BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Aquila, Inc. for Permission and Approval and a Certificate of Convenience and Necessity Authorizing it to Acquire, Construct, Install, Own, Operate, Control, Manage and Maintain and otherwise Control and Manage Electrical Production and Related Facilities in Unincorporated Areas of Cass County, Missouri Near the Town of Peculiar.	)))))))))	Case No. EA-2006-0309

STAFF'S PREHEARING BRIEF

Summary

Aquila seeks here, post hoc, authority from this Commission to construct a power plant at a site where Cass County, Missouri asserts its zoning ordinances prohibit such a plant to be built, absent rezoning by, or a special use permit from Cass County. Further, individuals residing in the vicinity of the power plant oppose it on the basis of noise, environmental, property value and aesthetic concerns. While the Staff found cases where zoning was a factor addressed by the Commission when it granted authority to construct a power plant, in each of those cases, zoning permitted the proposed plant at the proposed site or the utility obtained rezoning to permit the proposed plant to be located at the proposed site. This does not indicate, however, that zoning is a prerequisite to the Commission granting a CCN. As the Staff addresses below, despite Aquila's failure to resolve its zoning issues with Cass County and the manner in which Aquila pushed forward with construction of the South Harper Power Plant and Peculiar Substation, it is the Staff's view that, when all the relevant factors are balanced, including but not limited to Cass County's land use plan, Cass County's zoning requirements, Aquila's need for the type of facility it built to serve its ratepaying customers, the fuel supply and transmission infrastructure near the site, and impacts on residents near the site, the Commission should grant Aquila's

application and authorize it to construct both the South Harper Power Plant and the Peculiar Substation.

Background

This particular case began with Aquila's January 25, 2006 application to the Commission for certificates of convenience and necessity (CCN) that would grant Aquila authority from the Commission to build and operate an electric power plant (South Harper Power Plant) and a transmission substation (Peculiar substation) near Peculiar, Missouri. This is not the first time Aquila has requested authority from this Commission to build this plant and substation.

After the Circuit Court of Cass County held in a lawsuit brought by Cass County, Missouri that Aquila did not have the authority it needed to build the plant in an unincorporated part of Cass County, Aquila appealed the Circuit Court's judgment and filed an application with this Commission requesting the Commission either clarify that Aquila's existing certificates of convenience and necessity gave it specific authority to build and operate the plant or, alternatively, the Commission issue a certificate of convenience and necessity that specifically authorized Aquila to build the South Harper Power Plant and Peculiar substation. The application opened Case No. EA-2005-0248. After an evidentiary hearing where many of the parties in this case presented evidence, on April 7, 2005, the Commission issued an order clarifying that Aquila's existing certificates granted to Aquila specific authority to build power plants anywhere in its service territory, including the South Harper Power Plant.

In its appeal of the Cass County Circuit Court's judgment, Aquila argued the Commission's clarification order mooted the judgment. The Missouri Western District Court of Appeals disposed of Aquila's argument in its opinion handed down December 20, 2005 in *StopAquila.Org. v. Aquila,Inc.*, 180 S.W.3d 24, 28 (Mo. App. 2005)(*StopAquila*). Thereafter, on February 28, 2006, the Cass County Circuit Court, which had the Commission's April 7, 2005

order under review by writ of review entered on February 28, 2006, a consent judgment directing the Commission to set aside and vacate the April 7, 2005 order. On March 7, 2006 the Commission vacated its April 7, 2005 order.

In related litigation StopAquila.Org (Stop Aquila) obtained from the Western District Court of Appeals (Case No. WD6500) a reversal of the Cass County Circuit Court's judgment that the bonds the City of Peculiar, issued as part of a Chapter 100 financing of the South Harper Power Plant, did not require voter authorization. The Missouri Supreme Court transferred the matter for decision on December 7, 2005, opening Case No. SC87302. Further, in Case No. EO-2005-0156, as Aquila proposed, and contrary to the positions of the Staff and the Office of the Public Counsel, the Commission, on December 19, 2005, issued a report and order disclaiming jurisdiction over transfer of the South Harper Power Plant site to the City of Peculiar in connection with the Chapter 100 financing and dismissing the application. Commissioners Gaw and Clayton dissented. The Office of the Public Counsel filed a motion for rehearing of that case which remains pending before the Commission.

Aquila has been embroiled in contentious litigation with most of the parties in this case regarding the South Harper Power Plant, Peculiar substation and related matters for well over a year.

FIRST ISSUE: DOES THE COMMISSION HAVE JURISDICTION TO CONSIDER THE APPLICATION?

At this time, the Staff has nothing to add on the question of Commission jurisdiction that was not presented to the Commission in response to the motions to dismiss filed by StopAquila and Cass County that the Commission denied on April 20, 2006. Therefore, the Staff does not overburden this prehearing brief with restatements of the arguments that were presented to the Commission in opposition to the motions to dismiss. Instead, should Commissioners wish to revisit the issues raised regarding jurisdiction at this time the Staff refers them to the motions to

dismiss, the transcript of the argument on the motions and the many pleadings that followed the motions.

SECOND ISSUE: IS THE AUTHORITY REQUESTED BY AQUILA NECESSARY OR CONVENIENT FOR THE PUBLIC SERVICE?" (SECTION 393.170.3, RSMO 2000)

Statute

The legislature had stated the standard to be applied here in section 393.170.3, RSMo[1] as follows:

> The commission shall have the power to grant the permission and approval herein specified [granting a certificate] whenever it shall after due hearing determine that such construction or such exercise of the right, privilege or franchise is necessary or convenient for the public service. The commission may by its order impose such condition or conditions as it may deem reasonable and necessary.

In its December 20, 2005 opinion in *StopAquila*, the Western District Court of Appeals held that a Commission-regulated electric utility must: (1) obtain a certificate of convenience and necessity for each electric power plant before it is built and (2) comply with non-charter first class county zoning requirements, unless it had first obtained either: (a) a certificate of convenience and necessity authorizing construction of the power plant from the Public Service Commission, or (b) county commission permission to build the plant. The Court, construing section 393.170, also stated the legislature "did not give the Commission the authority to grant a certificate of convenience and necessity for the construction of an electric plant without conducting a public hearing that is more or less contemporaneous with the request to construct such a facility." After that decision Aquila filed its application opening this case.

