vegetation management requirements for all transmission owners. NERC
6		Standard FAC-003-1 Transmission Vegetation Management Program includes a number
7		of specific, measurable and enforceable requirements all utilities must meet in order to
8		maintain mandatory compliance. The rules defined inspection schedules, vegetation
9		clearances, flexibility of trimming cycles, required records and documentation.
10		GMO has enhanced its transmission vegetation management program in order to
11		meet obligations and maintain compliance under the NERC vegetation management
12		program standards.
13	Q:	Does the Missouri vegetation management rule affect maintenance of the
13 14	Q:	Does the Missouri vegetation management rule affect maintenance of the transmission lines?
	Q: A:	
14	-	transmission lines?
14 15	-	transmission lines? Although the Missouri rule exempts transmission lines covered by the NERC rule, some
14 15 16	-	transmission lines? Although the Missouri rule exempts transmission lines covered by the NERC rule, some of GMO's transmission lines do not fall under the exemption. In cases where both the
14 15 16 17	-	transmission lines? Although the Missouri rule exempts transmission lines covered by the NERC rule, some of GMO's transmission lines do not fall under the exemption. In cases where both the Missouri and NERC rules apply, GMO applies the strictest standard.
14 15 16 17 18	A:	<pre>transmission lines? Although the Missouri rule exempts transmission lines covered by the NERC rule, some of GMO's transmission lines do not fall under the exemption. In cases where both the Missouri and NERC rules apply, GMO applies the strictest standard. V. INFRASTRUCTURE</pre>
14 15 16 17 18 19	A: Q:	transmission lines? Although the Missouri rule exempts transmission lines covered by the NERC rule, some of GMO's transmission lines do not fall under the exemption. In cases where both the Missouri and NERC rules apply, GMO applies the strictest standard. <i>V. INFRASTRUCTURE</i> Describe GMO's plans regarding the newly published infrastructure rule.

1	Q:	What costs are included in the adjustment GMO is requesting for the infrastructure
2		rule?
3	A:	The costs included are:
4		1. New Infrastructure Inspection cycles on transmission and distribution infrastructure
5		that is not presently being performed;
6		2. Increased frequency and/or stricter inspection criteria for infrastructure inspections;
7		3. Creating and maintaining systems required to schedule and track Infrastructure
8		Inspections and repairs;
9		4. Increased repairs of infrastructure; and,
10		5. Increased reporting and recordkeeping required by the rule.
11	Q:	Are these one-time or recurring annual costs for Infrastructure Inspection?
12	A:	GMO's compliance plan and the cost estimates presented here are based on a levelized
13		schedule of inspections and repairs. By "levelized," I mean it is assumed that inspection
14		and repair scheduling and costs are evenly distributed across cycle years such that costs
15		are the same year after year. Therefore, the added cost will be recurring.
16	Q:	Are there plans to consolidate the GMO Infrastructure Inspection plan into the
17		KCP&L Infrastructure Compliance Plan filed with the MPSC on July 1, 2008?
18	A:	The separately filed plans are very similar in approach. We plan to review the plans and
19		expect the result to be a recommendation to combine them into a common, master plan
20		for compliance. If this is the outcome, we will file this common plan for MPSC review
21		and approval.
22	Q:	Has GMO implemented any proactive storm response processes?

1	A:	Yes. GMO implemented a new service restoration program on or about 2001. This
2		program interfaces with the CIS system and identifies the transformer a customer is
3		connected to and predicts the most likely open device and customers affected.
4	Q:	Have you initiated any training to improve GMO's storm and disaster response?
5	A.	Service Restoration procedures have been created and all supervisors have been trained
6		on these procedures.
7	Q:	Is GMO also working with regional utilities to coordinate the response to storms in
8		the area?
9	A:	Yes. Due to the magnitude of the 2002 ice storm, we quickly realized a need for a larger,
10		coordinated effort among regional utilities. GMO is a member of the Midwest Mutual
11		Assistance Group. As evidenced during the 2007 Ice Storm and subsequent severe
12		storms affecting the Midwest this spring and summer, when a situation arises, this group
13		communicates via e-mail and conference calls, serving as a resource to any member
14		utility.
15	Q:	Please describe the Outage Management System.
16	A:	The ServiceOn ("OMS") allows GMO to track outages, effectively manage crews and
17		decrease service restoration times. The system:
18		1. Predicts outage device and location;
19		2. Provides for the paperless recording of trouble calls, work assignments and resolution
20		of outages, non-outages and "customer meets"; and,
21		3. Updates CIS+ records so Customer Service representatives and customers can see
22		status updates.
22	0.	

