Exhibit No.	:	
Witness	:	Bruce G. Peshoff
Type of Exhibit	:	Rebuttal Testimony
Party	:	Cass County, Missouri
Case No.	:	EA-2006-0309

CASS COUNTY, MISSOURI

Case No. EA-2006-0309

REBUTTAL TESTIMONY

OF

BRUCE G. PESHOFF

Leawood, Kansas
April 4, 2006

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 Public Convenience and Necessity Authorizing it to Acquire, Construct, Install, Own, Operate, 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

AFFIDAVIT OF BRUCE G. PESHOFF

STATE OF KANSAS)
) ss.
COUNTY OF JOHNSON)

I, Bruce G. Peshoff, of lawful age, being duly sworn, do hereby depose and state:

1. My name is Bruce G. Peshoff.

2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my personal knowledge, information and belief.

Bruce G. Peshoff

Subscribed and sworn to before me, a Notary Public, this 4th day of April, 2006.

Notary Public

My Commission expires: 1/20/09

JASON P. PREU NOTARY PUBLIC NOTARY SEAL STATE OF KANSAS

REBUTTAL TESTIMONY OF BRUCE G. PESHOFF

Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS

A: My name is Bruce Gregory Peshoff, I am a Principal at Planning Works, LLC, and my business address is 8014 State Line Road, Suite 208, Leawood, Kansas 66208.

Q: FOR WHOM ARE YOU APPEARING IN THIS PROCEEDING

A: Cass County, Missouri.

Q: PLEASE EXPLAIN YOUR RELATIONSHIP TO CASS COUNTY.

A: Planning Works has been retained by Cass County to review its planning and zoning procedures and practices and to provide the expert testimony and opinions set forth herein all as part of Cass County's participation in this case.

Q: PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND HISTORY OF EMPLOYMENT AND PROFESSIONAL EXPERIENCE.

A: I have attached Schedule BGP-1 which sets out my education and experience. Briefly, I am a professional planner with approximately 15 years of planning experience in the public, non-profit and private sectors, and have advanced degrees in both planning and law. My specialization is growth management – specifically, helping communities understand, respond to and prepare for the implications of new development. Most of my work experience has been as a consulting planner for cities, counties and private development interests, including working for Professor Robert Freilich's planning group, from which Planning Works was formed. My professional experiences include a wide variety of projects and clients from coast to coast. I maintain memberships in both the American Planning Association and American Bar Association, have served on and chaired committees and regularly participate in professional training courses.

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A: In my testimony I will describe for the Public Service Commission (hereinafter "Commission") the importance of planning and zoning and its importance to areas of rapid population growth, like Cass County, particularly when planning for intensive uses

of property and for uses which potentially have regional implications. I will provide an overview of the system of planning and zoning in place in Cass County, including the adoption and amendments to the Zoning Ordinance and Comprehensive Plan. I will discuss how industrial uses of property, like the South Harper Generating station, are treated and have been treated by Cass County pursuant to its planning and zoning regulations. In addition, my testimony will address the Cass County planning and zoning review process that would have occurred if Aquila had filed timely development review applications such as a rezoning and/or special use permit(s) pertaining to the South Harper Generating Station and the Peculiar Substation. There is also a portion of my testimony in which I discuss boards and commissions, including public utility commissions, of other jurisdictions that have authority to approve the site for proposed power plants.

THE IMPORTANCE OF PLANNING AND ZONING

Q: YOU HAVE MENTIONED ALREADY THE TERM "COMPREHENSIVE PLAN." WHAT IS A COMPREHENSIVE PLAN AND WHAT IS ITS PURPOSE?

A: Within a system of planning and zoning, the Comprehensive Plan establishes the "vision" for the community, establishes policy guidelines and provides the basis for zoning and land use decisions. Comprehensive Plans constitute more than the general form and shape of projected development for a community. The Plan is a document consisting of principles, guidelines and standards that goes to the core of how a community "does business." It provides for an orderly and balanced future, promoting economic (jobs), social (quality of life), environmental (natural resources, open space) and fiscal (budgeting, capital improvement plans) attributes of an area. It sits atop the hierarchy of local government law regulating land use and has been analogized to a constitution for all future development. A Plan should be future-oriented (establishing goals and objectives for future land use and development), continuous (flexible and able to adjust to changing conditions), based on an assessment of present (actual) and future (reasonable) conditions and comprehensive (coordinated, not haphazard or incremental).

Q: WHAT ARE DEVELOPMENT REGULATIONS?

A: The term "development regulations," in its broadest sense, loosely characterizes the regulatory structure applicable to existing and new development. Development

regulations include subdivision regulations, zoning regulations, building codes, and administrative procedures.

Q: HOW DO DEVELOPMENT REGULATIONS APPLY TO A COMPREHENSIVE PLAN?

A: While the Comprehensive Plan is an advisory document that directs the future mix, intensity and distribution of land use, it also is the foundation of the development regulations. Though development regulations are the primary legal tool for implementing the Plan, they must be consistent with the Plan.

Q: ARE THERE KINDS OR TYPES OF DEVELOPMENT REGULATIONS?

A: Yes, development regulations can be divided generally into two types or parts: Subdivision Regulations and Zoning Regulations. With regard to Subdivision Regulations:

- Subdivision Regulations control the division of land into distinct parcels. They contain rules and standards that are applied to the conversion of farm or vacant land into lots and parcels for urban development.

- Subdivision Regulations aid in the development of public facilities. While zoning generally treats of location factors - where and how a particular private structure or use may be established - subdivision regulations concern themselves with the provision for and design of public facilities such as streets and sewers, and the layout and division of the site into lots so as to protect against hazards and to ensure consistency with the development of adjacent land with respect to public facilities.

- Subdivision Regulations provide an opportunity to protect future residents of an area. Design standards give the community an opportunity to protect the desired community character and assure that new developments do not create blight or burdens for other existing and future property owners. The future residents of the development are not on the scene to speak for themselves, so it becomes imperative that the reviewing agency and staff members attempt to execute that function on their behalf.

- Subdivision Regulations ensure that when developers construct public facilities (such as streets) that these facilities are built to public standards. Design standards provide an opportunity to assure safe and convenient circulation for automobiles, pedestrians and bicycles; to minimize conflicts between transportation facilities and abutting land uses; and to ensure adequate park and recreation, water and sewer, and storm drainage facilities.

With respect to Zoning Regulations:

- Zoning Regulations control where land uses may be located. In general, zoning ordinances divide a county into zones for various classes of land uses (such as residential, commercial, and industrial) and prescribe regulations as to how land or buildings may be used. Moreover, the zoning ordinance specifies spatial relationships between land and the placement of buildings on the land - for example, the size and type of bufferyards and open space to protect incompatible uses.

- Zoning Regulations provide for the implementation of the Comprehensive Plan. In one oft-cited case, the Oregon Supreme Court observed truisms applicable to all jurisdictions:

> Although we are aware of the analytical distinction between zoning and planning, it is clear that under our statutes the Plan adopted by the planning commission and the zoning ordinances enacted by the county governing body are closely related; both are intended to be parts of a single integrated procedure for land use control. The plan embodies policy determinations and guiding principles; the zoning ordinances provide the detailed means of giving effect to those principles.[1]

- Zoning Regulations protect residential land uses from the negative impacts of industrial and commercial land uses and vice versa. Preventing industrial development in a residential district provides protection to the residents from noxious odors, noise, vibrations, heavy traffic, and other negative impacts. Similarly, preventing residential development in a commercial area protects the

[1] Fasano v. Washington County, 264 Or 574, 507 P2d 23 (1973).

commercial developers' ability to assemble property, provide for parking and loading areas, and conduct business without enduring complaints from residents. Zoning ordinances generally include provisions that encourage compatibility between uses and seek to minimize conflicts between different types of land uses.

- Zoning Regulations provide an opportunity to improve the aesthetics of an area, particularly architectural or historic character.

Q: WHY ARE PLANNING AND ZONING IMPORTANT?

A: Planning and zoning are critical to successful community growth. Planning can be defined as the process of applying forethought to solve or avoid potential problems. The key to successful community growth is the consistency between planning, regulatory and fiscal tools. Consistency not only refers to the relationship between the Plan and development regulations, but broadly refers to the relationships between planning, zoning, building permits, annual budgets, short- and long-range capital improvement plans and intergovernmental relationships. Good planning is critical to growth management, helps reduce conflict, benefits developers and the public, and promotes fairness.

Q: PLEASE EXPLAIN.

A:

- *Planning is essential for proper management.* Planning is an integral element of good management. Management needs to anticipate events; it is weak if it merely responds to them. ... The evolution of planning methods has stressed the validity and pertinence of information, the logic of analysis, the worth of evaluating the consequences of alternative decisions, and the effectiveness of standards and policies in achieving goals. We see land use planning as serving four functions in the community's management of change - intelligence, advance planning, problem solving, and operating the community's development management system. Those four services should be provided to both public and private decision-makers to improve community discourse and land use decisions and to achieve a more desirable future in which social use, market values, and environmental values are in balance. The application process, whether it involves a rezoning or special permitting, is an essential element in planning. Informed decision-making consists of gathering, organizing, analyzing, and disseminating information applicable to the use and development of land. This alerts decision-makers to conditions,

trends, and projections as well as the social, economic, and environmental impacts of those projections and proposed alternative decisions (i.e., impact assessments), and aims to serve public officials and agencies primarily but also provides information to private firms, organizations, and individuals. The presumption is that better information will lead to improved public discourse, more equitable and effective policy, and better land use decisions.

- *Growth management reduces conflict.* Growth management describes how people and their governments deal with change. The purpose of growth management is to provide greater certainty and predictability about where, when, and how much development will occur in a community, region, or entire state; how it will be serviced, and the type and style of development. Lack of predictability about the future growth and development of a community leads to costly struggles that may pit government, developers, and concerned citizens against each other. This case is certainly an example of that.

- *Planning provides benefits to developers and the public.* Benefits flow both ways - to the public and to the developer, but with so much money at stake clear precautions must be established, to keep public and private interests from blurring the public detriment and lessen the opportunities for bad decision-making (for either side). Precautions, to improve good planning, include the adoption of standards and guidelines that provide predictability (to establish community objectives and preferences and identify development expectations). Active community development does need the partnership of both public and private sectors; some public investments and incentives to private development are justified, and a public concern for the marketability of that development is needed. The balance will be better struck if all the computations of costs and benefits and markets are explicitly and publicly examined, case by case. As more citizens and communities begin to question the type of growth that is occurring in their area, how much it is costing, who is paying for it, and how it is affecting the community, the need to coordinate the community's planning and control devices is becoming evident to all.

- *Planning and zoning promote fairness.* The heart of zoning is how local decisions are made: how fair is the process by which permission to develop is granted or denied? The hallmark of zoning is the opportunity for individuals to petition for relief - to seek a change - from the general comprehensive zoning plan. Cass

County's regulations provide for two basic types of relief: rezonings (a legislative act that gives broad discretion to elected officials to determine the use, intensity and timing of development) and/or special use permits, variances, exceptions or administrative appeals (to address use- or site-specific issues).

Q: WHAT IS THE RELATIONSHIP BETWEEN ADEQUATE DEVELOPMENT REVIEW AND PLANNING AND ZONING?

A: Plan implementation and consistency are critical for adequate development review. The development review process provides an outline of how the community, especially including stakeholders (neighbors that have invested in the community) who may be impacted, considers development proposals. Development review requirements are established to protect and enhance the public realm, to mitigate impacts of development proposals on their surroundings and preserve public resources. The Missouri planning statutes, not unlike statutes in other states, give cities or counties the power to review applications for proposed land developments. With respect to the case at hand, and from a planner's perspective, it would be Cass County's responsibility and duty, as the jurisdiction delegated the responsibility by the State to review development proposals, to make a determination of whether a proposed use(s) of land would be appropriate for the proposed location.[2]

Q: WERE THE *LOCATIONS* FOR THE SOUTH HARPER GENERATING PLANT AND THE PECULIAR SUBSTATION GIVEN ADEQUATE DEVELOPMENT REVIEW?

A: No. Development review is intended to be an anticipatory function; it is intended to occur prior to development occurring so that a community can ensure compliance with its goals, objectives, policies and standards. The plant and substation were constructed prior to any governmental body review, by the County Planning Board, County Commission or even this Public Service Commission, leaving the review strictly at the discretion of the entity with the vested interest in developing the facility (Aquila) rather than with an unbiased entity with an interest of representing and protecting the jurisdiction's interests (Cass County).

[2] "No improvement of a type embraced within the recommendations of the master plan shall be constructed or authorized without first submitting the proposed plans (*emphasis added*) thereof to the county planning board and receiving the written approval and recommendations of the board." (RSMO 64.235)

Furthermore, the plant and substation were erected without any participation by the public. The Missouri planning statutes, as they apply to Cass County, provide that the development review process should be a public process.[3]

Also, in accordance with generally accepted planning principles, coordinated development must be based on needs that are reasonably foreseeable and not what is beyond visionary – there must be a reasonable, rational basis for projecting and protecting future development patterns. Coordinated development includes coordinating with the transportation network and roadway improvements, compatible land uses, adequate open space and buffering and capital improvements planning. None of this accompanied the location and erection of the South Harper plant and Peculiar substation

Q: IS THERE A RELATIONSHIP BETWEEN PLANNING, ZONING AND OTHER GOVERNMENTAL OR COMMUNITY USES?

A: Yes. All land uses are controlled by some form of planning and zoning, including those that generate some "public benefit," such as schools, utilities, airports and hospitals.

Q: ARE SOME LAND USES EXEMPT FROM LOCAL ZONING CONTROL?

A: Yes, there are some land uses, including on occasion the public benefit uses mentioned earlier for example, that have obtained exemptions from local zoning approval. Even so, when uses are expressly preempted from local zoning control, there are a myriad of other regulatory controls established to ensure that appropriate land use factors are considered, especially in states with strong home rule practices such as Missouri.