Missouri Court Decisions

Although stated with regard to a cooperative's challenge to the grant of an area certificate to The Empire District Electric Company, the following language from *State ex rel. Ozark Elec.*

[1] All reference are to the Revised Statutes of Missouri 2000 or to Supp. 2005, unless otherwise noted.

Co-op. v. Public Service Commission, 527 S.W.2d 390, [insert page cite] (Mo.App. 1975) is equally applicable here:

> For some reason, either intentional or otherwise, the General Assembly has not seen fit to statutorily spell out any specific criteria to aid in the determination of what is 'necessary or convenient for the public service' within the meaning of such language as employed in Section 393.170, supra. Some aid is afforded, however, by the broad, pervasive legislative intent discernible from Chapter 393, RSMo 1969, so far as it is relative to regulation of electric utility companies. More particularly, Section 393.130, RSMo 1969, contains language that gives some indicia that the General Assembly, among other things, concluded that the public interest would be served by requiring regulated electric utilities to render electric service by means of 'adequate' facilities.

Perhaps most significantly for purposes of this case, in its 2005 *StopAquila* decision the Western District Court of Appeals noting that circumstances change over time, stated, "This strongly suggests that the legislature intended that a public hearing relating to the construction of each particular electric plant, take place in the months *before* construction begins, so that current conditions, concerns and issues, including zoning, can be considered, whether that hearing is conducted by the county or the Commission." (Emphasis in original).

Additional guidance is found in other Missouri court decisions. In its 1993 *Intercon Gas* opinion[2] the Western District Court of Appeals construed the term "necessary or convenient" stating:

> [The Commission] has authority to grant certificates of convenience and necessity when it is determined after due hearing that construction is 'necessary or convenient for the public service.' §393.170.3. The term 'necessity' does not mean 'essential' or 'absolutely indispensable,' but that an additional service would be an improvement justifying its cost. Additionally, what is necessary and convenient encompasses regulation of monopoly for destructive competition, prevention of undesirable competition, and prevention of duplication of service. The safety and adequacy of facilities are proper criteria in evaluating necessity and convenience as are the relative experience and reliability of competing suppliers. Furthermore, it is within the discretion of the Public Service Commission to determine when the evidence indicates the public interest would be served in the award of the certificate.

[2] *State ex rel. Intercon Gas, Inc. v. Public Serv. Comm'n.* 848 S.W.2d 593, 597(Mo.App. 1993)(*citing State ex rel. Beaufort Transfer Co. v. Clark*, 504 S.W.2d 216, 219 (Mo. App. 1973)).

The Missouri Supreme Court has long recognized that, in the Public Service Commission Law, the Legislature delegates a large area of authority and discretion to the Commission and "many of its decisions necessarily rest largely in the exercise of a sound judgment."[3] The Missouri Supreme Court, in *City of St. Louis,*[4] stated:

> The whole purpose of the act is to protect the public. The public served by the utility is interested in the service rendered by the utility and the price charged therefor; [the] investing public is interested in the value and stability of the securities issued by the utility. In fact the act itself declares this to be the purpose. Section 5251, R. S. 1929 (Mo. St. Ann. § 5251, p. 6674), in part reads: "The provisions of this chapter shall be liberally construed with a view to the public welfare, efficient facilities and substantial justice between patrons and public utilities."

Similarly, the Missouri Court of Appeals, in *DePaul Hospital*,[5] discussed the long-standing view of Missouri's courts that the Public Service Commission Law is to be "liberally construed for the public's, ergo the consumer's protection," stating:

> (T)he Public Service Commission Law of our own state has been uniformly held and recognized by this court to be a remedial statute, which is bottomed on, and is referable to, the police power of the state, and under well-settled legal principles, as well as by reason of the precise language of the Public Service Commission Act itself, is to be 'liberally construed with a view to the **public welfare, efficient facilities and substantial justice between patrons and public utilities.**" *State ex rel. Laundry, Inc. v. Public Service Commission*, 327 Mo. 93, 34 S.W.2d 37, 42--3(2, 3) (Mo. 1931). 'In its broadest aspects, the general purpose of such regulatory legislation is to substitute regulated monopoly for destructive competition. But the dominant thought and purpose of the policy is the **protection of the public** while the protection given the utility is merely incidental. *State ex rel. Electric Company of Missouri v. Atkinson, et al*., 275 Mo. 325, 204 S.W. 897; *State ex rel. Pitcairn v. Public Service Commission*, 232 Mo.App. 535, 111 S.W.2d 222. (emphasis added).

When considering the public interest, the Commission should keep in mind that between the utility and its customers, the Commission's primary duty is to the ratepayers and that the

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[3] *State ex rel. Dyer v. Public Serv. Comm'n*, 341 S.W.2d 795, 802 (Mo. 1960), *cert. denied*, 366 U.S. 924, 81 S.Ct. 1351 (1961).

[4] *State ex rel. City of St. Louis v. Public Service Comm'n*, 73 S.W.2d 393, 399 (Mo. 1934)(internal citation omitted).

[5] *De Paul Hospital School of Nursing, Inc. v. Southwestern Bell Tel. Co*., 539 S.W.2d 542 (Mo.App. 1976).

interests of one ratepayer should not be elevated over those of the rest. As the Western District Court of Appeals said in a 1993 opinion:

> It is true that the cases indicate that the Commission will, in general, give more weight to its role of protecting *utility patrons*—whether they be utility shareholders or customers – than is given to the utility itself, but no case has ever held . . . that the public interests of one [customer can or should] take precedence over the public need to ensure that there exists reliable, adequate and safe electric service for regulated utility customers. . . . [T]he Commission's primary duty is to protect the interests of ratepayers.[6]

Finally, in arguing that the combustion turbine units Aquila has installed at the South Harper Power Plant were "necessary" for purposes of section 393.190, RSMo, the statute requiring Commission authorization to transfer interests in utility plant, Commissioners Gaw and Clayton in their dissent in Case No. EO-2005-0156 stated:

> In *State ex rel. Union Electric Company v. University City*, [449 S.W.2d 894 (Mo. App. 1970),] the St Louis Court of Appeals addressed a city's ability to deny a conditional use permit to an electric utility seeking to erect an electric substation at a specified site. The court noted that one consideration for the city council is whether the electric substation is "necessary for public convenience at the location." In that decision, the court discussed whether alternative locations would suffice for the placement of the electric substation. Ultimately, the court determined that "necessary" means "suitable, proper and convenient to the ends sought." (internal citations omitted)

Missouri Commission Decisions

The Commission has issued numerous CCNs authorizing construction of electric power plants. The Staff has located six Commission Reports and Orders where the Commission issued certificates of convenience and necessity authorizing construction of electric power plants. The factors the Commission considered in each may be helpful; therefore, the Staff has included those factors found in each Report and Order in the following summaries followed by a listing of the factors:

[6] *State ex rel. Capital City Water Co. v. Public Serv. Comm'n*, 850 S.W.2d 903, 911(Mo. App. W.D. 1993).