23 Q: How will KCP&L and GMO integrate their storm response systems?

A: Although emergency plans are already being designed and integrated, some of KCP&L's
 storm response systems will take additional time to integrate into GMO territories
 because of the need for upgrades to GMO's infrastructure and combining KCP&L's and
 GMO's CIS, EMS and OMS systems.

5

Q: Would you please describe the plan for merging the OMS?

A: Merging of the GMO and KCP&L Outage Management Systems is presently scheduled
for the first quarter of 2009 and will improve storm management and restoration efforts
throughout the combined service territories. After the systems are merged, we will begin
an evaluation to determine whether to upgrade the current KCP&L OMS application or
purchase a Distributed Management System ("DMS") which would provide additional
SCADA information.

12 Q: What are the plans for merging the EMS?

13 KCP&L and GMO currently have Energy Management Systems that support the A: 14 monitoring and control of their respective electrical grids. The EMS used by GMO, the 15 Monarch System, and the EMS used by KCP&L, the EMSYS system, are scheduled to be 16 replaced in 2009 when a new EMS, the Network Manager system, is commissioned. The 17 Network Manager EMS will support the monitoring and control of the combined 18 companies' grids and includes a full suite of functional advanced network applications 19 allowing Dispatcher Load Flows and Contingency Analysis to be routinely performed. 20 These functions, which do not run on GMO's Monarch EMS, are important components 21 for maintaining transmission system reliability. 22 Merging GMO and KCP&L's EMS systems provides improved tracking, with

23 one common platform, screens, special applications, *etcetera*, of system conditions for

1		both the transmission and distribution dispatch areas. The GMO and KCP&L EMS
2		systems will be moved one at a time to the new EMS platform that was being purchased
3		at the same time as the announcement of the acquisition.
4	Q:	Are there additional systems that are important in this area?
5	A:	The FAME mapping system displays data in a graphical format to better inform the
6		operator location of the open device and customers affected.
7		VI. SAFETY
8	Q:	What are GMO's goals and plans for safety-related improvements in the future?
9	A:	GMO will adopt KCP&L's safety practices and procedures, driving to a zero workplace
10		accident rate with the tools in place to sustain World Class Safety. Such tools to make
11		positive safety strides include using a newly developed Safety Communication Website,
12		improved observation and audits with the ability to track and trend, and continuing safety
13		education for our Safety and Training Specialists and Bargaining Unit Safety
14		Representative. The training technology of today, along with the development of
15		scenario-based training, will provide our employees with cost-effective and creative ways
16		to reinforce GMO's workforce safe work practices.
17		Safety has always been a priority at GMO and will continue to be so, with a
18		priority to strive for our stated goal of attaining a World Class Safety culture based on
19		annual evaluations by DuPont Safety Resources. We are creating a number of cross
20		functional teams with management and bargaining unit employees to develop and modify
21		safety policies, procedures, and training, and establish open communications to learn
22		from our near misses and accidents as we drive toward a goal of a zero accident
23		workplace.

1 Q: Does that conclude your testimony?

2 A: Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of the Application of Aquila, Inc. dba KCP&L Greater Missouri Operations Company to Modify Its Electric Tariffs to Effectuate a Rate Increase)

Case No. ER-2009-

AFFIDAVIT OF WILLIAM P. HERDEGEN, III

)

STATE OF MISSOURI)) ss

COUNTY OF JACKSON)

William P. Herdegen, III, being first duly sworn on his oath, states:

My name is William P. Herdegen, III. I work in Kansas City, Missouri, and I am 1. employed by Kansas City Power & Light Company as Vice President, Transmission and Distribution Engineering and Operations.

Attached hereto and made a part hereof for all purposes is my Direct Testimony 2. on behalf of Aquila, Inc. dba KCP&L Greater Missouri Operations Company consisting of <u>- Jwenty-one</u>(2) pages, having been prepared in written form for introduction into evidence in

the above-captioned docket.

I have knowledge of the matters set forth therein. I hereby swear and affirm that 3. my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

Willin P. Sterden

William P. Herdegen, III Subscribed and sworn before me this 5th day of August 2008. Nrcol A. Notary Public NOTARY SEAL My commission expires: <u>Feb. 4 201</u> Nicole A. Wehry, Notary Public Jackson County, State of Missouri My Commission Expires 2/4/2011 Commission Number 07391200