Q: IN THIS CASE, AQUILA MAY QUALIFY FOR AN EXEMPTION FROM LOCAL ZONING APPROVAL. IF THIS IS THE CASE, SHOULD IT ALSO BE EXEMPT FROM AN ADEQUATE DEVELOPMENT REVIEW?

A: Assuming that Aquila is exempt from local zoning control since it has filed this case for certification of the South Harper Plant and Peculiar Substation before the Commission, it is my opinion that adequate review is nonetheless a planning requirement. An appropriate land use assessment should be conducted by an entity with the ability to

[3] "The county planning board shall have power to make, adopt and may publish an official master plan for the county for the purpose of bringing about coordinated physical development (*emphasis added*) in accordance with present and future needs (*emphasis added*)"... and ... that "the board shall hold at least one public hearing." (RSMO 64.231.1)

adequately review the development proposal. Such an adequate review would include at a minimum:

- Expertise in land use planning and zoning;
- Familiarity with the jurisdiction's Plan and regulatory controls;
- A thorough understanding of the community goals, objectives, policies and strategies; and
- Familiarity with the history of development, particularly the treatment of similar development proposals, in the community.

Q: ARE THERE GENERALIZED STANDARDS OR PROCEDURES THAT PLANNERS CONSIDER REGARDING POWER PLANTS?

A: Yes. In the Energy Policy Guide of the American Planning Association (see Schedule (BGP-2) the importance of land use planning in the siting of power generating facilities is emphasized. Recognizing that energy facilities are not always subject to the same comprehensive planning process and environmental evaluation that is required for other land-use decisions, Initiative 11 provides:

> Develop procedures and standards to ensure that siting decisions for energy generation, transmission, and distribution facilities will be evaluated to ensure consistency with community and regional development objectives, and the overall protection of public health, safety, and the environment.[4]

Regarding environmental justice and the siting of energy generation facilities, the Energy Policy Guide of the American Planning Association recommends:

> A clearly defined process is needed to establish priorities and requirements and identify participants/stakeholders in siting of new energy facilities. The process should ensure compliance with all applicable local, state, and federal regulations governing such

[4] Energy Policy Guide, American Planning Association, Ratified by the Board of Directors, April 25, 2004, p. 8.

> issues as air quality, water/wetlands, land use, noise, cultural and natural resources, public health and safety, and other environmental issues in addition to ensuring that environmental justice issues are addressed. The location of energy facilities should be part of a comprehensive planning process, which includes the opportunity for meaningful public participation and public consensus, in advance of the "public hearing to announce the new plant" scenario [*emphasis added*].[5]

Q: WHAT ARE THE CONSEQUENCES OR IMPLICATIONS IF DEVELOPMENT IS NOT CONSISTENT WITH THE COMPREHENSIVE PLAN?

A: Many detrimental effects can result from ignoring a community's Comprehensive Plan when making land use decisions. When purchasing homes, businesses and land for investment, individuals make decisions based on their best appraisal of the future of a community and how their investment will be influenced by future activities in an area. One of the ways an individual can do this is by consulting a community's Comprehensive Plan to compare how their plans fit in with the community's plan. If an individual feels that the Plan is a document that will not be followed to balance the interests of the community and individual land owners, a rational person will make decisions to promote their own best interests with disregard for how those decisions will impact adjacent properties and the overall best interests of their neighborhood and town.

Through the Comprehensive Plan, a community expresses its vision for the future and the principles that guide land use decisions. A Plan provides some degree of certainty as to a community's goals, objectives and land use policies. Setting a precedent that the Plan will not be followed is dangerous in that it eliminates that certainty for individual land owners. Without some assurance that their property will be protected from incompatible uses and that its value will be retained, there is no reason for individuals to maintain or improve their property investment. This can lead to blight, including general disinvestment, property code violations, high vacancy rates and abandoned properties, reduced property values and the associated decline in the tax base and overall decrease in the community's quality of life.

[5] Energy Policy Guide, American Planning Association, Ratified by the Board of Directors, April 25, 2004, pp. 12-13.

Land use incompatibilities that reduce property values and quality of life disproportionately burden those with lower or fixed incomes who cannot afford to move or to accept a lower price for their property. The purchase of a home is typically a family's largest expenditure, and families choose to live in communities where they think that investment will be protected. If residents of Cass County believe that land use decisions can be made without regard for the County's Plan, they will cease to believe that Cass County is a good location for their investment.

The Comprehensive Plan provides the legal basis for a community's land use decisions. If the Plan no longer serves that purpose, there is no legal basis for land use decisions and therefore no route or recourse for a community to plan for the provision of municipal facilities and services or the fiscal stability of the municipal government and service providers.

CASS COUNTY PLANNING AND ZONING

Q: HAS CASS COUNTY ADOPTED A COMPREHENSIVE PLAN AND ZONING ORDINANCE?

A: Yes, it has.

Q: BRIEFLY, WHAT IS THE RECENT HISTORY OF THE COUNTY'S ADOPTION AND AMENDMENTS OF ITS COMPREHENSIVE PLAN AND ZONING ORDINANCE AND WHAT WAS THE BASIS AND EXTENT OF *THOSE AMENDMENTS?*

A: The County has established and maintained a planning and zoning program for land use regulation, defined and implemented through the County's Comprehensive Development Plan, Zoning and Subdivision Regulations since 1959. During the 1990s, growth was guided by the Cass County 1991 Comprehensive Plan, the primary intent of which was to "encourage urban development to locate near incorporated areas and other urban land uses."

The 1991 Comprehensive Plan was adopted by the Cass County Planning Board on November 27, 1990 and adopted by the County Commission in February 1991. This Plan is the basis for other planning documents I describe in my testimony.

The 1991 Plan was reviewed and updated, with minimal changes to the existing goals, objectives and policies adopted, and recommended amendments to the Cass County zoning and subdivision regulations drafted. The 1997 Plan includes the 1991 Plan and the subsequent updates. The updates to the Comprehensive Plan were adopted on June 10, 1997, and the changes to the Zoning Ordinance were adopted on June 16, 1997.

In 2002, the County and various stakeholders met to identify key issues within the County, and in 2003 updates to the Plan were drafted to address those issues. The issues identified were generally in response to the growth and increasing urbanization occurring within the County. As a result of this planning effort, a 2003 Comprehensive Plan was adopted that incorporated the 1991 and 1997 Plans. The Plan was adopted in July 2003 by the Board of County Commissioners and the County Planning Board. No changes were made to the zoning ordinance at that time.

There are few substantive differences between the 1997 and 2003 Comprehensive Plans of Cass County regarding overall land use policy. On the whole, the County maintains its position in both documents that urban and rural uses should occur in appropriate locations, with urban uses concentrated in and around existing incorporated areas, in order to reduce land use incompatibilities and provide for the efficient extension of municipal facilities and services.

Overall, the 2003 Plan responds to the increasing urbanization of the County. For example, the Plan supported the adoption of impact fees to mitigate the costs of serving new development. Additionally, as the "Urban Reserve Area" system promoted in the 1997 Plan had little desired effect on development in the County, a Tier system was implemented through the 2003 Plan to ensure that development would occur in appropriate locations with adequate levels of service.

In addition to changes in the Plan between 1997 and 2003, the County went from being designated as a Second Class County to a First Class County, allowing it to reduce the number of members on the Planning Board.

Further updates were made to the Plan in 2004, and a new Plan was adopted on February 1, 2005 by the Board of County Commissioners and the County Planning Board. The 2005 Plan is a self-contained document, in contrast to the 2003 Plan, which was a compendium of the 1991, 1997 and 2003 planning efforts. A new Zoning Ordinance was also adopted at that time.

Q: IN PREPARING YOUR TESTIMONY, DID YOU HAVE THE OPPORTUNITY TO REVIEW RECORDS OF THE CASS COUNTY PLANNING BOARD AND THE MANNER IN WHICH IT CONDUCTED HEARINGS AND RENDERED RECOMMENDATIONS?

A: Yes, I did.

Q: CAN YOU SUMMARIZE THE AVERAGE NUMBER OF APPLICATIONS PROCESSED BY THE PLANNING BOARD ANNUALLY AND DESCRIBE THE TYPES OF MATTERS HEARD?

A: From January of 1960, to April of 2006, there have been 2,701 applications processed by the Planning and Zoning Commission. This is an average of approximately 58 applications per year. The Commission hears matters including special use permits, rezonings, lots splits, preliminary and final plats and ordinance amendments and special use permits. Over the course of the past five years, the Planning Board has heard from 80 to 100 applications per year. Compared to other similarly-situated rural county planning boards, Cass County responds to a very active agenda that includes a wide range of planning issues, most dealing with growing urbanization demands.

Q: HAS CASS COUNTY APPROVED APPLICATIONS RELATED TO INDUSTRIAL USES OF PROPERTY? IF SO, PROVIDE THE COMMISSION EXAMPLES THAT IDENTIFY THE APPLICANT, DESCRIBE THE PROCESS AND INDICATE WHETHER THE APPLICATION WAS APPROVED OR DENIED.

A: Yes. Cass County has a strong record of supporting industrial and other intensive commercial uses. Some recent examples include:

Application Number	Date Heard	Owner/Applicant	Location	Matter	Comments

Application Number	Date Heard	Owner/Applicant	Location	Matter	Comments
2420	1/28/03	Harrelson Properties, LLC	Near 195th & 71 HWY	Rezoning, preliminary & final plat	• Approved • A to PD to include C-2 and I-1 Classification for use as a Business Center
2536	8/26/03	Ron & Rachel Rushly	Near Faumuliner & 275th	Special Use Permit	• Approved • MSTP Sanctioned Tractor & Truck Pull • Two times per year • Traffic
2542	4/27/04	Mike Vogt, Summit Lifts	Near 167th & MO 291 HWY	Final Plat	• Approved • Industrial Park • Next to fire station
2573	2/24/04	Ron G. Schrock	Near Kauffman & 275th	Special Use Permit	• Approved • Light manufacturing, small parts assembly & upholstering on farm
2595	8/24/04	Town & Country Disposal of Western Missouri, Inc.	Near 231st & MO 291 HWY	Rezoning	• Approved • Ag to I-1 for light industrial use as a transfer station • Opposed by Harrisonville
2614	4/26/05	Foster Bros. Wood Products	Near Tieman & MO 7 HWY	Rezoning & Lot Split	• Approved • Mulch • Expansion of Use • Ag to I-1

Application Number	Date Heard	Owner/Applicant	Location	Matter	Comments
2640	7/26/05	Crabtree Transportation LLC	Near 195th & Mullen	Special Use Permit	• Approved against staff recommendation • For a bus lot • Across from subdivision
2656	9/27/05	Craig A. & Wanda M. Cox	Near 203rd & State Hwy D	Rezoning	• Approved • RR to C-2 to store • RVs and trailers • No sale or repair • Concern about increasing industrial uses • Area "center" for industrial/commercial uses (antique/auction, concrete plant, bar, landscaping, body shop, storage)
2670	12/27/05	Curtis Holland/Terry & Patricia Suddoff	Near 227th & MO 2 HWY	Special Use Permit for a cell tower, lot split and rezoning	• Approved • For a cell tower • Rezone from RR to C-2 • Greenhouse on residential lot

Q: HAS AQUILA ALWAYS TAKEN THE POSITION THAT IT IS EXEMPT FROM COMPLYING WITH CASS COUNTY DEVELOPMENT APPLICATION REQUIREMENTS?

A: No. Applying for land use approval is not a foreign concept to Aquila, who previously submitted applications for special use permits and/or rezoning to construct and operate

the "Aries" plant, the "Camp Branch" plant, and a number of substations. In addition, there are numerous other provisions of the County's development regulations with which Aquila has complied, such as for building permits, driveway permits and a health department permit.

Q: HAS AQUILA ALWAYS TAKEN THE POSITION THAT IT IS EXEMPT FROM ZONING REQUIREMENTS?

A: No. Aquila conducted a "site selection" analysis found in the Project Manager binder for the South Harper Facility, which includes a table labeled as the "Comprehensive Site Evaluation Summary Table." The "fatal flaw" column [in that table] is particularly revealing, not so much for its cursory assessment of the risks associated with each potential alternative site as for its identification of key recurring variables - land use compatibility and ZONING. Aquila was clearly considering the viability and risk of the alternative sites based, in part, on the availability of appropriate zoning, as noted by the following comments:

- "County zoning issue negated by planned Peculiar annexation" (South Harper site);
- "County zoning issue negated by location inside of Raymore" (Good Ranch site);
- "Due to zoning denial and expected litigation from Cass County and opposed surrounding landowners" (Camp Branch site);
- "Adjacent to .. and within full view of Shafer Estates" (North 235th site); and
- "Scenic parkway may hinder development as needed" (Turner Road site).

These analyses cannot help but bring forward the question: If Aquila was operating under the premise that County zoning did not matter, then why were two development proposals dependent upon, at least in part, potential municipal annexations (Camp Branch with Harrisonville and South Harper with Peculiar)?

Q: HAS CASS COUNTY PREVIOUSLY APPROVED APPLICATIONS FOR THE CONSTRUCTION OF POWER PLANTS AND/OR SUBSTATIONS? IF SO, PROVIDE THE COMMISSION EXAMPLES THAT IDENTIFY THE APPLICANT, DESCRIBE THE PROCESS AND INDICATE WHETHER THE APPLICATION WAS APPROVED OR DENIED.

A: Yes, construction of power plants and substations has been approved through the Cass County planning process. There are two key examples relating to the County's treatment of power plants and, ironically, both examples concern applications filed by Aquila – the first plant application was approved, the second was withdrawn by Aquila before the County's review process was complete.

Q: TELL THE COMMISSION ABOUT THE AQUILA APPLICATION THAT WAS APPROVED.

A: The Aquila application that was approved concerned the erection of the "Aries" facility, located near Pleasant Hill, Missouri. When Aquila approached Cass County regarding rezoning for the Aries facility, Aquila, with the aid of a local attorney, arranged meetings with the County representatives regarding various aspects of the project well in advance of the filing of its application. Those attending the meetings included: the County Clerk, County Commissioners, County Planning Department staff and the Cass County Economic Development Council. Aquila spear-headed an inclusive, cooperative process that virtually assured approval of their development proposal (the rezoning) because they sought to address local concerns. Aquila successfully followed the process, to its benefit, the County's and adjacent property owners. Based upon my review of the County records, it appears that no complaints have ever been filed with the County about the Aries site.