UE Callaway County Nuclear Plant

In a contested proceeding creating 3600 pages of testimony and 99 exhibits, by a Report and Order effective April 1, 1975, the Commission authorized Union Electric Company to "construct, operate and maintain a multi-unit steam electric generating plant ("Callaway Nuclear Plant") in Callaway County, Missouri.[7] The plant site was totally outside UE's service area. The Commission found UE had about 735,000 electric customers as of June 30, 1974, that UE was a member of one of nine regional electric reliability councils organized to coordinate the planning and operation of the nation's bulk power supply, that UE was a member of the Missouri-Illinois power pool where firm and reserve capacity was available to participants under an interconnection agreement.

As to the proposed plant site, the Commission found: UE "selected the proposed site after an extensive eighteen-month review of potential sites over a 110,000 square mile area including the entire state of Missouri and adjoining areas in southern Iowa, western Illinois, and northern Arkansas." The Commission found the primary site selection factors were water supply, existing land use, population distribution, topography and seismology; and that other limiting factors were the need to conform to the Nuclear Regulatory Commission's seismic criteria, the presence of state and national parks and forests, and streams designated as wild or scenic rivers. The Commission found the site consisted of 3,200 acres with about 1,650 acres of peripheral land to serve as a buffer, and a road, rail and water access corridor of about 1,750 acres extending south from the plant site to the Missouri River. UE presented unrefuted evidence from the Director of Parks and State Historic Preservation Officer stating the plant would not pose a threat to any known historic or archeological site, and the Commission found

[7] *In the matter of the Application of Union Electric Company for Permission and Authority to Construct, Operate, and Maintain a Multi-Unit Nuclear Steam Electric Generating Plant in Callaway County, Missouri,* Case No. 18, 117 (Report and Order dated March 14, 1975) (unlisted, unreported case).

the nearest historic or archeological site was about three miles from the proposed site and that neither it nor any other similar site would be impaired by the plant.

The Commission found the plant would meet then existing state air and water pollution control regulations. The Commission found UE had "undertaken a detailed environmental monitoring program to fully evaluate the environmental characteristics of the site" which was submitted to the NRC and the NRC's staff had issued a draft statement that a construction permit should be issued. The Commission found "measures will be taken to minimize the impact on the environment during construction and operation of the proposed facilities" and that "[c]ontrols will be utilized to prevent adverse effects on local water quality." The Commission also found that [i]ncidents of air pollution during construction will be minimized by controls such as seeding, prohibition of unsupervised burning, use of dust collectors and dust control on roads."

The Commission found waste heat would be dissipated into the atmosphere through cooling towers. The Commission found "that the construction and operation of the proposed plant should result in no environmental harm" It found, "that the proposed site is suitable for the construction of an electric generating plant and that adequate precautions will be taken by [UE] during the construction and operation of the plant for protection of the environment." The Commission, however, "question[ed] the extensive land acquired for the plant and shall require [UE], at the discretion of the Commission, to provide the Commission with a utilization study to determine what portions, if any, should not be included in rate base." The Commission physically described the proposed generation units and then addressed UE's asserted need for additional capacity.

The Commission found UE had established its need for additional generation capacity to meet present and future demands. In support of that finding the Commission found UE had present generating capacity of 6,022,000 kW and was in the process of building two 600,000 kW

coal-fired units. It stated intervenors and its Staff had challenged UE's estimated load growth rate and load predictions—peak loads and base loads, with required reserve. The Commission found UE's system load had been growing in excess of 7% compounded annually and that UE's estimation of future load requirements based on inputs including: (1) time and gross national product, (2) informed judgment of the forecaster, (3) the effect of price on demand, (4) the price of substitute sources of power, (5) population and family formations, (6) level of real income, (7) level of industrial output, (8) predicted growth rate of 5.6% compounded through 1984, (9) impacts of customer conservation, and (10) 18% reserve margin were reasonable. The Commission found that UE would have reserve deficiencies in 1982 and capacity deficiencies in 1983 and 1984 and concluded that UE needed the capacity represented by the proposed plant.

The Commission then made findings regarding how that capacity need should be met, i.e., by fossil fuel-fired plant or nuclear plant. First, the Commission found the only practical alternative to a nuclear plant was a coal-fired plant. The Commission found that even when the Staff made adjustments that inflated UE's assumptions that the most recent cost estimate for the nuclear plant of $768 per kW installed compared to UE's cost estimate of a comparable coal-fired plant of $685 per kW installed (with installed SO_2 scrubbers) and $615 per kW (without SO_2 scrubbers) when combined with the estimated cost of fuels—2.47 mill per kWh for nuclear fuel, 12.9 mills per kWh for high sulfur coal and 7.5 mils per kWh for low sulfur coal—the nuclear plant was more economical than a comparable coal-fired plant. The Commission stated, "Based on all the evidence in the record, we are compelled to reach the conclusion that the most economical way of supplying the increased electrical needs of [UE]'s customers in the future is through the construction f the proposed nuclear plant."

The Commission found UE's proposed issuance of mortgage bonds, unsecured long-term debt, preferred stock, common stock and internal funds to finance construction of the plant

would be submitted to the Commission and other federal and state regulatory bodies for approval as required by law and that they constituted a reasonable program for funding. The Commission also found the evidence established UE's ability to obtain the necessary financing and that the construction of the plant would create new job opportunities, increased tax revenues and overall economic development in the state of Missouri.

Finally, the Commission addressed safety. First, the Commission observed that radiological health and safety is within the exclusive jurisdiction of the federal government. Then the Commission discussed the evidence presented to it regarding radiological safety at the plant and found the proposed plant "will pose no threat to the health and safety of the citizens of Missouri."

KCP&L/SJL&P Iatan Station

By Report and Order effective December 14, 1973, the Commission authorized Kansas City Power & Light Company (KCP&L) to construct, own, operate and maintain, remove, replace and otherwise control and manage Iatan Steam Electric Generating Station and it authorized St. Joseph Light & Power Company(SJL&P) to participate in the construction, ownership, operation, maintenance, removal, replacement, control and management of Iatan Steam Electric Generating Station.[8] The station was partly in SJL&P's service area, but not in KCP&L's service area. The Commission also authorized construction of a 345 kv transmission line and made findings of fact and conclusions of law regarding that line. In its findings of fact, the Commission stated KCP&L and SJL&P had "received all required consents of all proper municipal authorities." The Commission found the legally described proposed station site was on the left bank of the Missouri River near the Upper Iatan Bend in an unincorporated area of

[8] *In the matter of the Application of Kansas City Power & Light Company and St. Joseph Light & Power Company for Certificates of Public Convenience and Necessity to Construct, Own, Operate and Maintain an Electric Generating Station in Platte County, Missouri, and Certain Related 345 kv Transmission Facilities,* Case No. 17,895 (Report and Order dated November 14, 1973) (unreported case).

Platte County, Missouri. The Commission found the electric loads on the systems of both KCP&L and SJL&P were increasing and would continue to increase at rates exceeding 6% and 7% annually, respectively, during the foreseeable future. To provide adequate capacity, including reasonable reserve capacity, during expected summer peak load conditions in 1979, KCP&L and SJL&P were applying for authorization for the station, which would include a fossil fuel-fired generating unit so that it could be available for trial operation by October 1979. Lead time requirements for the fossil fuel-fired unit were estimated to be five-years. The Commission found that unless KCP&L and SJL&P added generation capacity by 1979, each probably would not have sufficient capacity to meet peak load and maintain a reasonable reserve capacity. The Commission found the station would be "well located with respect to both the systems of KCPL and SJLP." The Commission stated KCP&L estimated it would require about 750 MW of added capacity by 1979 and that its construction program included the addition of about 350 MW of new oil-fired gas turbines during 1975 to 1978.

The Commission found Iatan Unit 1 would be fueled with low-sulfur western coal delivered by rail; emissions would be controlled by facilities approved by the Missouri Air Conservation Commission; subject to authorization from the U.S. Corps of Engineers, cooling water would be obtained from the Missouri River; effluent discharges into the Missouri River would be designed to meet Missouri Clean Water Commission requirements; and the actual location of the station within the proposed site could not be finally determined until completion of engineering determinations and studies, including consideration of all environmental requirements. The Commission found KCP&L and SJL&P proposed to finance the construction with their treasuries and any financings would be submitted to the Commission, if and when needed.

Missouri Power & Light Company Fairgrounds Substation Unit

By Report and Order effective August 6, 1973, the Commission authorized Missouri Power & Light Company to construct, operate and maintain a 54 MW combustion turbine generating unit at 2627 Industrial Drive, Jefferson City, Missouri.[9] In granting the certificate the Commission found the unit was to be located on a parcel of 15.37 acres, the proximity of the unit to residential areas and the location and relationship of the proposed fuel oil-fired unit to the company's transmission system.

The Commission found the primary use of the plant would be to serve load during peak demand and emergency conditions, but that it may be used as requested throughout the company's service area. The Commission found the estimated cost of the unit to be $5 million to be obtained by new financing, which would require Commission approval. The Commission found Missouri Power & Light Company purchased a substantial part of its electric power from Union Electric Company and the new unit could be a source of significant savings on billing demand costs. Furthermore, the Commission found the unit should provide economies in operation and greater reliability, particularly in Jefferson City, and that the proposed unit did not present environmental problems present with an existing Mill Bottom plant.

In addition to the findings above, the Commission found the unit could be converted to burn natural gas "which will always be available during the summer when demand on the generating plant will be highest and the supply of gas most plentiful." In making its findings, the Commission noted the company's feasibility study.

The Commission stated the company had complied with the requirements of all state and local agencies regarding construction of the unit and that the planned unit included silencing

[9] *In the matter of the Application of Missouri Power & Light Company for Permission and Authority to Construct, Operate and Maintain a 54 MegaWatt Combustion Turbine Generating Unit in Jefferson City , Cole County, Missouri*, 18 MoPSC (NS) 116, Case No. 17,737 (Report and Order dated July 27, 1973).

equipment designed to meet National Electric Manufacturing Association's "Standard E" of 57 decibels at 200 feet from the unit. The Commission further found the closest residential property line was just over 1,000 feet from the site proposed for the unit and that sound from the unit could be additionally muffled.

No residents near the site complained of noise from the unit as of the Commission's June 5, 1973 session of the hearing. The company estimated running the unit about 400 hours per year. The Commission found the unit site desirable because it was on land owned by the company for several years but underutilized. The substation needed for the unit was already on the site and a natural gas line also was on the site. Some parties expressed concern the unit might be noisy. In reaching its decision to grant the requested authority the Commission stated it "considered the issues of fuel reliability, economic feasibility, system reliability and the sound levels which will be experienced by neighboring residential areas during times of operation of [the combustion turbine unit].

The Commission stated it felt it "should not interfere with such a management decision [to site the unit] unless there is a clear showing that such decision is unreasonable and unsound." The Commission concluded, "Based on the evidence in this case, we cannot make such a finding unless we simply succumb to speculative statements by residents" and "We cannot subscribe to the contention that because some citizens object to it being located near them that this is sufficient evidence to find management acted unreasonably." The Commission indicated it had considered the impact of the unit on the environment and "essentially balanced the needs of the community for reliable, continuing power as opposed to no plant near the Schellridge Subdivision." The Commission expressed the opinion that by proper zoning ordinances the citizens had already designated the area in question as an industrial area. Further, the Commission found the unit would not be unsightly and that from an architectural and beautility

point of view it would enhance the appearance of the present industrial area. The Commission stated, "In short, we emphasize we should take cognizance of—and respect—the present municipal zoning and not attempt, under the guise of public convenience and necessity, to ignore or change that zoning." The Commission found Missouri Power & Light Company had complied with municipal requirements before constructing the unit.