The Aries application was filed with the Cass County Planning Board on April 12, 1999. The result of Aquila's submittal and good faith cooperation with Cass County in advance of that submittal was a successful review process that resulted in the issuance of the rezoning with no protests by neighboring property owners and no legal conflicts between Aquila and the County.

Q: YOU MENTIONED ANOTHER AQUILA APPLICATION FILED WITH CASS COUNTY THAT WAS WITHDRAWN. TELL THE COMMISSION ABOUT THAT APPLICATION.

A: The application that was withdrawn concerned a facility proposed at or near "Camp Branch" in Cass County. In comparison to the Aries process, the process followed by Aquila respecting the Camp Branch site and eventually the South Harper site was fundamentally different. Prior to choosing the South Harper location for the peaking facility, Aquila examined several potential sites in Cass County, and initially selected the

Camp Branch location near to Harrisonville, Missouri for its peaking facility. The Camp Branch site was located in unincorporated Cass County but was also an area the city of Harrisonville intended to annex for residential purposes according to its Plan of Intent. The Cass County Planning Board recommended that the special use permit for the Camp Branch location be denied for reasons including land use compatibility, traffic, noise, visual impacts and water/sewer availability.

The pre-application procedures used by Aquila for Aries were not utilized during the application for the Camp Branch location. For Camp Branch, Aquila contacted with the County Planning Department only a week prior to submittal of its application for a rezoning of the area. At that time, Aquila was informed that the Camp Branch location was an inappropriate location for rezoning as an Industrial district, and that applying for a Special Use Permit for the site would be the most appropriate route if it chose to pursue that location. Ultimately the permit was recommended for denial by the Cass County Planning Board because the Camp Branch location was incompatible due to the reasons listed above and the objection of neighbors, the application was tabled by the Zoning Board, and Aquila eventually withdrew their application to the Board of Zoning Adjustment.

On July 13, 2004, the Cass County Planning Board considered Aquila's application at a public hearing and voted unanimously to recommend denial of the permit, whereupon the Planning Board recommendation was forwarded to the Board of Zoning Adjustment. I have reviewed the transcript of the proceedings before the Cass County Planning Board in providing this testimony, and I incorporate that transcript by reference.

At the hearing, representatives of Aquila stated that it had been Aquila's original intention to apply for a rezoning of the property from an Agricultural to an Industrial classification, but based upon the recommendation of County Planning Director Darrell Wilson, the company chose to pursue a Special Use Permit instead.

Aquila's testimony at the hearing addressed the six criteria set forth in the zoning ordinance for acquiring a special use permit. Those criteria were:

- The location and size of the proposed use in relation to the site, to adjacent sites and the use of the property and nature and intensity of operations on the property;

- Accessibility to emergency services and traffic flow;
- Availability of utilities and services;
- Height and siting of structures on the site;
- Yard and open space requirements; and
- General compatibility with adjacent properties in the district, general health, safety and welfare of the community.

Witnesses against approving the application included both the Mayor and Director of Community Development for the City of Harrisonville, who addressed the City of Harrisonville and Cass County Comprehensive Plans and explained why the Camp Branch site would not be appropriate for a power plant in terms of land use compatibility and future land use plans for the area. Additionally, the attorney representing Cass County Residents Opposing the Power Plant (CCROPP), a group of approximately 280 residents, spoke against the project for a variety of land use compatibility and planning issues, such as the need to buffer more intense uses with less intense uses on a continuum.

Overall, while Aquila stated that they met the criteria for a Special Use Permit, they did not fully or adequately address how the SUP would meet the objectives of the Comprehensive Plan, or how the criteria would be specifically achieved. Ultimately the Planning Board voted to deny the permit, as mentioned previously, and that recommendation was forwarded to the Board of Zoning Adjustment. Later, Aquila withdrew the application and the Board of Zoning Adjustment held no hearing on the matter.

Q: HAS AQUILA TRIED TO FILE AN APPLICATION FOR A SPECIAL USE PERMIT OR PERMITS WITH THE CASS COUNTY PLANNING BOARD RESPECTING THE SOUTH HARPER PEAKING FACILITY AND THE PECULIAR SUBSTATION?

A: Yes, it presented for filing such applications with the Planning Board on January 20, 2006 but its filing was rejected at that time by Cass County for reasons related to the litigation pending between the parties. As explained to me, Cass County rejected the

applications on Jan 20, 2006, because at that time the only Order in place was the trial court's Judgment directing that the plant and substation be immediately dismantled. I am further advised that subsequent to the trial court's January 27, 2006 decision to provide Aquila to May 31, 2006 before dismantling the plant and substation, Cass County invited Aquila to resubmit its applications.

Q: HAVE YOU REVIEWED AQUILA'S REJECTED APPLICATIONS FOR THE SPECIAL USE PERMIT(S) RELATED TO THE SOUTH HARPER PLANTFOR THE AQUILA PLANT AND SUBSTATION THAT AQUILA ATTEMPTED TO FILE WITH THE COUNTY ON OR ABOUT JANUARY 20, 2006?

A: Yes, I have.

Q: WERE THE APPLICATIONS IN PROPER FORM FOR REVIEW BY THE PLANNING BOARD?

A: Yes, the Special Use Permit applications submitted by Aquila for South Harper were adequate *to begin* review by the Planning Board to determine if these uses meet the criteria set forth in the 1997 Zoning Ordinance for the approval of the permit under Article 8, Section C - Standards for Issuances of Special Use Permits. It is also reasonable and likely that, due to a project of this scope and complexity, additional information or clarification of submitted information would have been requested.

THE AQUILA SPECIAL USE PERMIT APPLICATIONS

Q: MR. PESHOFF, FOR MY NEXT SERIES OF QUESTIONS I WANT YOU TO ASSUME THAT AQUILA FILED TIMELY AND COMPLETE APPLICATION(S) WITH THE PLANNING BOARD OR ZONING OFFICER OF THE COUNTY. PLEASE DESCRIBE FOR THE COMMISSION THE PROCESSES THE PLANNING BOARD WOULD EMPLOY TO EVALUATE AND ANALYZE THE APPLICATION(S)?

A: According to Article 8 of the 1997 Cass County Zoning Ordinance, the Planning Board, after receiving the formal application according to the proper procedures, would review the application for the Standards for Issuance of Special Use Permits delineated in Section C, relying on planning staff reports, conferral with other applicable County staff and consultants and their own knowledge and research. Section C delineates six major

criteria for issuance of a SUP that the Planning Board considers, briefly described as follows:

- Location, size, nature and intensity of proposed use in relation to the site and to adjacent properties;
- Accessibility of property to emergency and municipal services, traffic impacts and parking availability;
- Location, availability, capacity and compatibility of utilities and services;
- Location, nature and height of all site improvements, their relation to adjacent property and uses, and the need for buffering or screening;
- Adequacy of required yard and open space requirements and sign provisions; and
- General compatibility with adjacent properties, other properties in the district and the general safety, health, comfort and general welfare of the community.

There are further restrictions and standards for certain special uses that the Planning Board considers, as applicable, as described in Article 8. The Planning Board also takes into account the goals, objectives and land use policies of the Comprehensive Plan. Additionally, the Board considers the presentations, findings and comments presented at the public hearing.

Q: WHAT FACTORS WOULD THE PLANNING BOARD CONSIDER TO MAKE A RULING ON THE APPLICATION(S)?

A: The County would consider the following factors:

- *The impacts of development on the community.* Land use changes inevitably involve impacts. Systematic and objective assessment of these impacts not only gives decision-makers important information for their deliberations, but also points out options for impact mitigation. The land use planner constructs and applies evaluation procedures and identifies and proposes mitigation alternatives.

Development proposal evaluation methods assess the impacts of proposed public and private land use changes in light of plan objectives. They consider both local and communitywide impacts.

- *Land use efficiency.* The spatial specificity of the land classification plan and land use design serves several purposes. One is to promote efficiency by coordinating the size and location of future public facilities with the location and intensity of future residential, commercial, and industrial development. A second purpose of the land use design is to specify the most suitable long-range pattern to counteract the short-sighted misallocation of land through an unplanned market.

- *The public health, safety and welfare.* Zoning is the most widely applied land-use control in the United States. The main purpose of zoning is to separate land uses that might result in threats to public health, safety, or welfare or reduce a landowner's enjoyment of his or her property.

- *Locational requirements and implications.* The following location principles illustrate the considerations that the planner should address, adapting them to the specific community's goals and concerns, the specific nature of the economy, and the physical geography, including:
  - -- Topography, drainage and terrain
  - -- Alternative locations
  - -- Access to and capacity of transportation network
  - -- Visibility
  - -- Availability of infrastructure
  - -- Compatibility with surrounding uses (this criterion is especially applicable for heavy industrial areas and industrial processes with off-site noise, glare, odor, smoke, traffic, dangerous emissions, or waste storage areas)
  - -- Compatibility with the natural environment

- *Consistency with the Comprehensive Plan.* The idea that local land-use decisions should be consistent with an independently adopted local Comprehensive Plan is a fundamental concept of planning practice. An increasing number of states have adopted legislation requiring consistency between certain land-use regulations, such as zoning and subdivision ordinances, and a local Comprehensive Plan. Many states also have adopted legislation that requires other decisions (including

sewer extensions, the creation of tax increment finance districts or redevelopment districts, etc.) to be consistent with a Comprehensive Plan.

- Additionally, in reviewing the application, the Planning Board would have the opportunity to request additional information of the applicant in response to data requests, as well as confirm that the proposed facilities are in compliance with other local, state and federal regulations.

Q: ARE THERE ANY OTHER FACTORS THAT THE COUNTY MAY CONSIDER PRIOR TO MAKING A RULING ON THE AQUILA APPLICATION(S)?

A: Yes. Communities generally are afforded considerable latitude when considering discretionary requests, such as for special use permits, rezonings and variances. Courts and communities across the country, supported by generally accepted planning principles, have consistently ruled against self-inflicted cases of hardship as a means to avoid compliance with Comprehensive Plans and development regulations. For example, the County's Zoning Ordinance identifies Board of Zoning Adjustment findings to approve a zoning variance, the first of which is that the requested variance requested is "not created by the action or actions of the property owner or applicant." (§13(D)(b))

The above-referenced provision is directly applicable to one of the key "nagging" questions that arise from Aquila's proposal for the South Harper peaking facility relates to need... is the facility actually needed to supply regional electrical needs or is it merely an alternative business choice to improve the return for Aquila shareholders? In two Aquila documents, the balance between preference and need come into focus:
Aquila's Application to the Public Service Commission (dated January 25, 2006) refers to the Commission's *preference* (emphasis added) for company-owned generation instead of power purchase agreements. (at paragraph 20)

Aquila's Special Use Permit Application for Cass County (dated January 2006) indicates that "ownership of peaking generation is an essential component of its (Aquila's) least-cost plan). (at §1.2)

Without attempting to address electric demand, infrastructure needs or Aquila's business model (those topics can be more appropriately addressed to others with such expertise), this analysis can identify the *types* of questions that communities routinely and reasonably raise during the development review process. The following are not NIMBY

(not in my backyard) questions, but questions that focus on the applicant's actions and alternatives, the role of Cass County to the region's needs, the roles of other counties in the region and the viability of alternative sites in Cass County that could satisfy Aquila's needs and minimize land use incompatibilities.

Ownership in Aries facility, until recently, included Aquila. Did Aquila create its own problem by selling its interest in the Aries plant? Could Aquila's continued ownership of Aries precluded the need for the South Harper plant? Is there anything that Aquila could have done to lessen the need for another plant in the County?

Cass County already includes one approved electric plant – the Aries facility. A review of Missouri Department of Natural Resources data (for 2000, the most recent year information is provided) indicates that there are 22 counties in the State with large, fossil-fired plants, but only three (3) have more than one plant (and each of those three counties contains at least one major city). Further, the DNR data shows that 53 counties had an electrical plant (of any type or size) that produced electricity, but only 16 counties had more than one plant. Cass County is a largely rural county on the fringe of a metro area. Should Cass County really bear more of a burden than any other County in Missouri?

What reasonable siting alternatives exist? Are there other Counties in the region/service area with no plants that could be responsible for their fair share of the metro area's electrical needs? Are there other locations in the County that would minimize the incompatibilities from this intensive land use and provide existing or planned improvements consistent with Aquila's needs? Could both plants be co-located or adjacent to one another, effectively creating a utility district?

Are the same factors that Aquila claimed supported the selection of the South Harper site still valid, such as the existence of Southern Star gas lines and overhead power lines, or, as anecdotal information suggests, did Aquila remove and upgrade overhead lines and extend gas lines to another provider? Were the transmission line improvements consistent with the existing lines at the Aries plant?

Cass County has not attempted to exclude any and all power plants from within its borders, only to ensure that its citizens are adequately protected, a cornerstone of the development review process. Unfortunately, Aquila's actions might lead one to paraphrase a statement by the then-President of General Motors, at his Secretary of

Defense confirmation hearings in 1953, that "what's good for Aquila is good for Cass County."

Q: HAVE YOU CONDUCTED A DEVELOPMENT REVIEW ANALYSIS OF AQUILA'S SOUTH HARPER PLANT AND PECULIAR SUBSTATION?

A: Yes.

Q: WHAT PLAN(S) AND/OR ORDINANCES DID YOU REVIEW FOR THAT ANALYSIS?

A: I reviewed and applied the 2003 Cass County Comprehensive Plan to determine Aquila plant and substation Plan consistency and the 1997 Cass County Zoning Ordinance to determine Aquila plant and substation compliance with the County's zoning and development requirements.

Q: WHY ARE YOU USING THE 2003 COMPREHENSIVE PLAN AND THE 1997 ZONING ORDINANCE WHEN THE COUNTY ADOPTED A SUCCESSOR PLAN AND ORDINANCE IN FEBRUARY 2005?