UE Rush Island Plant

By Report and Order effective June 2, 1971, the Commission authorized Union Electric Company to construct, operate and maintain a multi-unit steam electric generating plant ("Rush Island Plant") on a particularly described parcel of land in Jefferson County, Missouri and within UE's existing service area.[10] In an apparently uncontested proceeding the Commission recited the following findings of fact in granting the authorization:

> The demands upon Applicant for electric service have grown steadily in recent years and are expected to continue to expand in the future. The all-time gross instantaneous peak demand on Applicant's system of 4,290 megawatts was experienced on July 31, 1970. Applicant estimates that such peak demand will increase to 6,370 megawatts by 1975, and to 6,800 megawatts by 1976. [*3]
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> At the present time, the total generating capacity of Applicant's system is 4,283 megawatts. After completion of Units 2, 3 and 4 of Labadie Plant in 1971, 1972 and 1973, respectively, (now under construction) the total generating capacity will be 6,149 megawatts.
>
> Applicant proposes to provide some of the additional required generating capacity by construction of a multi-unit steam electric generating plant to be located near Rush Tower, Jefferson County, Missouri, approximately 35 miles south of St. Louis. The site of the proposed plant, as shown by Applicant's Exhibits 1 and 2 which were received in evidence herein, is within Applicant's service area in Jefferson County, Missouri, as established by the Commission in Case No. 3505. Initially, Applicant plans to install two generating units, each with a capacity of approximately 600 megawatts, with provisions for future installations of additional units. The first unit is expected to be in service in May, 1975, and the second unit is expected to be in operation in May, 1976. The proposed plant will be interconnected with the transmission and distribution system of Applicant by means of substantial transmission facilities in order that

[10] *In the matter of the Application of Union Electric Company for Permission and Authority to Construct, Operate, and Maintain a Multi-Unit Steam Electric Generating Plant in Jefferson County, M*issouri, 15 MoPSC (NS) 505, Case No. 17, 139 (Report and Order dated May 21, 1971).

the electric energy to be generated can be utilized economically to the greatest advantage of the consuming public.

Applicant examined numerous sites before selecting the Rush Island site near Rush Tower, Missouri, for the construction of the proposed power plant. The Rush Island site was chosen because of its relationship to the loads served, the availability of an ample supply of water, the presence of a large level area requiring a minimum of fill upon which to construct the plant, the remoteness of the location from densely populated areas, and the ability economically to transport to the site large quantities of coal. The latter factor would have a favorable effect on the ultimate cost of service to the consumer in that it would aid in the maintenance of a competitive position in the purchase of coal for its proposed plant.

Applicant decided to build a new plant rather than add to existing plants in order to geographically balance its generating capacity. The development of the proposed Rush Island Plant site will produce a better balance in geograhpic dispersal, and would permit better utilization of existing transmission facilities.

The construction of the first generating unit of the proposed plant for service in 1975 will require an estimated expenditure of $ 171,000,000 without related transmission facilities. The construction of the second unit for service in 1976 will require an estimated expenditure of $ 124,000,000 without related transmission facilities. Applicant proposes to finance the construction of the initial two units, as well as the balance of the proposed plant, out of funds to be available in its treasury, a substantial portion of which will be obtained from new financing. The amount and nature of such new financing will be submitted to the Commission for approval as and when the funds are required.

The construction, operation and maintenance of the proposed plant will not affect any other public utility, except that the increase in Applicant's generating capacity will better enable it to furnish additional service to utilities purchasing electric energy from Applicant.

The Applicant has taken all reasonable steps to insure that the operation of the proposed plant will not adversely affect the air or water quality standards at or near Rush Island. The Applicant proposes to use as fuel low sulphur coal secured from the nearby coal fields of Southern Illinois. The Applicant has specified that the sulphur content of the coal supplied shall not exceed one percent during the first five year period of operation of the proposed plant. Plans of the Applicant include the installation of a sulphur dioxide removal system at such time in the future as the deterioration in the quality of the coal available may necessitate. Plans for the proposed plant also include the use of mechanical devices to prevent the release of harmful solids as well as gases into the surrounding atmosphere. Applicant proposes to operate the Rush Island Plant within all known and proposed standards of the Federal Environmental Protection Agency, as well as the Missouri Air Conservation Commission.

Applicant proposes to operate the plant's cooling system within the standards set by the Missouri Water Pollution Board and presently has pending before that Agency an application for an operating permit for the proposed plant.

> Applicant has also applied for a permit to construct and operate the plant along a navigable river from the United States Army Corps of Engineers and has applied for permits to dredge in the Mississippi River from the Corps of Engineers and the Division of Waterways of the State of Illinois. Applicant has made application to the Federal Aviation Administration for permission to construct a stack 700 feet in height in order to provide an additional margin for protection of the air quality at or near Rush Island.

UE Sioux Plant

In another apparently uncontested proceeding, by Report and Order effective March 1, 1963, the Commission authorized Union Electric Company(UE) to construct, operate and maintain a multi-unit steam electric generating plant ("Sioux Plant") on a site in St. Charles County, Missouri and within UE's existing service area.[11] The Commission found that demands on UE for electric service had steadily grown and were anticipated to continue to grow in the future. The Commission found UE's estimated generating capacity in 1966 was about 500 kW less than estimated requirements.

The Commission found the proposed plant would be interconnected with UE's other power plant through high voltage transmission facilities, that it would be located where coal could be delivered by either rail or barge, aiding in maintenance of a competitive position in the price of coal used by the plant. The Commission found the location of the proposed plant would "produce a better balance in geographic dispersal" of UE's generation plants, "permit better utilization of existing transmission facilities" and would "require only modest investment in new transmission facilities to connect the new generating capacity to the loads and the interconnected transmission system."

The Commission found the estimated cost of the initial plant to be $74 million without related transmission costs and $75.6 million with them. The Commission found the proposed

[11] *In the matter of the Application by Union Electric Company for Permission and Authority to Construct, Operate and Maintain a Steam Electric Generating Plant in St. Charles County, Missouri,* Case No. 15,151 (Report and Order dated February 20, 1963) (unreported case).

plant would not affect any other public utility, except the increase in UE's generating capacity would better enable UE to better serve utilities purchasing electricity from UE. The Commission also found UE proposed to finance the plant out of its treasury, "a substantial portion of which will be obtained from new financing" and that the amount and nature of such new financing would be "submitted to the Commission for approval as and when the funds are required."