A: The Aquila plant and substation development projects should have been brought to the County for review and consideration prior to their construction. According to the Permit Book for the South Harper Facility (prepared by Burns MacDonnell, for Aquila, dated March 2005), Aquila and its contractors/agents were conducting a flurry of permit applications for a variety of jurisdictional bodies and agencies as early as May 2004. That application process continued through the fall and winter of 2004. Had the projects been submitted for development review in a timely manner, Aquila also would have submitted applications to Cass County at that same time. Based on the timing of the Aquila application and permitting process in 2004 the only controlling documents [that were adopted by Cass County] were the 2003 Comprehensive Plan and the 1997 Zoning Ordinance.

Q: BASED UPON YOUR REVIEW OF THE CASS COUNTY PLANNING AND ZONING REQUIREMENTS AND BASED FURTHER UPON YOUR EXPERIENCE IN THE LAND USE PLANNING FIELD, DO YOU HAVE AN OPINION RESPECTING WHETHER THE AQUILA SOUTH HARPER FACILITY IS CONSISTENT AND IN COMPLIANCE WITH THE COUNTY'S 2003 COMPREHENSIVE PLAN AND 1997 ZONING ORDINANCE? PLEASE EXPLAIN THE REASONS FOR YOUR OPINION.

A: No, it is my opinion that the South Harper Facility is not consistent with the 2003 Comprehensive Plan, which emphasizes minimizing conflicts between rural and urban uses and other negative land use externalities. The South Harper Facility is not an appropriate use for its rural location.

- The facility is an urban use in a rural location that is incompatible with the surrounding rural residential uses, and should have been located nearer to or within an Urban Area Reserve or incorporated area.

- The facility is inappropriately located in an Agricultural district and does not minimize land uses externalities for nearby rural residential uses, due to its industrial character, noise and height.

- The location of the facility is outside of designated Urban Area Reserves, where urban-oriented land uses are encouraged to be located. As an industrial use with urban character, the facility should be located within an Urban Area Reserve.

- The facility is not in accordance with Policy G1.1, as it is not contiguous to urban development, and is therefore inefficient "leap-frog" development that should be located closer to a city.

- The facility is not in accordance with Policy G1.2, which limits development within the unincorporated portions of the County, and prevents the inefficient use and distribution of public facilities and services. The Policy is intended to prevent the County's rural development from becoming urban in nature and creating urban demands on the County. The power plant should be located in an urban area instead of a rural area in order to change the rural character of unincorporated Cass County.

- The facility is not in accordance with Policy G2.1, which encourages new urban development to be located within urban area reserves as identified on the Future Land Use map. The facility is an urban development that is located outside of the designated urban area reserves and within an Agricultural District.

- The facility is not in accordance with Objective G3, which is to minimize conflicts between rural and urban land uses. As a major industrial use, the facility is in conflict with the surrounding rural residential and agricultural uses.

- The facility is not in accordance with Objective A1, which discourages the premature subdivision and development of agricultural land for urban purposes. As the power plant is an industrial use, it should not be located in an Agricultural District, as it currently is.

- The facility is not in accordance with Policy A1.1, which encourages growth around existing incorporated areas and which encourages the separation of urban and rural land uses. The facility should be located in a setting with more intensive development, closer to or within an incorporated area.

- The facility is not in accordance with the Industrial Goal, Objective or Policies, which include location, land use separation and buffering and access standards. The facility is an intensive use that should not be located near to the less intensive rural residential areas that are currently adjacent to the facility, as indicated in Policy I1.3.

- In accordance with Policy I1.4, the facility, as an industrial use, should be separated or buffered from existing or projected residential growth areas. Instead, the facility is currently adjacent to residential areas on the north and east sides.

- Policy I1.8 states that industrial uses, in the absence of special conditions requiring remote locations, should be encouraged to locate within existing cities. The facility is currently located in an unincorporated portion of the County, and should instead be located within a City.

- The facility is not in accordance with Policy T1.6, as its impact on the surrounding road system should have been evaluated.

And, no, the South Harper Facility does not meet the criteria of the 1997 Zoning Ordinance. The facility is located in an area zoned as an Agricultural District, and as an "Electrical Services & Power Generation" facility, a special use permit is required to support this use in an Agricultural District, which has not been obtained.

- The land the facility is located on is identified as an Agricultural District, intended to protect land from urban-type activities. Such as facility is allowed in an Agricultural District only with a Special Use Permit.

- Electric Services & Power Generation" is a use permitted by right in I-1 and I-2 districts. It is not a use permitted in any other district. The facility should be located in an appropriately zoned Industrial District.

- ARTICLE VIII - SPECIAL USE PERMITS describes the Board of Zoning Adjustment's right to grant or deny special use permits, and delineates procedures for application, hearing, findings and action by governing body. As the facility is located in an Agricultural District, a special use permit should have been obtained

Q: EVEN IF A PRELIMINARY REVIEW INDICATED THE SOUTH HARPER PLANT AND SUBSTATION ARE LOCATED IN AREAS THAT ARE NOT CONSISTENT WITH THE COMPREHENSIVE PLANS AND DOES NOT CONFORM TO THE ZONING ORDINANCES, DOES THIS MEAN THAT THE COUNTY PLANNING BOARD WOULD BE PRECLUDED FROM APPROVING SPECIAL USE PERMITS FOR THESE FACILITIES?

A. No. The County Planning Board would be expected to evaluate all of the factors I have described including conformity with the comprehensive plans and zoning ordinances in consideration of its recommendation, along with the contributions of any members of the public who participate in the hearing. Even if the County Planning Board recommended a denial of the special use permit requested, the recommendation must come before the County Board of Zoning Adjustment, which can accept or reject the recommendation of the Planning Board. Before these boards, the applicant and other stakeholders can, and generally do, formulate conditions by which to accommodate conflicting interests and if all are satisfied, the application can be approved with those conditions.

Q: BASED UPON YOUR REVIEW OF THE AQUILA APPLICATION(S) FOR SPECIAL USE PERMIT(S) FOR THE PLANT AND SUBSTATION, DATED JANUARY, 2006, DID AQUILA ADEQUATELY ADDRESS EACH OF THE COUNTY'S DEVELOPMENT REGULATIONS?

A: The special use permit applications submitted by Aquila, dated January 2006 were one-sided and driven from the company's point of view. The information entered in the applications was not conducive to an unbiased review pursuant to generally accepted planning principles. In Aquila's process to select a site for South Harper and the Peculiar Substation, due diligence and site analysis activities were completed by the company to determine if the locations were suitable to meet the needs of Aquila. However, these analyses did not extend beyond the site needs in terms of the facilities in question to measure any meaningful type of impact on the surrounding neighborhoods and communities within Cass County. In the submitted Special Use Permit Applications for these facilities, the review that was completed was Aquila-oriented and superficial with respect to conducting a real analysis on the extent of impacts on the greater community. The land use and development / site plan considerations that Aquila addresses in the Special Use Permit applications were limited to:

- Landscape / visual screening;
- Stormwater drainage;
- Environmental and natural resource impacts;
- Wastewater disposal;
- Facility lighting;
- Facility security;
- Fire protection;
- Facility signage;

- Traffic;
- Road Maintenance and repair;
- Local tax impact; and
- Impact on property values.

While these subjects must be addressed, these considerations should be secondary to discussions regarding appropriateness of the proposed land uses on the sites in question. If a site is inappropriate for a particular land use due to considerations of the greater community, the facility's landscape and lighting plan, for instance, are not relevant and should not be addressed until an appropriate location is identified.

Regarding land use, the very brief description of the Peaking Facility's land use compatibility section found in the application is limited to identifying the existing electric transmission line and natural gas pipelines, the existing natural gas compressor station and a communications tower to the north of the compressor station. While the Application notes that adjacent properties have agricultural and residential zoning classifications, it makes no mention of the facility's impact on those surrounding properties in the sections within the application dealing with land use compatibility. The Application correctly identifies the area for the Peaking Facility as being located in a Multi-Use Tier, but does not identify why a power plant is an appropriate use within such a Tier.

While Aquila has completed its analysis of the sites and found them suitable for the purposes of a peaking facility and substation, the development review process is intended to give the County the opportunity to complete its own due diligence and to review the plans of the applicant for consistency with County regulations, goals, objectives and policies. While an applicant looks at a site in terms of its own needs, the governing body looks at the use and design of a site in terms of the greater community, and how a particular use on a particular site will impact the surrounding property owners and County operations from a broader perspective. As the applicant did not follow the prescribed routes for approval of the facility in terms of appropriate zoning or permitting, the County did not have this opportunity to become involved in the land use, site planning and development review processes intended to balance the rights of property owners and users throughout the County.

Although Aquila has been working with neighboring property owners to improve the screening of the Peaking Facility and reduce the noise impacts of the facility, the property

owners were not given the opportunity to participate in the process in a formal, County-led review of the proposal, which would have provided the opportunity for community members to make formal responses to Aquila's proposal. Many of the issues regarding on-going site improvements at the Peaking Facility could have been addressed prior to construction through a cooperative process among Aquila, the County and stakeholders and neighbors, as opposed to post-construction improvements and buy-outs of neighboring properties. Aquila has paid for improvements to local streets, water and fire systems and other community-improvement projects, however these improvements were either required in order to service the facility or to appease neighbors of the project, and have no affect on the underlying issue. The County was unable to review the appropriateness of the proposed uses on the sites that were chosen, and was by-passed as the authority on local land-use decisions.

In short, the County should have been able to review and evaluate Aquila's findings regarding the suitability of the sites for the peaking facility and substation, and to review the zoning and land use compatibility of the facilities on a community-wide basis prior to site planning or construction of the facilities. After finding a suitable location for these activities, site planning issues, mitigation efforts and community improvement projects should have been addressed, with formal community participation at all stages of the process. It appears clear that had Aquila given the process the opportunity to work, a process which has proven to work in favor of utilities in Cass County in the past, a less combative and costly and, possibly, a consensus-driven result could have occurred.

Q: ARE THERE LOCATIONS IN UNINCORPORATED CASS COUNTY WHERE AN INDUSTRIAL USE, SUCH AS A POWER PLANT, WOULD BE PERMITTED? PLEASE IDENTIFY THOSE LOCATIONS.

A. Yes. The attached maps (see Schedule BGP-3) of Potential Industrial Sites identify the numerous areas within the County where industrial zoning and uses might be appropriate. As this map illustrates, the County is open to industrial type uses, supports the location of these uses within the County, and set standards for identifying appropriate locations for industrial uses. An effective Comprehensive Plan gives options for the location of different types and intensity of uses and includes flexibility within its Plan to meet the changing needs of the County. The number and variety of potential industrial sites shown on the map illustrates the choice and the flexibility that the County supports.

- The map is not intended to be an exhaustive portrayal of every possible industrial site within the County, but simply includes examples of areas that appear to accommodate heavy and industrial uses.

These sites were identified due to their zoning as industrial districts, proximity to other industrially zoned sites, and recommendation by County staff that these sites might be appropriate for industrial zoning in accordance with the goals, objectives and land use policies defined in the Comprehensive Plan.

BOARD AND COMMISSIONS IN OTHER JURISDICTIONS

Q: ARE YOU AWARE OF ANY GOVERNMENT COMMISSIONS OR BOARDS, INCLUDING PUBLIC UTILITY COMMISSIONS, IN OTHER JURISDICTIONS THAT HAVE THE AUTHORITY TO SPECIFICALLY APPROVE THE SITE OF PROPOSED POWER PLANTS?

A: Yes, I am.

Q: DESCRIBE HOW THOSE GOVERNMENT COMMISSIONS OR BOARDS EXAMINE LAND USE ISSUES IN THE CONTEXT OF POWER PLANT APPROVAL OR CERTIFICATION.

A: Numerous states expressly and explicitly manage the siting of energy generation and transmission facilities through state siting boards, which oversee the siting process and control permitting for such facilities. I understand that Counsel will be providing an exhibit with my source information on this topic at the hearing. The following discussion is not a comprehensive overview of state siting procedures, nor an exhaustive list of state siting boards. However, the following examples do illustrate how state siting boards address land use regulations, local authority and zoning classification in their review of facility siting:

- *Oregon Energy Facilities Siting Council.*[6] In Oregon, the state regulates the siting of energy facilities, including a land use review, through the Energy Facility

[6] "Energy Facility Siting Standards," State of Oregon Department of Energy, 30 March 2006,

Siting Council, established in 1975. The applicant must choose to 1) seek land use approval from the local jurisdiction, or 2) to have the Council make the land use determination. If the applicant chooses to seek land use approval at the local level, then the applicant must follow the local procedures and comply with all local land use ordinances. The Council will issue a site certificate for the project only if the local jurisdiction has approved the proposed land use. If the applicant chooses instead to have the Council make the land use determination, the Council must make findings on compliance with the local land use ordinances. Local officials are asked to identify the "substantive criteria" from local land use ordinances and comprehensive plan that the Council should apply to the proposed facility. The land use standard ensures that the proposed facility will comply with Oregon's land use planning goals, which are 19 goals adopted by the Land Conservation and Development Commission (LCDC).

- *Florida Power Plant Siting Act (PPSA).*[7] For the Power Plant Siting Act, the Department of Environmental Protection (DEP) is the lead agency for coordination of the siting process, and has jurisdiction for many of the activities which the certification is in lieu of. The PPSA requires that a Land Use and Zoning hearing by an Administrative Law Judge (ALJ) be conducted to verify that the site is consistent with and in compliance with local government plans and zoning ordinances. The Department of Community Affairs, at a different time, includes an analysis of compliance with the State Comprehensive Plan. The Siting Coordination Office, within DEP, coordinates with other Agencies to develop proposed Conditions of Certification, including local land use experts and authorities, such as Regional Planning Councils, local governments and other state agencies.

- *Kentucky Electric Generation and Transmission Siting Process.*[8] Consideration of local land use issues includes naming the chairperson of the planning commission with jurisdiction over the proposed site as an ad hoc member of the Siting Board. Additionally, applications for siting approval must identify the Local Planning and Zoning Authority and provide notice of any requested deviations from state setback requirements. The application must contain certain

http://www.oregon.gov/ENERGY/SITING/standards.shtml.

[7] "Power Plant Siting Overview," State of Florida Department of Environmental Protection, 30 March 2006, http://www.dep.state.fl.us/siting/Programs/Power_Plant_Siting_Overview.htm.

[8] "Guide for Kentucky's Electric Generation and Transmission Siting Process," Kentucky Public Service Commission, 30 March 2006, http://psc.ky.gov/agencies/psc/siting_board/merchant.htm.

information, including a report on public involvement activities conducted by the applicant, a site assessment report containing a detailed description of the project and thorough analysis of the impacts to be considered by the Siting Board (visual impacts, traffic, property values, etc.), and a statement of compliance with any local zoning regulations and noise control ordinances. In addition, a local public hearing will be held by the Siting Board if requested by a local government entity - city, county or planning and zoning authority - or by at least three residents of the city or county in which the proposed facility would be located.

- *Massachusetts Energy Facilities Siting Board.*[9] In order to be exempt from local zoning, an applicant must file an application containing at a minimum, the following information:
  - -- A demonstration that the petitioner is a public service corporation that may seek a zoning exemption pursuant to G.L. c. 40A, § 3, with supporting documentation as necessary.
  - -- A list of the sections of the zoning ordinance or bylaw from which the petitioner seeks an exemption, together with a summary of each such section and an explanation of why exemption from that section is needed, with supporting documentation as necessary.
  - -- A description of the use of land or structures which are the subject of the exemption request, and an explanation of the purpose of the proposed use.
  - -- An explanation of the public benefits to be provided by the proposed use of land or structures, with a supporting analysis and a description of the methods used to develop this analysis.
  - -- A description of alternatives to the proposed use of land or structures, including the use of existing structures or facilities.
  - -- An analysis of the environmental or other impacts of the use of land or structures, during both construction and operation. This analysis could include, without limitation, impacts on land use at or near the site, on wetlands or water resources at or near the site, visual and noise considerations, traffic and access considerations, public safety considerations, air pollutant emissions, or the use of hazardous substances.
  - -- A list of all permits required for the proposed use of land or structures prior to construction, during construction and during operation.

[9] "Energy Facilities Siting Boards," Commonwealth of Massachusetts Department of Telecommunications and Energy, 30 March 2006, http://www.mass.gov/dte/siting_board.htm.

In addition, during the review process, local agencies and officials such as the building inspector, planning board, conservation commission, water department, fire department, historical commission, board of health and department of public works also may be involved.

- *California Power Plant Site Certification Regulations.*[10] Regarding land use, applicants for power generating facilities within California are instructed to include the information in their application:
  - -- A discussion of existing land uses and current zoning at the site, land uses and land use patterns within one mile of the proposed site and within one-quarter mile of any project -related linear facilities.
  - -- An identification of residential, commercial, industrial, recreational, scenic, agricultural, natural resource protection, natural resource extraction, educational, religious, cultural and historic areas, and any other area of unique land uses.
  - -- A discussion of any trends in recent zoning changes and potential future land use development.
  - -- Identification of all discretionary reviews by public agencies initiated or completed within 18 months prior to filing the application for those changes or development.
  - -- Legible maps of the areas identified in subsection (g)(3)(A) potentially affected by the project, on which existing land uses, jurisdictional boundaries, general plan designations, specific plan designations, and zoning have been clearly delineated.
  - -- A discussion of the compatibility of the proposed facilities with present and expected land uses, and conformity with any long- range land use plans adopted by any federal, state, regional , or local planning agency. The discussion shall identify the need, if any, for variances or any measures that would be necessary to make the proposal conform with permitted land uses."

- *Washington State Energy Facility Site Evaluation Council (EFSEC)*.[11] As part of the EFSEC siting process, projects are reviewed for consistency with all

[10] "Rules of Practice and Procedure & Power Plant Site Certification Regulations" Title20, California Codes and Regulations, California Energy Commission, August 2000, http://www.energy.ca.gov/reports/2000-08_800-00-007_TITLE20.PDF.
[11] "Energy Facility Site Evaluation Council; Certification," Energy Facility Site Evaluation Council, Access Washington: Official State Government Website, 31 March 2006, http://www.efsec.wa.gov/cert.html.

applicable local land use laws and plans, and local governments may regulate the location of energy facilities through comprehensive planning and zoning policies. If a proposed facility is not in compliance with local land use provisions and the conflict cannot be resolved, the state can preempt the local land use plans or zoning ordinances through an adjudication process. However, the local government has representation on the state Energy Facility Site Evaluation Council when a facility is seeking location within a jurisdiction's boundaries, and the affected local governmental also participates in the hearings process.

Q: DOES THE STATE OF MISSOURI HAVE A BOARD OR COMMISSION LIKE THE BOARDS OR COMMISSIONS YOU HAVE JUST DESCRIBED?

A: I do not believe the state of Missouri has such a board or commission. Although I do not purport to be an expert in utility regulation in Missouri, I do not believe that the Missouri Public Service Commission itself is like the boards or commissions in other jurisdictions I have mentioned in my testimony. The Commission has a very different structure and purpose compared to the above-referenced boards and commissions because of the absence of one key factor – land use planning. The Commission is primarily an infrastructure and rate assessment entity. It is a competent, technical entity that has successfully regulated the electrical supply industry. However, siting considerations appear to be limited to the location of a facility in relation to its service area and the cost of the facility relative to consumer rates and shareholder return. The Commission appears to have no goals, objectives, strategies or prioritization for siting conditions that identify, assess, preserve or protect local planning and zoning requirements or development requirements and no directive to work with communities to ensure land use compatibility or protect the community's fiscal resources.

I reviewed the MoPSC website and *2005 Annual Report*, including the Commission's *Mission Statement*, *A Snapshot of What We Do*, *Division Descriptions*, *Organizational Functions* and *Organizational Chart* and these confirm that local land use planning and zoning has not been a concern of the Commission. From the Commission's *A Snapshot of What We Do* (June 2005):

> The Public Service Commission is the state government agency charged with ensuring that you receive safe, adequate, and reliable utility services at reasonable rates. The Commission must balance

the interests of the public — ratepayers as well as company shareholders. In proceedings before the Commission, rates are set to give the utility company an opportunity, but not a guarantee, to earn a reasonable return on its investment after recovering its prudently incurred expenses.

- In comparison, state utility commissions or specialized state boards or commissions with local siting control for proposed generation plants recognize the responsibility to local communities that has been delegated to them by their respective legislatures and typically expand and modify their organizational structure to include a land use planning function.

Q: DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

A: Yes.

PLANNING WORKS

BRUCE GREGORY PESHOFF, J.D.
PRINCIPAL

As a founding Principal of Planning Works, Bruce G. Peshoff focuses on integrating a multi-disciplinary balance between land use, regulatory controls and fiscal impacts to promote good development and smart growth, which typically includes growth management planning (tiers, growth boundaries, area and corridor plans, centers and villages, mixed use and master planned communities and implementing prioritized strategies); multi-jurisdictional and public-private coordination (intergovernmental agreements, extra-territorial jurisdiction, budget and capital improvement plan coordination, development agreements and); fiscal responsibility (levels of service, costs of growth, equitable financing plans, infrastructure assessments, annexation and extension policies) and client advocacy (litigation support, site planning, on- and off-site improvement requirements, staff support). Mr. Peshoff has over 15 years of planning experience in the public, private and non-profit sectors, and received his joint planning and law degrees from the University of Toledo – *Juris Doctor* (1990) and *Master of Arts - Urban Planning* (1991), and a *Bachelor of Science* (1985) from the University of Akron.

PROFESSIONAL ACHIEVEMENTS

- *Speaker,* North Carolina APA Conference, Topic: Smart Growth and Public Facilities, 2003.
- *Participant,* Jackson County (MO) Economic Development Forum (Sponsored by Ingrams magazine), 2002.
- *Speaker,* Mississippi Municipal League, Topic: Understanding Impact Fees, 2001.
- *Speaker,* Kansas APA Growth Workshop, Topic: Annexation vs. Incorporation - Fiscal Impacts, 1999.
- *Author,* with Robert H. Freilich, The Social Costs of Sprawl, THE URBAN LAWYER (Summer 1996).
- *Speaker,* APA National Conference, Topic: The Social Costs of Sprawl (sponsored by Rutgers University Center for Urban Policy Research), 1996.
- *Speaker,* APA National Conference, Topic: APA Response to Land Use Regulations and the "Takings" Challenge, 1995.
- *APA/Missouri Chapter Excellence in Planning Award: Jackson County Unified Development Code, 1995.*
- *APA/Missouri Chapter Excellence in Planning Award: Jackson County Strategy for the Future, 1994.*
- *Volunteer Editor,* Planning Commissioner's Journal, 2002-2005.
- *Chair,* APA Research and Policy Committee, Planning & Law Division, 1996-97.
- *Guest Commentator,* 'Planning from the Right' - Kansas City APA Newsletter, 1995-1996.
- *Chair,* Nominations Committee, Planning & Law Division, 1995-96.
- *Research Assistant,* with Roger W. Andersen, Architectural Barriers Legislation and the Range of Human Ability: Of Civil Rights, Missed Opportunities and Building Codes, 28 Williamette Law Review 525 (1992).
- *Past Member,* Toledo Neighborhood Business and Economic Development Committee, 1988-1989.
- *Research Assistant,* with Roger W. Andersen, The 1988 Fair Housing Act Amendments, 35 The Practical Lawyer 79 (1989).

PROJECT EXPERIENCE

Growth Management Planning:

Alachua County, Florida	Growth Management Plan
Appanoose County, Iowa	Transportation and Land Use Plan
Bozeman, Montana	Unified Development Code

Centennial, California	'New Town' Development Plan
Cedar Rapids, Iowa	Comprehensive Plan, Consolidated Plan
Clinton County, Iowa	Growth Management Plan
Desert Hot Springs, California	General Plan
Dexter, Michigan	Comprehensive Plan, Parks and Recreation Plan
Durango, Colorado	Growth Plan
Durant, Oklahoma	Comprehensive Plan
Effingham, Illinois	Comprehensive Plan
Grand Junction, Colorado	Growth Plan
Islamorada, Florida	Workforce Housing Plan
Jackson County, Missouri	Master Plan, Master Plan Update
Jacksonville, North Carolina	Growth Management Plan
Kiawah Island, South Carolina	Master Plan
Lafayette County, Missouri	Comprehensive Plan
Lake Lotawana, Missouri	Comprehensive Plan, Plan Amendment, Annexation Plan
Linn County, Iowa	Rural Land Use Plan
Ocean Springs, Mississippi	Comprehensive Plan, Annexation Strategy
Osage Beach, Missouri	Growth Management Plan
Raytown, Missouri	Downtown Plan
Saline County, Kansas	Comprehensive Plan
Thornton, Colorado	Community Facilities Analysis, Comprehensive Plan
Warren County, Iowa	Comprehensive Plan
Weddington, North Carolina	Land Use Plan

Development Regulations:

Clinton County, Iowa	Subdivision Regulations, Zoning Ordinance
Columbia, Missouri	North Central Columbia Neighborhood Overlay District
Jackson County, Missouri	Unified Development Code
Kiawah Island, South Carolina	Zoning Code, Subdivision Regulations, Road Code
Lake Lotawana, Missouri	Zoning & Subdivision Regulations
Linn County, Iowa	Interim Development Ordinance

Fiscal and Infrastructure Impact Analysis:

Beaufort County, South Carolina	Impact Fees
Cherokee County, Georgia	Impact Fees
Delaware, Ohio	Impact Fees
Douglas County, Colorado	Impact Fees
Johnson County, Kansas	Alternative Infrastructure Financing Alternatives
Ocean Springs, Mississippi	Impact Fees
Queen Anne's County, Maryland	Impact Fee Capital Improvement Program
West Peculiar, Missouri	Adequate Public Facilities Ordinance, Capital Improvements Plan
Wilmington, North Carolina	Cost of Growth Analysis

Economic Development / Redevelopment:

Bass Pro Shops (Independence, MO)	Redevelopment Plan / Tax Increment Financing Plan
Dial Realty / RLDS Church (Independence, MO)	Jackson Point Redevelopment Plan / Tax Increment Financing Plan
Grosse Ile, MI	Airport Industrial Park, Brownfield Redevelopment Plan
GSSW Real Estate Corp. (Orlando, FL)	Multi-Site Office Development Plan
Hazel Park, Michigan	Tax Increment Financing District Restructuring
Homart Corporation (Independence, MO)	39th / Jackson Redevelopment Plan / Tax Increment Financing Plan
Independence (MO) Regional Health Center	Truman Road Corridor Redevelopment Plan / TIF Plan
Iowa 80 Group (Council Bluffs, IA)	Council Bluffs Travel Plaza Tax Increment Financing Plan
Jackson County, Missouri	Economic Development Plan
Kessinger/Hunter / J.C. Nichols (Prairie Village, KS)	Prairie Village Plaza Redevelopment Plan
Lincoln Park, Michigan	Tax Increment Financing District Restructuring
Longview Farms (Lee's Summit, MO)	Redevelopment Plan
Omaha Realty Group (Omaha, NB)	Northeast Downtown Area Redevelopment Plan / Condemnation
PDSI, Inc. (Grandview, MO)	Truman Corners Redevelopment Plan / TIF Update

Target Stores / Onyx (Independence, MO)	I-70 / I-470 Redevelopment Plan / Tax Increment Financing Plan
Target Stores / Kessinger/Hunter (Manhattan, KS)	Redevelopment Plan
Target Stores (Mission, KS)	Redevelopment Plan
Neighborhood Housing Services (Toledo, OH)	Old West End Neighborhood Redevelopment Plan, Historic South Side Neighborhood Redevelopment Plan

Site Analysis / Development Review:

Alexander Development (Akron, OH)	Multi-Site Redevelopment Plan
Dexter, Michigan	Staff Support
Edgerton, Kansas	Growth Management Workshop, Staff Support
Flying J Travel Plaza (Vienna, WI)	Site Plan
Flying J Travel Plaza (Oak Grove, MO)	Site Plan
Fountain Hills, Arizona	Residential Development Site Plan Review
Hope & Andrews Corp. (Creve Couer, MO)	Highest and Best Use Analysis, Site Design Analysis
Laner Development Corp.(Leawood, Kansas)	Annexation Strategies
Martin Marietta, Inc. (Augusta, KS)	Site Analysis; Annexation Strategy
Martin Marietta, Inc. (Greenwood, MO)	Site Analysis; Annexation Strategy; Special Use Permit
NEOT, Inc. (Toledo, Ohio)	Highest & Best Use Analysis
Novi, Michigan	Highest and Best Use Analysis
Olathe Kia (Olathe, KS)	Redevelopment Approval
Putnam County, Missouri	Zoning and Land Use Base Map
Spring Hill, Kansas	Growth Management Workshops, Staff Support
Sunflower Oil Co. (Kansas City, MO)	Site Selection / Redevelopment Plan, Lease Negotiations

Litigation Support:

Brown & Dunn (Kansas City, MO)	Expert Witness - Development Impacts
Cass County, Missouri	Aquila Power Plant Litigation
Havana Development Group (Kansas City, MO)	Expert Witness - Urban Redevelopment Project
Coppell, Texas	Mixed Use Redevelopment Plan
DST Realty, Inc. (Kansas City, MO)	Cathedral Square Redevelopment Plan
Elkhorn, Nebraska	Annexation Litigation
Greensprings Development (Baltimore County, MD)	Redevelopment Plan
Home Builders Association of Madison, MS	Impact Fee Challenge
Kelly Company (Gardner, Kansas)	Annexation and Land Use Zoning Litigation
Kingston Homeowners Association (Overland Park, KS)	Expert Witness - Development Impacts
Lake Lotawana, Missouri	Annexation Litigation
Martin Marietta, Inc. (Peculiar, MO)	Annexation Litigation
Mosely & Standerfer (Flower Mound, TX)	Impact Fee Challenge
Omaha Realty Corp. (Omaha, NE)	Condemnation Litigation
Pinter Enterprises (Casselberry, FL)	Adult Use Ordinance - Condemnation Litigation
Smith Law Group (Overland Park, KS)	Expert Witness - Development Impacts
TKW, Inc (Grandview, MO)	Development Approval Litigation
Toledo, Ohio	Environmental Litigation Landfills, Roadway Improvements

AMERICAN PLANNING ASSOCIATION
POLICY GUIDE ON
ENERGY

Adopted by the Legislative and Policy Committee, December 11, 2003
Adopted by the Chapter Delegate Assembly, April 24, 2004
Ratified by the Board of Directors, April 25, 2004

I. INTRODUCTION

The planning profession already recognizes the urgency of such issues as urban sprawl, the degeneration of inner ring suburbs, the disappearance of agricultural and green space land resources, and the proliferation of pavement. We can easily see the need to design ways to reduce our ecological footprint.

What is less obvious but equally important is that in order to create the sustainable communities we desire, we must also plan to first increase energy conservation and renewable energy production while significantly reducing use of non-renewable energy sources as well. Most Americans are unaware of the large role energy plays in their everyday lives, and particularly how today's energy production and consumption are directly connected to the condition of the environment, the health of the economy, and the quality of life that will be experienced by future generations.

The planning profession is well positioned to contribute to this aspect of sustainability planning for two primary reasons. First, the planner's role now includes a broad range of community-based planning functions. Second, as communities adopt the concept of sustainability and "smart growth," their expectations of traditional comprehensive planning and zoning processes become more complex. In response, planners are striving to keep pace with the environmental, social, and economic interconnections in their communities in order to provide the leadership comprehensive planning demands.

The power to shift energy habits and priorities is within reach of every individual American. Where we exercise the most control over our energy future is in our personal actions and professional practice. Thus, the most effective energy policy recommendations that planners develop will be those that guide and facilitate progressive citizen-level actions, decisions, regulations, and land-use policies that lead to energy market shifts towards competitive, healthy, and safe energy alternatives.

II. POLICY RATIONALE AND FINDINGS

This energy policy guideline addresses primarily non-transportation energy issues. APA's transportation-related energy policies are set forth in the APA *Policy on Surface Transportation* (adopted 1997), which is incorporated by reference in this policy guide. Smart growth planning initiatives generally address transportation energy use, but non-transportation energy issues such as clean energy and energy efficiency tend to be applied somewhat anecdotally to individual projects. The advantages of anticipating and managing other community energy needs are less obvious but no less important to "smart growth." For example, if a community chooses to promote renewable energy to increase self-reliance, a comprehensive set of energy efficiency goals will be needed to make this practical. Energy efficiency can also be an effective tool for designing economic development strategies (see Appendix A).

While planners can exert only minimal influence on the selection of energy sources, planners are in a position to greatly affect the demand, location, and mitigation of energy production. Through legislation that encourages and accommodates localized power production, sets standards for extraction and pollution, and establishes criteria for building and site design, planners can greatly affect energy choices and consumption.

At the same time, with the help of land-use and transportation planning, planners can influence their communities to reduce the need for energy and reduce the environmental impacts of electric generation and consumption and other energy resource use. In some instances, planners can also influence local energy decisions through the use of local subsidies and education.

Energy consumption becomes a significant land-use issue from a number of perspectives. These include the siting of energy generation and transmission facilities, renewable energy, natural resource extraction, transportation policy, resource conservation, industrial development, waste management, and site design. The planning profession is uniquely well placed to advance the adoption of resource sustainability principles through its comprehensive planning processes. The creation of "green buildings and infrastructure," such as LEED™ (Leadership in Energy & Environmental Design) standards for building design, will enhance our ability to reduce energy dependence and promote the conservation of resources.

POLICY FINDINGS:

1. **A safe, reliable energy supply is important to every community's health, safety, and commerce.**
   a. Energy is not only a critical component to the functioning of our communities (both urban and rural) but also a major trade commodity and determinant of the country's foreign policies and strategies.
   b. Utilities have historically made little substantive investment in transmission system improvements especially since deregulation appeared on the horizon. The August 2003 blackout brought this issue to public attention. It was not lack of power but rather the inability of the stressed transmission system to deliver on the demand. This triggered automatic controls to shut down plants and substations. These automatic shutdown controls are there for safety purposes.

2. **The urbanization that has occurred over the past few decades has created a demand for energy that is quickly surpassing its current rate of production.**
   a. Continued population growth and technological advances are generating higher demands for reliable energy supply sources. Right now, consumption patterns show that a tremendous amount of energy will be needed in the future to keep the national economy running. While capacity varies from place to place, this is where, with the proper guidance, community-based planning can begin to have some impact. Greater energy efficiency can be achieved through community commitment beyond individual efforts. Even with the advances made with alternative energy sources and conservation efforts employed, the need for new and upgraded electric generation and transmission facilities has continued.
   b. Due, in part, to the country's increasingly electronics-based economy, electricity is the fastest growing segment in the American energy mix.[1]
   c. Americans now are spending 90 percent of their time indoors, in buildings that consume two-thirds of U.S. electricity.[2] Perhaps the majority of the time that Americans spend outside of buildings is spent in transit between them, generally as single occupants in fossil fuel powered vehicles.

3. **Some of the most useful fossil fuel reserves, particularly petroleum, are not expected to last beyond the year 2050 at current consumption levels.[3]**
   In the past decade from 1990 to 2000, proven oil reserves worldwide increased by only 4 percent. According to Kenneth S. Deffeyes, an acclaimed oil geologist, world production of oil will peak sometime this decade and will then slowly and irreversibly decline. Today the U.S. produces only 38 percent of the oil it consumes. It is now seeking solutions such as drilling in the Arctic National Wildlife Refuge. This will yield only 2 percent of U.S. annual consumption at its peak output, 25 years from now. That is unlikely to make even a small dent in the country's demand for oil.

4. **The alternative energy industry has matured over the past few decades.**
   a. Renewable energy equipment has become more reliable and economical, and installation standards are more professional.
   b. There are a number of promising alternatives for electricity production including solar, wind, and alternative fuels that provide a balance of economic and environmental benefits.

5. **Fair share or other equitable approaches are needed for siting energy generation and distribution facilities, and land-use plans and policies need to provide flexibility and guidance for communities involved in development of new energy sources.**
   a. Potential sites are increasingly difficult to locate and approve due to environmental, land-use, social equity, and operational requirements.
   b. Utility-scale renewable energy development is raising new siting and land-use issues.
   c. The development of both renewable and non-renewable sources of energy presents specific challenges to the communities involved, including permitting

and zoning of facilities and support industries, provision of appropriate infrastructure, and worker housing.

6. **The way we plan urban areas significantly affects the energy usage of individual building sites. Appropriate site design standards and building codes can encourage energy conservation and the use of renewable energy technologies on site.**
   a. Most existing building codes ignore such considerations as latitude, elevation, microclimate, and building proportions, orientation, and size. This frequently results in requirements for excessive use of energy in buildings.
   b. The use of renewable energy equipment such as photovoltaic panels and solar water heaters is frequently discouraged in housing development covenants because people assume they will be unattractive.
   c. Energy professionals have developed a substantial number of technologies, policies, and education programs that promote sustainable use of energy resources. Many local government entities have received grants to incorporate energy efficiency and renewable energy into schools and other government facilities, and to increase public transportation. These projects have helped raise awareness of clean energy alternatives and have made these options visible to the public. In brief, there is evidence to suggest that in the absence of federal leadership, throughout the U.S. resource-efficient energy policy is being envisioned and formulated by consensus at the state, county, and municipal levels.

III. GENERAL POLICY STATEMENTS

Thus, in summary, APA supports the following policy position and specific policy statements:

POLICY POSITION:

APA and its Chapters recognize regional, community, and site planning and design as central and integral determinants of our nation's energy future and overall well-being. In response, APA and its Chapters endorse managing energy consumption and encouraging efficiency by modifying development patterns, architecture, and the design of household, commercial, transportation, and industrial technologies to reduce energy demand, and by forecasting the energy demand of long range land-use plans and strategies, and mitigating the impacts of that demand.

Furthermore, APA and its Chapters endorse supply side investments, subsidies, policies, and education that support clean energy fuels, renewable energy sources, zero-waste distribution systems, and the decommissioning of hazardous energy sources.

IV. SPECIFIC POLICY INITIATIVES

Policy Statement 1: APA and its Chapters encourage planners and decision makers to evaluate the effects of plans, programs, and policies on energy usage, and to determine how to reduce energy impacts by making more efficient use of all energy resources.

Initiative 1:
Reduce energy consumption through comprehensive planning and urban design that incorporates strategies for both mobile and non-mobile energy efficiency.
(Reference: APA *Smart Growth Policy Guide* and APA *Policy Guide on Surface Transportation*)

Reasons to support Initiative 1:
City planning and design that focus on efficient use of land resources for roads and infrastructure and that limit low density areas and segregated land uses can contribute significantly to lower energy consumption. Planners can directly affect the manner in which communities are designed and laid out. Therefore, planners can affect the amount of energy consumed in the construction, maintenance, and operation of their communities, and in the daily lives of community residents and businesses. Comprehensive and general plans should include land-use policies crafted to reduce energy consumption. At the same time energy conservation should be the basis for implementation strategies and programs.

Initiative 2:
Provide technical assistance for the development of guidelines and codes for energy-efficient site planning and building methodologies that take advantage of the energy flows of the natural environment.

Reasons to support Initiative 2:
Even though information about solar energy and other renewable energy sources has been available for decades, and demonstration sites and buildings have shown the potential for significant savings in energy use, these methods are still not part of mainstream design and construction. Buildings continue to be built that rely entirely on mechanical heating, lighting, and cooling systems regardless of environmental conditions. Development of rules and regulations that allow and encourage energy-efficient and environmentally sensitive design of buildings will have the potential to lower energy costs and reduce the country's dependence on foreign energy sources. APA encourages discussion with building code officials to ensure that local land-use standards are consistent with industry-wide construction and safety standards.

Initiative 3
Support programs to increase energy efficiency and reduce life-cycle costs of all construction projects, including public and institutional projects.

Initiative 4:
Support federal, state, and local programs that reward energy savings rather than consumption through incentives, appropriate subsidies, and regulation.

Reasons to support Initiative 4:
Currently tax incentives and sales tax programs promote the consumption of energy rather than lower usage and conservation of energy. By reviewing and revising these current tax incentives with utility providers, planners can play a role in promoting conservation of energy, thereby reducing the associated environmental damages.

Initiative 5:
Continue to support the Low Income Home Energy Assistance Program (LIHEAP) and the Weatherization Assistance Program as means towards greater energy conservation.

Reasons to support Initiative 5:
Energy conservation is a top priority and the most important component of a sound energy program. This is particularly important for low- and moderate-income persons, who benefit from both technical *and* financial assistance in implementing low and no-cost methods for conserving energy in their homes. For instance, a full funding of a weatherization program requires a relatively small capital investment yet can go a long way to reducing LIHEAP expenditures in our most energy inefficient homes over the long-term.

Initiative 6:
Support education, incentives, and subsidies that reduce consumption at the individual level.

Reasons to support Initiative 6:
There are many programs aimed at reducing individual energy consumption, such as EnergyStar Rating Programs, home insulation, energy leakage tracking programs, smart technologies, and hybrid or electric vehicles. Incentives or legislation at the local level for more efficient use of energy can greatly promote the awareness and use of these programs. Many states have public benefits programs that direct ratepayer dollars into efficiency and renewable energy incentives programs. At the federal level there are a number of programs that can benefit communities and individuals including Zero-Energy Homes and Million Solar Roofs (DOE), and Fannie Mae energy-efficient mortgages.

Initiative 7:
Increase the corporate average fuel economy (CAFE) standards.