UE Taum Sauk Plant

In a Report and Order effective March 9, 1960 the Commission, in an apparently uncontested proceeding, authorized UE to "construct, operate and maintain a pumped-storage electric generating station" ("Taum Sauk Plant") in Reynolds County, Missouri.[12] The Commission found UE had experienced an all-time peak demand of about 1.9 million kW in August 1959 and that UE estimated peak demand would increase to 2.35 million kW by the summer of 1963 requiring a total generating capacity of 2.7 million kW, with a 15% reserve and safety margin. The Commission found UE had 1.94 million kW of capacity and an estimated generation capacity of 2.37 million kW by 1963, leaving a shortfall of 335,000 kW of the estimated requirements.

The Commission further found the specific location of the plant and described in some detail the proposed plant itself including its rated capacity of 350,000 kW and that it would be made up of five major components: a small dam, a lower pool, an upper pool, a waterway, and a pumping and generating station. Additionally, the Commission found UE proposed to use the plant "for the purposes of carrying peak loads, providing emergency generating capacity and as otherwise may be appropriate in the operation of its system."

[12] *In the matter of the Application of Union Electric Company for Permission and Authority to construct, Operate, and Maintain a Pumped Storage Generating Station in Reynolds County, Missouri,* 9 MoPSC (N.S.) 62, Case No. 14,390 (Report and Order dated February 23, 1960).

The Commission determined that UE estimated the plant would initially cost $40 million without required transmission facilities and $50 million with them. The Commission noted that the plant cost to be about $29.5 million less than the cost of the same capacity at a new steam plant. The Commission found UE "states that it will inter-connect the proposed plant with other generating plants in its system; and that when the route and plans for the transmission line from the proposed plant are determined, [UE] will file a separate application for authority and permission to construct, operate and maintain same."

In addition to the findings noted above, the Commission observed that UE adduced a certified order of the Reynolds County Court dated December 21, 1959 granting UE a franchise to "construct, operate and maintain the proposed plant and related transmission lines in [Reynolds] County."

The Commission found Black River Electric Cooperative would be affected by the proposed plant, but, although given formal notice, did not appear in the proceedings and had executed a letter agreement with UE that the cooperative would relocate the cooperative's affected facilities at UE's expense. The Commission also found UE proposed to finance the plant with its treasury funds, a substantial part of which would be obtained through new financings, the amount and nature of the financings to be submitted to the Commission for approval as and when the funds were required. It appears from the Commission's Report and Order authorizing construction of UE's Meramec Plant, that the plant was built outside of UE's service area since the Commission states therein: The Specific location of the proposed plant and its relation to the St. Louis area served by petitioner is shown on two plats identified as Exhibit "B" attached to the application.

UE Meramec Plant

In a Report and Order effective July 6, 1950 the Commission, without holding a hearing, authorized UE to "construct, operate and maintain a steam electric generating plant" (Meramec Plant) in St. Louis County at the confluence of the Mississippi and Meramec rivers.[13] It is not clear from the text of the Report and Order whether the plant site was within UE's service area or not. In its Report and Order the Commission stated UE plans to initially install a generating unit with a rated capacity of 110,000 kW and fly-ash emission control equipment that would reduce such emissions at least to those standards of the City of St. Louis. UE identified the specific location of the proposed plant and its relationship to the St. Louis area served by UE. UE proposed to interconnect the plant with other plants in the power system UE uses so that it could economically use the capacity and energy. UE asserted the plant would impact no other utility other than it would increase UE's generating capacity permitting it to better furnish additional service to utilities purchasing electric energy from it. UE proposed to build the plant with funds from its treasury, increasing those funds as and when needed through financings brought before the Commission for approval.

UE applied for, and obtained from, the County Court of St. Louis County rezoning to permit erection of the proposed plant. Additionally, UE obtained a permit from the St. Louis County Planning Commission to build the plant. UE stated demand for electricity had escalated after the war and was anticipated to rapidly increase into the future, particularly in the City of St. Louis and the counties surrounding it, UE's current generating capacity was about 925,000 kW, it estimated demand would be about 1 million kW by 1952 and, with a 15% reserve and safety capacity would require a total of 1.2 million kW in capacity. With completion of UE's Venice

[13] *In the matter of the Application of Union Electric Company of Missouri for a Certificate of Public Convenience and Necessity to Construct and Operate a Steam Generating Station in St. Louis County, Missouri,* Case No. 11,925 (Report and Order dated June 26, 1950) (unreported case).

No. 2 Plant in Illinois in 1950, UE estimated it would have system capacity of 1.12 million kW. UE estimated demand would rise so that by 1962 it would require capacity of over 1.5 million kW. UE stated practically no additional capacity could be added to its hydro-electric generating facilities and that completion of Venice No. 2 would virtually complete the development of existing steam generating plants.

UE stated "it had long been desirable to build power plants in Missouri because the major portion of the system's energy sales and the greater majority of the customers on the system are located in Missouri." UE stated it had built its steam plants in Illinois because it was far cheaper to deliver coal by rail to the East St. Louis area than to cross the river and deliver it in St. Louis and its environs. In 1942 the cost to transport a ton of coal from the east side of the river to St. Louis was 30 cents and by 1950 it was 50 cents.

UE stated it had acquired ownership of the Poplar Ridge Coal Company with substantial reserves of suitable coal in West Kentucky fields that could be economically shipped by barge to the proposed site in Missouri. UE further stated the proposed site was near the center of its load, had an ample supply of water, had excellent conditions for a foundation since it was underlain with rock extending into the adjacent river channel permitting construction of an economical water intake structure, could readily be protected from floods and was well-situated for receiving and storing large quantities of coal shipped by river. The site itself was about eight miles south of St. Louis, and "transmission routes to carry the energy generated at the new plant to the western boundaries of the city and the rapidly growing area of St. Louis County [could] be through less congested territory than if the proposed plant were built on the Illinois shore which would require expensive submarine or overhead river crossings."

Listing of Factors

By Commission Rule (4 CSR 240-3.105) the Commission requires a company seeking authorization to build an electric power plant to file: (1) a description of the route of construction, that is the area through which the facility will be built; and a list of other utility assets in the area as well as railroad tracks or underground facilities which the construction will cross; (2) the plans and specifications for the complete construction project and the estimated cost of the project (either with the application or sometime during the case); (3) the plans for financing; (4) approval of governmental bodies, when necessary, including proof of a local franchise and, in this case, proof of approval by DNR, and, finally, (5) the facts showing that the granting of the application is required by the public convenience and necessity.