Reasons to support Initiative 7:
Given the high percentage of energy consumption for transportation, it is important to achieve as much fuel economy as possible in that sector. Average fleet fuel efficiency has actually decreased in recent years. The technology exists to increase efficiency. APA

supports efforts that require automobile manufacturers to meet ever-increasing CAFE standards without impacting safety or convenience as it has wide-ranging benefits from less fuel consumption to reduced air pollution.

Policy Statement 2: APA and its Chapters support legislation that will help to reduce dependence on fossil fuels and stimulate the development of renewable energy resources.

Initiative 8:
Develop and encourage appropriate applications of renewable energy.

Reasons to support Initiative 8:
Renewable energy is a means of attaining sustainability because it decreases dependence on fossil fuels and nuclear energy. However, renewable energy comes from a variety of sources, and different technologies are appropriate in different climates and circumstances.

There are a number of promising alternatives for electricity production that include solar and wind power and alternative fuels that promise to provide a balance of economic and environmental benefits. Planners are in a position to work with utility providers to plan for the land-use and infrastructure requirements of renewable energy production such that they only minimally impact the environment.

Initiative 9:
Support utilization of on-site, distributed generation technologies.

Reasons to support Initiative 9:
Some electric utilities are exploring the concept of moving away from large, centralized power stations designed to meet computer-projected demand, toward a diverse system that responds more directly to local needs. Distributed generation systems essentially generate electricity to be used on site, with any surplus power being fed back into the grid. These systems can be large or small and can use either renewable or fossil fuel power. Possible systems range from a set of solar panels on the roof of a home, to a small hydropower plant on a river, to a natural gas-powered micro-turbine at an industrial plant.

One important advantage of a distributed generation system is its close proximity to the user. Transmission requirements are reduced, as are the power losses that occur over long distance lines. Distributed generation is also an important trend, both for generation flexibility and energy security.

a. APA encourages discussion with building code officials to ensure that local land-use standards proactively encourage the installation of renewable energy technologies.
b. Local incentive programs, such as subsidies can also support many of these more environmentally friendly distributed energy resources, at long-term savings for the consumer.

c. Smart growth planning could provide the forum for planners to broker open discussions between utilities and their customers regarding distributed renewable energy generation.

Initiative 10:
Support the adoption of consistent initiatives by state Public Regulatory Commissions nationwide for net metering, renewable energy portfolio standards, and the establishment of public benefits funds that encourage all customer sectors to conserve energy and invest in renewable sources.

Reasons to support Initiative 10:
Utility regulation is a state-level function, and there are currently a wide variety of rules and requirements among states regarding the promotion of renewable energy and distributed generation technologies as part of the nation's energy supply. At present, most states allow net metering,[4] but requirements and guidelines are inconsistent, even within individual states themselves. Ten states have renewable energy portfolio standards in place, but requirements and deadlines vary. Another 10 states have some form of renewable energy power purchase obligations established. Public benefits programs are usually created as part of a utility restructuring effort, and they also vary widely by state. The energy efficiency and renewable energy programs are generally only a small part of the overall restructuring package.

Much could be done. Local and state APA chapters could establish an energy sub-committee to track the renewable energy policies and regulations of their state's utility regulatory commission, and keep abreast of statewide efficiency targets and renewable energy portfolios. Municipal and county planners can work with their state energy office to promote public education programs about green power and distributed generation.

Policy Statement 3: APA and its Chapters support the adoption of legislation and regulations that require the planning and evaluation of decisions regarding energy production, distribution, and use to mitigate associated adverse impacts.

Initiative 11:
Develop procedures and standards to ensure that siting decisions for energy generation, transmission, and distribution facilities will be evaluated to ensure consistency with community and regional development objectives, and the overall protection of public health, safety, and the environment.

Reasons to support Initiative 11:
The environmental impacts and other potential hazards of electricity generation and distribution may take years and huge investments to mitigate. Nevertheless, many energy facility siting and system design decisions are not subjected to the same comprehensive planning process and environmental evaluation that is required for other land-use decisions. Planners should be involved in the development of local and regional public

health, safety, design (particularly in redeveloping areas and scenic corridors), and environmental standards and hazard mitigation planning for power generation and distribution facilities to reduce their potential damage to the environment and achieve local and regional development objectives. These, in addition to the regular safety and maintenance precautions energy companies carry out, can help to reduce energy waste and as well as greatly minimize potential risks and damage to the a community.

Large power plants are often located in or near rural communities that rely heavily upon the taxes they generate to fund local government and schools. Such communities should be targeted for intensive ongoing planning expertise (that their local economies may not be able to afford) to help mitigate known and potential impacts. Additionally, these communities would benefit from economic development expertise to deal with the job losses and brownfields when their fossil or nuclear power plants make way for transition to other more sustainable sources.

Initiative 12:
Recognize that providing transportation options and good urban form design is the first step to changing pollution intensive choices for mobility. Actively promote alternative transportation modes through the planning and implementation of bicycle and pedestrian pathways and transit systems.

Reasons to support Initiative 12:
During the past century, the automobile has raised per capita consumption of both energy and space, thereby altering the form of 21st century American communities more than any other single variable. With cross-generational subsidies further hiding the costs of this technology, other choices for mobility quickly disappeared. Yet over the past few decades, it has been shown that with appropriate subsidization of transit and incentives for pedestrian and bike paths, people have been changing their mobility choices. People have been voluntarily selecting travel modes that are much less energy intensive and pollute less per capita than a single-occupied vehicle.

Initiative 13:
Develop community based lighting design guidelines that promote energy efficiency and safety while reducing light pollution or "sky-glow," light trespass on adjacent properties, and glare.

Reasons to support Initiative 13:
Since lighting in American communities is typically designed to attract attention or to limit safety liability, it is frequently excessive and poorly designed, sending half of the light directly skyward where it is of little use. These excess lumens create light pollution and waste significant amounts of energy. It has been estimated that a community of 100,000 people could save more than $500,000 per year through improved lighting design.

For safety reasons too, light levels need to be maintained within a certain range, as over-lighting creates problems for drivers who pass through brightly lit areas and are blinded

as they pass back into darker areas. Over-lighting creates glare directly from the fixture, temporarily impairing vision. Light trespass, defined as unwanted light shining on adjacent property, clearly is inefficient and has a negative impact on the enjoyment and value of the affected adjacent property.

Community lighting guidelines need to address lighting that promotes "true color" in the physical environment, or the color seen by natural light. True color representation is necessary for efficient and effective crime prevention and detection. Lighting approaching true color also is important to enable EMS personnel to identify blood, oil, and other substances when attending an accident.

APA and its Chapters recommends working with the International Dark-Sky Association (IDA), the Illuminating Engineering Society of North America (IESNA), and the International Crime Prevention Through Environmental Design Association (CPTED) through their respective United States affiliates to recommend/establish community based and energy efficient lighting design options. Planners can also work with the state to establish statewide lighting standards for public spaces and thoroughfares.

Initiative 14:
Continue to reduce the negative environmental impacts of current fossil fuel extraction and electricity generation through research, technology, and community involvement.

Reasons to support Initiative 14:
The United States relies primarily on fossil fuel energy to generate electricity. However, the production and combustion of fossil fuels has tremendous impacts on air, water, and soil quality, which, in turn, can negatively affect the health of humans and other species as well as harming the earth's atmosphere. Despite the fact that stringent regulations have led to an ongoing decrease in pollution levels in the U.S. since the 1970s (with the notable exception of CO_2), pollution levels continue to rise because demand for all levels of energy continues to grow due to both population growth and increasing per capita consumption. The problem is compounded by the complexities of enforcing the Clean Air Act and other regulatory standards.

Transportation, stationary source combustion (primarily fossil fuel power plants), and industrial process emissions compose the bulk of anthropogenic sources of air pollution. Air pollution is implicated in a variety of health and atmospheric problems including respiratory disease and cancer, acid rain, ozone depletion, and global warming.

Pollutants produced when fuel is burned to generate electricity include nitrogen oxides (NO_x), which contribute to ozone (smog), fine-particle soot and acid rain; sulfur dioxide (SO_2), which contributes to fine-particle soot and acid rain; mercury, which is released to the air and deposited on land and water resources, concentrating in edible fish populations; and carbon dioxide (CO_2), which contributes to the greenhouse effect and climate modification.

Initiative 15:
Support the development of new renewable energy technologies and endorse an unbiased evaluation of their environmental impacts.

Reasons to support Initiative 15:
A wide variety of new renewable energy technologies are in development, primarily ways to harness energy from organic or biomass sources. Also, traditional renewable energy sources such as wind, solar, and hydropower continue to be refined. While renewable energy technologies show great promise for sustainable use, it is important that they be objectively evaluated for their impacts on the social and natural environment. Controversial questions have already been raised about the social impacts of siting wind turbines, the health impacts of burning biofuels, or the wisdom of promoting a hydrogen fuel cell future when either fossil or renewable energy must be used to produce the hydrogen.

Initiative 16:
The continued generation of electrical power from nuclear energy is a part of the mix of power sources, and while APA recognizes the benefits offered by nuclear energy, it advocates that the social and environmental concerns applicable to the siting and operating nuclear power plants, as well as the transportation and disposal of nuclear wastes continue to be addressed.

Reason to support Initiative 16:
The nation's 102 nuclear power plants supply 20 percent of all electrical power in the U.S. Nuclear power has a safety record that is better than coal-fired plants per megawatt hour and does not result in the production of greenhouse gases. Reactors can also be designed to "burn" up weapons grade materials left over from the Cold War. Most of the commercial nuclear power plants now operating will likely seek relicensing to allow continued operation for another 20 years. These plants must undergo a rigorous safety and environmental review by the Nuclear Regulatory Commission before being granted a renewal.

These plants are often located in or near rural communities that rely heavily upon the taxes they generate to fund local government and schools. Such communities should be targeted for intensive ongoing planning expertise (that their local economies may not be able to afford) to help mitigate known and potential impacts of nuclear plants.

Additionally, these communities would benefit from economic development expertise to deal with the job losses and brownfields when their nuclear energy plants make way for transition to other more sustainable sources.

Policy Statement 4: APA and its Chapters should work to promote environmental equity and justice with regard to energy production and distribution, and to assist communities with meeting the challenges inherent in the development of new energy resources.

Initiative 17:
Recognize that while energy is a commodity for sale and consumption, it is also a national resource that must be equitably managed.

Reasons to support Initiative 17:
The availability of energy is central to the functioning of our communities, yet the current management and distribution of energy has created great economic vulnerabilities. Making energy resources more affordable, with more stable pricing, and available to everyone in the community will require partnerships — governments, utility companies, private energy enterprises, and interest groups.

Initiative 18:
Integrate community energy efficiency goals into the "Smart Growth" planning process.

Reasons to support Initiative 18:
Planners in both urban and rural communities interested in "smart growth" should recognize the importance of integrating energy efficiency and energy resource management goals into their planning process. A plan for energy efficiency would address energy used for municipal services and infrastructure such as water and sewage treatment and street lighting, public buildings and facilities, and commercial, residential, and industrial uses.

Initiative 19:
Develop a fair share siting process for energy generation and distribution facilities that reflects sound environmental practice and does not place undue environmental justice burdens on any one community.
(Reference: *Policy Guide on Locally Unwanted Land Uses*)

Reasons to support Initiative 19:
There is a need to address environmental justice issues that emerge with the siting or maintenance of electrical generation and transmission facilities, fuel storage facilities, and other potential health hazards related to energy production and use. All stakeholders in the community should be involved in the formulation of appropriate solutions. The location of existing and new energy facilities should be part of a comprehensive planning process, which includes the opportunity for meaningful public participation and public consensus. New facilities should be consistent with local land-use plans and meet the most rigorous standards to protect the environment.

A clearly defined process is needed to establish priorities and requirements and identify participants/stakeholders in siting of new energy facilities. The process should ensure compliance with all applicable local, state, and federal regulations governing such issues as air quality, water/wetlands, land use, noise, cultural and natural resources, public health and safety, and other environmental issues in addition to ensuring that environmental justice issues are addressed. The location of energy facilities should be

part of a comprehensive planning process, which includes the opportunity for meaningful public participation and public consensus, in advance of the "public hearing to announce the new plant" scenario. The process also needs to ensure that a "fair" decision is ultimately made and ensure that energy generation facilities are not being disproportionately placed in low-income and minority communities. Planners should ensure and facilitate the involvement of the entire community, including low-income and minority populations, in the siting of energy facilities

Initiative 20:
Support efforts to include energy efficiency in all affordable housing guidelines.

Reasons to support Initiative 20:
Affordable housing programs make home ownership available to eligible low- and moderate-income families. The cost of owning a home, however, includes both the mortgage and the ongoing operational expenses, primarily the energy costs. Homes that are built for participants in affordable housing programs should be designed and built for energy efficiency to assure affordable energy bills as well.

Energy efficiency is particularly important in keeping affordable housing stock affordable. Particular attention should be placed on upgrading appliances, windows, doors, heating systems, and insulation in those units occupied by households that might not otherwise be able to make these improvements on their own.

The ability to afford heating and cooling is an issue that affects inner cities and rural areas alike. Low- and moderate-income persons pay a disproportionate amount of their annual family budget on heating and/or cooling their homes. Typically, this comes at the sacrifice of other necessary household expenditures. If people forego heating and cooling, substantial health impacts will arise.

Initiative 21:
Recognize that energy generation is also an economic development activity and plan adequately for all aspects of an energy generation and production facility and its workers.

Reasons to support Initiative 21:
Land-use plans and regulations should recognize and accommodate the types of development that support the various stages of energy related growth. For communities that are confronted with energy production, their land-use plans and policies should accommodate new energy growth through mechanisms such as flexible zoning regulations. Land-use plans should also be reviewed for sufficient developed and zoned industrial areas to accommodate support industry. In addition, the community plans and zoning regulations may need to address temporary housing for the facility's construction workers.

NOTES

[1] "U.S. Energy Consumption Patterns," Energy Information Administration, http://www.eia.doe.gov/emeu/iea/wec.html, Internet, accessed July 2002.