In determining whether granting of a certificate of convenience and necessity for construction of a power plant is "necessary or convenient for the public service," the Commission has looked at a wide variety of factors, depending on the circumstances presented to it in each case. Factors the Commission has considered include: current load, historical load growth and estimated load growth; existing generation capacity and comparison of generation capacity to estimated future load; whether generation capacity is needed to meet peak demand or broader demand; the location of the proposed plant relative to the utility's other generation, relative to where its load arises and relative to where its load is increasing; land use surrounding the site; zoning; the availability of infrastructure to supply fuel; the availability of infrastructure to transmit the generated power into the system; environmental impacts—air and water quality, noise; geology of the site; population density near the site; and impacts on other utility companies.

Factors Presented In This Case

The Staff believes the factors bearing on necessity or convenience in this case include all the foregoing factors, and that Cass County's current land use plan and zoning ordinance are factors the Commission should consider as well.

Need

As part of her professional responsibilities, Staff witness Mantle evaluates various utility companies resource planning. In her Rebuttal testimony at page 4 line 1 through page 6 line 14, Ms. Mantle describes the process that led to the conclusion that Aquila needed both these CTs and other resources to meet its customers' needs. In addition to reviewing Aquila's analysis, Staff witness Mantle determined that "the building of these three CTs meets two reasonableness criteria" (Mantle Rebuttal, p. 7, ln. 2.) Staff witness Mantle addresses Aquila's need for additional generation capacity in her rebuttal testimony. At pages 3-4 of her rebuttal testimony she states Aquila needs capacity to replace the capacity Aquila was obtaining by a contract that expired May 31, 2005. That contract allowed Aquila to take up to 500 MW of capacity in the summer and 320 MW of capacity in the winter. She also states Aquila needs capacity and energy to meet growth in its Missouri customers' electrical needs.

At pages 6 to 9 of her rebuttal testimony Staff witness Mantle states the Staff's view that, while Aquila may also need baseload capacity, Aquila's load is such that it needs generation capacity suited to meeting peak demands. She states this need for peaking capacity is driven by the high percentage of residential customers on Aquila's system who are very weather sensitive and have a highly variable load. Because Aquila needs capacity to serve these customers, combustion turbine units such as those at the South Harper Power Plant are appropriate plant to install.

Siting

Beginning on page 6 at line 13 of his rebuttal testimony, Staff witness Warren Wood lists a ten-step process for determining a reasonable site for a natural gas-fired simple-cycle electric power plant. Those steps follow:

> 1) Identification of areas within a utility's service territory where significant energy usage is occurring and areas where energy usage is expected to increase;
>
> 2) Identification of areas noted in step (1) that are not in close proximity to existing generation facilities, are near an existing generation facility that will likely be retired in the near future, are near an existing generation facility that has room for additional generation units, or are near an area where required energy needs are expected to significantly exceed an existing generating facility's capabilities;
>
> 3) Identification of major natural gas transmission pipelines that have sufficient available capacity, adequate pressure and access to natural gas supplies to serve such a prospective generation facility and pass through the areas identified in step (2);
>
> 4) Identification of electric transmission lines that have sufficient available capacity, or can be reasonably upgraded, to serve such a prospective generation facility, provide transmission to the areas that need to be served by the planned generation facility and pass through the areas identified in step (2);
>
> 5) Identification of areas where the natural gas transmission pipelines in step (3) and the electric transmission lines in step (4) come within a reasonable distance of each other;
>
> 6) Review county plat books for the areas identified in step (5) to determine if there are properties in the areas identified in step (5) that appear suitable for such a prospective generation facility and begin visiting with landowners to determine ability to purchase potential parcels of land for such a prospective facility;
>
> 7) Carefully evaluate each of the potential sites identified in step (6) for line-of-site population density, natural buffers between the generation facility and nearby residents or the ability to construct buffers, natural gas pipeline extension cost, transmission line upgrade and extension costs, land acquisition cost, suitability of geology for construction of generation facility foundations, emissions compliance cost, possible air or land permitting problems, access to other needed infrastructure such as water and other potential costs to address potential concerns of the nearby communities and residents;

8) Communicate with any nearby communities and residents to receive feedback on concerns with construction of the planned generation facility in the area;

9) Address concerns of the nearby communities and residents to the greatest extent possible associated with the "optimal site"; and

10) If the concerns of the nearby communities and residents cannot be addressed at the "optimal site", go back to step (6) to determine if another site is reasonable and repeat the steps after step (6), unless there are reasons why going back to step (6) is not reasonable.

Comparison of Staff witness Wood's "major steps" with factors the Commission has considered in granting certificates of convenience and necessity to build a power plant reveals that Mr. Wood's step one considers the factors of comparing where load arises and is increasing relative to the location of the proposed plant. His step two considers the factor of the location of the proposed plant relative to other existing power plants. His steps three and five consider the availability of infrastructure to supply fuel. His steps four and five consider the factor of the availability of infrastructure to transmit the generated power into the system. Mr. Wood's step six deals with land acquisition—an issue unlikely to arise in a case where a utility is seeking authority to build a plant on a site for which it had not yet acquired ownership rights. Mr. Wood's step 7 considers the factors of population density near the site, aesthetic impact of the power plant on the area surrounding it, the geology of the site, environmental impacts, zoning, planned land use and noise. Mr. Wood's step 8 and 9 considers input from nearby communities and residents and responses to them which address the factor of land use near the site.

As shown in Schedules WW-1 and WW-2 attached to Staff witness Wood's rebuttal testimony and discussed on page 10 of that testimony, Cass County is an area with rapidly increasing population and energy demand so that siting a power plant in the Cass County would put the plant where Aquila's load is increasing. Schedule WW-3 to Staff witness Wood's rebuttal testimony shows the location of the South Harper Power Plant is geographically diverse from Aquila's other Missouri electric power generating plants. At page 11, lines 3-12, of his

rebuttal testimony Staff witness Wood explains two advantages of locating plants apart geographically are: (1) it reduces the likelihood of losing power from multiple plants at the same time due to a common failure—for example inadequate fuel gas pressure, and (2) it reduces dependence on the same transmission paths to serve customers which reduces losses and the risk of overloading the transmission system.