[2] Hawken, Paul, Amory B. Lovins, and L. Hunter Lovins. *Natural Capitalism: Creating The Next Industrial Revolution.* Boston: Little, Brown, & Company. 1999. p. 85.

[3] *Ibid.*, p. 264.

[4] Net metering allows the owner of a distributed generation system to direct surplus power back to the grid when their system is generating more power than they require, and draw from it when more is needed, generally at the same retail rate. While accessibility to interconnection is mandated at the federal level, net-metering rules and allowances vary widely from state to state.

APPENDIX A: ENERGY EFFICIENCY OPPORTUNITIES

Opportunities exist to improve energy efficiency in number of different sectors:

1. Residential
    a. Structural materials and design, HVAC systems, and site orientation of single and multi-family homes
    b. Home appliances, electronics, and lighting
    c. Power tools and landscaping equipment
2. Commercial and institutional
    a. Structural materials and design, HVAC systems, and site orientation of office buildings, retail, and other commercial buildings, government buildings, and facilities (including schools)
    b. Office electronics and equipment, food service equipment, commercial business equipment, building maintenance and landscaping equipment, institutional and commercial lighting, hospital and medical equipment, municipal wastewater and solid waste management equipment
3. Industrial
    a. Structural materials and design, HVAC systems, and site orientation of industrial buildings and facilities
    b. Industrial process equipment, materials handling equipment, process monitoring systems
    c. On-site electric generators
4. Agricultural
    a. Structural materials and design, HVAC systems, and site orientation of agricultural buildings and facilities
    b. Food processing and refrigerated storage equipment
    c. Planting and harvesting equipment, agricultural waste management equipment
5. Transportation
    a. Vehicles
        i. All private, commercial, and government-owned vehicles used primarily for transportation including automobiles, vans, trucks, buses, RVs

ii. Construction and road-building equipment, road maintenance equipment

b. Road engineering
   i. Traffic lights and timing
   ii. Lighted road signs
   iii. Integration of public transportation

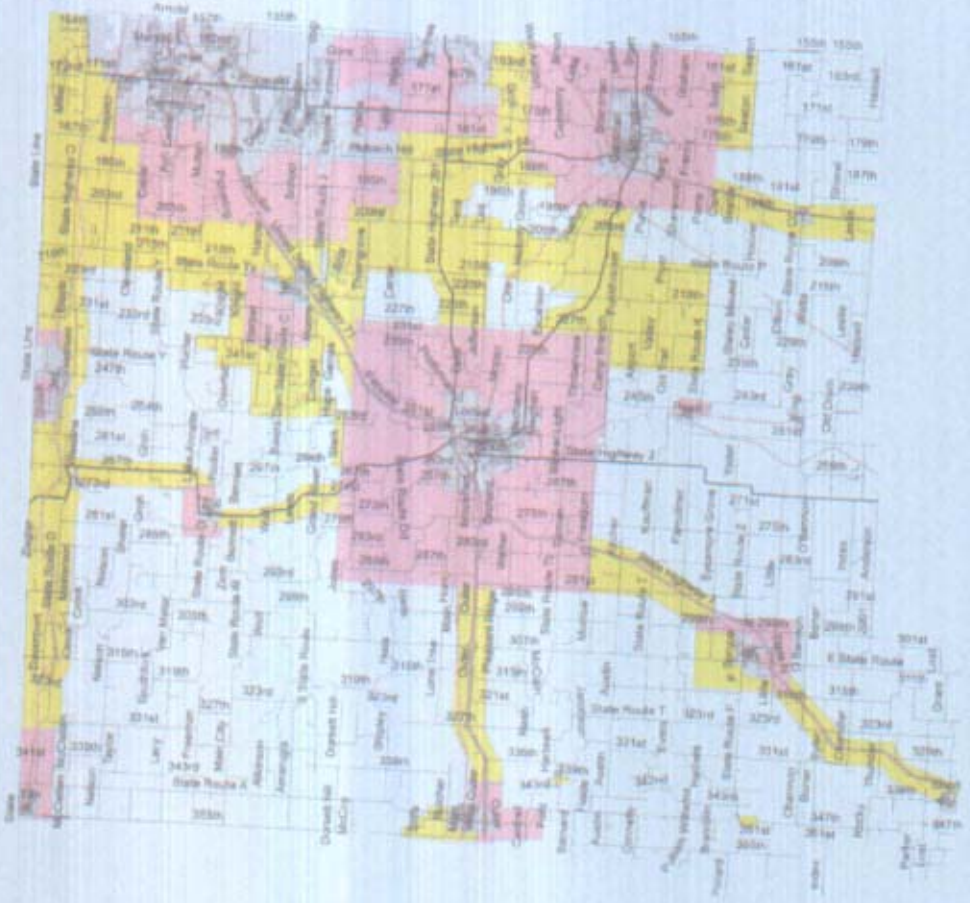
c. Municipal transportation planning
   i. Public Transportation
   ii. Bicycle paths
   iii. Urban walkability

6. Infrastructure
   a. Utility distribution systems including transmission and pipelines
   b. Municipal and utility infrastructure planning

Additionally, one can target improved efficiency at four different levels.

7. Level One: Individual — through improved appliance design (rated by the EnergyStar program), building design (through double and triple pane windows where appropriate, energy leakage tracking programs, appropriate building siting, and arrangement of glass and ventilation systems), change in usage behavior
8. Level Two: System design — support research that reduces leakages through transmission, provide technology sources closer to the user
9. Level Three: Land-use distribution and community design — by reducing need for vehicular trips, excessive lighting, and encouraging energy efficient building designs.
10. Level Four — alternative and realistic choices for mobility — through the use of transit, walking/biking, and other less consumptive habits

Map 1 - County Wide Land Use Tiers



Legend

Railroad

Land Use Tiers

Tier

Incorporated areas

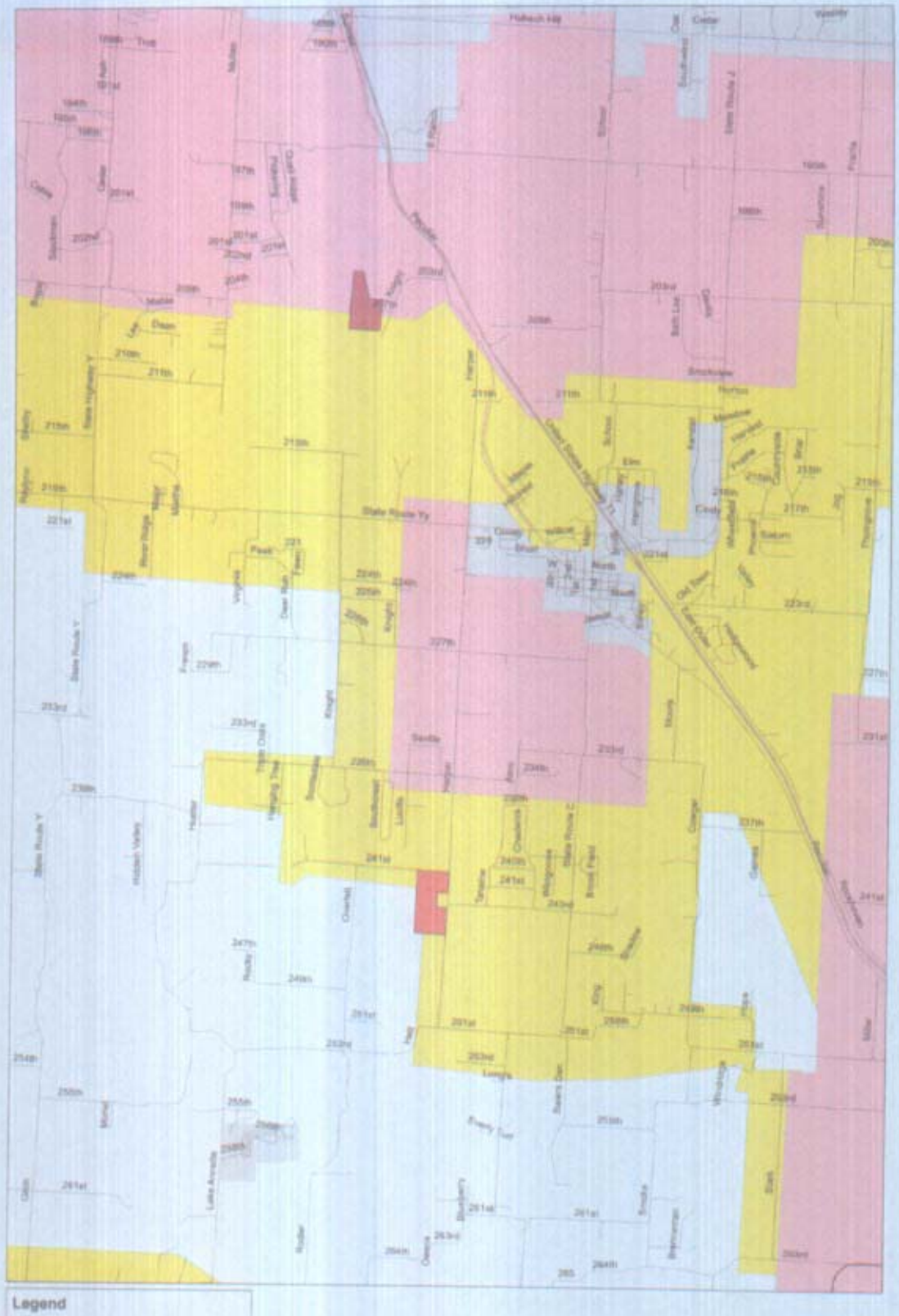
Multi-Use Tier

Urban Service Tier

0 3.5 7 14 Miles

PLANNING WORKS

Map 2 - Subject Properties Land Use Tiers



Map 3a - Aerial with 1 mile Ring - Plant

Map 3b - Zoning/Aerial with 1 mile Ring - Plant

Legend

- Railroad
- 1 Mile Buffer of Plant
- Aquila Plants

County Zoning zone

- Residential
- Commercial
- Industrial
- SUP
- City

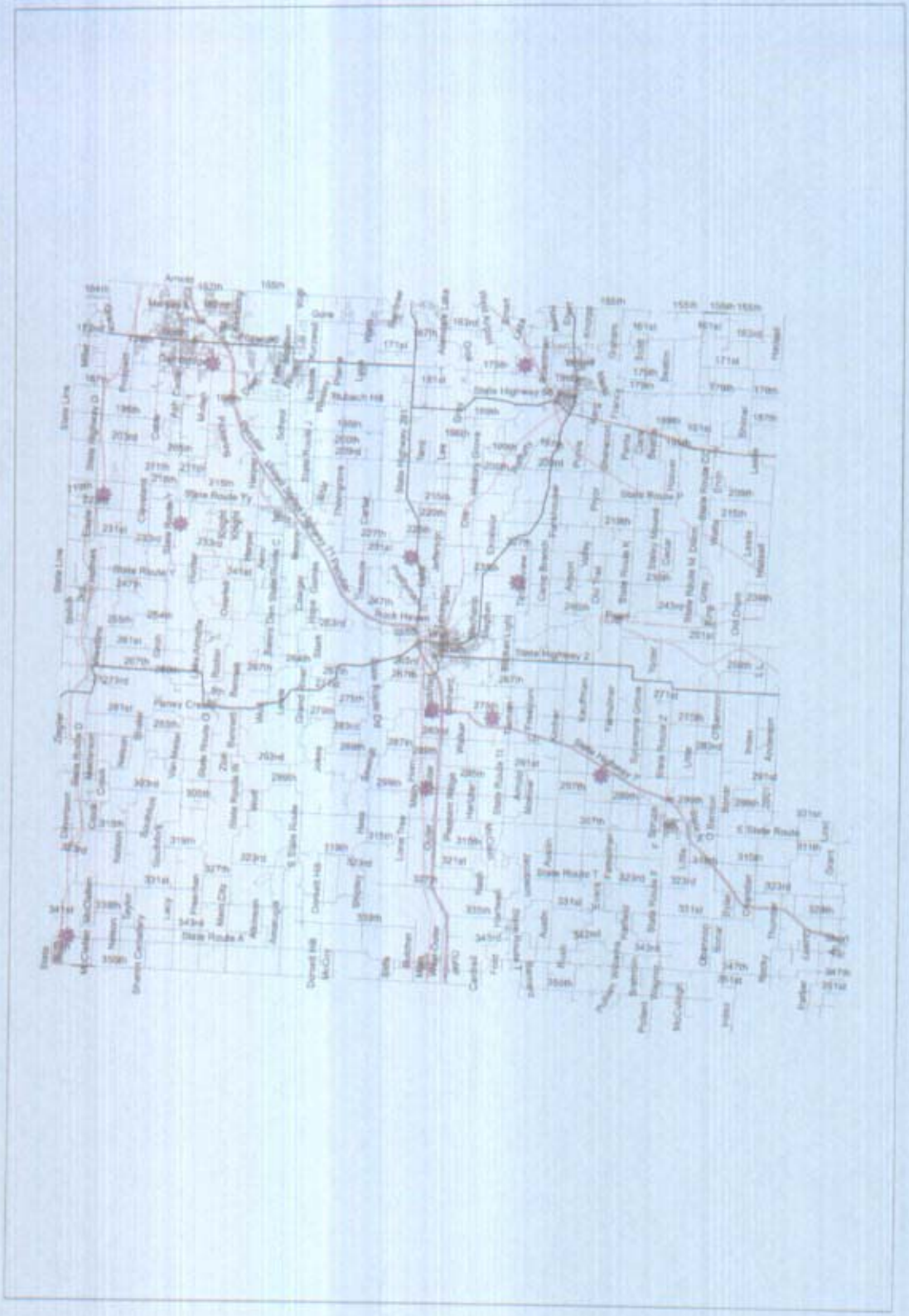
0 0.25 0.5 1 Miles

PLANNING WORKS

Map 4a - Aerial with 1 mile Ring - Substation

Map 4b - Zoning/Aerial with 1 mile Ring - Substation

Map 5 - Potential Industrial Locations



Legend
- Railroad
- Potential Industrial Locations

0 3.5 7 14 Miles

PLANNING WORKS