Schedule WW-4 to Staff witness Wood's rebuttal testimony shows the location of natural gas pipelines and transmission lines near the South Harper Power Plant with sufficient capacity to serve it. Staff witness Wood testifies at pages 11-12 of his rebuttal testimony that the availability of two natural gas lines with sufficient capacity to serve the plant enhances power plant reliability and provides competition in sale of the fuel used by the plant. At page 13 of his rebuttal testimony Staff witness Wood testifies to two locations in Cass County where major natural gas pipelines and transmission lines intersect, one north of Harrisonville and the other south of Peculiar.

Schedules WW-5a, WW-5b, WW-6a and WW-6b to Staff witness Wood's rebuttal testimony show considerations given to population density near the site, aesthetic impact of the power plant on the area surrounding it, land use near the site, the geology of the site, environmental impacts, zoning, planned land use and noise. Further, Staff witness Wood addresses these issues at pages 14 to 17 of his rebuttal testimony. At pages 22-23 of his rebuttal testimony, Staff witness Wood compares land use near the South Harper with land use near other power plant sites and states:

> Land use in the vicinity of the simple-cycle generation plants I have seen included sparsely populated agricultural, residential and industrial areas. The South Harper plant is in an agricultural area with a housing density that is rural in nature. This type of land use is not uncommon in the vicinity of these types of electric generation plants. In some cases the population density around these types of plants is relatively dense, approaching that of a residential area, but often the current housing density around the generation plant includes homes that were built after the generation plant was operating.

He further testifies the South Harper Power Plant is located immediately adjacent to an interstate natural gas pipeline compressor station that was sited and built long before Aquila built the South Harper Power Plant. While others have informed Staff witness Wood the South Harper Power Plant is in an area zoned "agricultural," when he has asked Cass County for its zoning map which defines zoning districts, the county was unable to produce the map and, therefore, the Staff is unsure of the zoning restrictions, if any, that apply to the South Harper Power Plant. (Staff witness Wood rebuttal, p. 23, ll. 11-12; Staff witness Wood surrebuttal, p. 3, l. 16 to p. 5, l. 19).

In his surrebuttal testimony, p. 4, l. 18 to p. 5, l. 10, and in Schedule WW-10 attached to that testimony, Staff witness Wood states that most of the South Harper Power Plant is located within an area designated by Cass County in its most recent land use plan as being for Multi-Use, including industrial uses. He further states the Staff's view that it Cass County's use plan and zoning ordinance now in effect that this Commission should consider in evaluating Aquila's application. (Staff witness Wood, Surrebuttal p. 16, l. 15 to p. 17, l. 7).

As to the siting of the Peculiar substation, Staff witness testifies, at page 20 of his rebuttal testimony: "The location of the South Harper Power Plant site drove the location of the 345 kV to 161 kV substation northwest of Peculiar. This substation was also located to minimize the needed right-of-way distance and take advantage of an existing 69 kV right-of-way." Staff witness Wood testifies that regardless of the South Harper Power Plant, there is a need for a substation at or near where the Peculiar Substation is sited. (Staff witness Wood Rebuttal, p. 27, ll. 6-12).

Neighbor's concerns

At pages 3 to 7 of his rebuttal testimony, Staff witness Bender addresses improvements Aquila made to the South Harper Power Plant site to screen the facility from sight and noise

testing done regarding sound created by operation of the generating units. He relates that the plant is visible from some neighboring properties and that sound from the plant did not exceed county ordinances or manufacturer guarantees. He also states that when vehicles passed on the roadway he could not hear the plant operating. He also states the plant meets air quality guarantees and requirements of the Missouri Department of Natural Resources and the U.S. Environmental Protection Agency.

At pages 20 to 21 of his Surrebuttal testimony Staff witness Wood addresses the aesthetic impact of the South Harper Power Plant on the surrounding areas and includes as Schedules WW-13 through WW-14, sheets 1-8, a map showing where they were taken and photographs showing views toward the plant taken from different surrounding locations.

In his Surrebuttal testimony, Staff witness Bender points out that sound levels measured when the plant is operating approximated the sound level of rustling leaves or a whisper when measured about one-half mile from the plant and provides schedules showing sound levels measured at different frequencies and distances from the plant.

THIRD ISSUE: IF THE COMMISSION GRANTS AQUILA A CCN, WHAT REASONABLE OR NECESSARY CONDITION OR CONDITIONS, IF ANY, SHOULD THE COMMISSION IMPOSE?

The Commission by statute may impose reasonable or necessary conditions and Staff witness Warren Wood recommends, on pages 21 through 22 of his rebuttal testimony, that the Commission should condition a site-specific CCN for the South Harper Power Plant and associated substation, noting that some of these conditions have already been met. Mr. Wood recommends that:

> (1) Roads must be repaired at the conclusion of work to equal or better condition than when Aquila first started working on this site.
>
> (2) Roads must be worked on at least weekly to repair any ruts or holes, and dust abatement measures are adopted.

(3) Sound abatement measures must be fully utilized (stack attenuation, turbine acoustical enclosures, berms, trees, and strict adherence by Aquila to the sound limits in its contract with the manufacturer).

(4) Emergency horns and sirens must be focused to the attention of site personnel and not the entire neighborhood.

(5) Security patrols must be very carefully conducted to only oversee Aquila's resources and not increase traffic in areas not associated with this effort.

(6) Security lighting of the completed facility must be subdued and be specifically designed to minimize "sky shine" that would impact the surrounding area.

Mr. Wood states that Aquila has already satisfied conditions 1, 2, 3 and 5. Staff witness Leon Bender's rebuttal testimony provides details regarding Aquila's efforts to satisfy condition 3. Staff has not confirmed whether Aquila may have also satisfied conditions 4 and 6.

Conclusion

Wherefore, for all the foregoing reasons, the Staff recommends the Commission authorize Aquila to construct, operate and maintain both the South Harper Power Plant and the Peculiar Substation, subject to the conditions that: (1) emergency horns and sirens at the sites must be focused to the attention of site personnel and not the entire neighborhood and (2) security lighting of the completed facilities must be subdued and be specifically designed to minimize "sky shine" that would impact the surrounding area.

Respectfully submitted,

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Certificate of Service

I hereby certify that copies of the foregoing have been mailed, hand-delivered, transmitted by facsimile or electronically mailed to all counsel of record this 21st day of April 2006.

/s/ Nathan Williams