Appendix D
Siting of Transmission
Electric Facilities

Appendix D is intended to provide information on the process and criteria that will be used for siting the proposed SMUD Woodland-Elverta Transmission line and Willow Slough Substation within the study areas analyzed in this EIR. Upon approval of the Program by LAFCo and by voters, SMUD will begin the project level analysis of these facilities. This will include siting the transmission line and substation and performing CEQA analysis to determine the preferred locations of these facilities

SMUD will utilize the guidance provided by the Sacramento County General Plan Public Facilities Element Section VII, Energy Facilities and the Sacramento County Zoning Ordinance Sections 301-10, 310-11, and 310-12. These policies provide guidance on siting of energy related facilities and minimizing impacts on CEQA related resources. The Zoning Code includes a prioritization of the types of locations preferred for siting these facilities. Since the guidance provided by Sacramento County is the most thorough discussion of siting of transmission lines and substations, it will also be used for facilities sited in the Yolo and Sutter Counties and the City of Sacramento.

SMUD will engage in a cooperative effort with agencies, local jurisdictions, property owners, and the public to determine and analyze alternative alignments and locations for these facilities. SMUD will work with these groups to site these facilities in locations that avoid or minimize effects on the environment and adjacent landowners without making the construction of these facilities infeasible or interfering with the authority and responsibility of the SMUD Board of Directors to make the final decision on the location of SMUD's facilities in the public interest.

The proposed locations for the transmission line and substation require approval from the cities and counties where the facilities will be located. The SMUD Board of Directors may override a local jurisdictions's disapproval of a siting location with a supermajority vote.

Attachments:

Sacramento County General Plan Public Facilities Element Section VIII, Energy Facilities

Sacramento County Zoning Code Section 301-10, 310-11, and 310-12.

PUBLIC FACILITIES ELEMENT

OF THE

COUNTY OF SACRAMENTO

GENERAL PLAN

* * * * *

Original Adoption
December 15, 1993

County of Sacramento
Planning and Community Development Department
General and Advanced Planning Section

Amended By Resolution 980979
August 12, 1998

SACRAMENTO COUNTY GENERAL PLAN
PUBLIC FACILITIES ELEMENT

SECION VIII

ENERGY FACILITIES

GOAL: Appropriately sited energy facilities that efficiently and safely produce and distribute energy to Sacramento County residents without compromising environmental quality or human health.

INTRODUCTION

The projected rapid growth in Sacramento County will require an associated expansion of the energy supply infrastructure. Good planning is necessary to develop an efficient system with minimal impact to the county's natural resources and human population. This section offers facility siting policies designed to minimize environmental impacts caused by the construction and operation of energy facilities. Other policies address safety and health issues. Facility definitions and descriptions, as well as discussions of impacts, issues, and other technologies are contained in the Energy Facility Background Report in Section Ix of this Element.

This section of the Public Facilities Element is concerned with the siting of energy facilities to protect biological and cultural resources and human health. The policies in this section relate to other General Plan Elements including:

Land Use-Separation of conflicting land uses.
Conservation-Protection of biological and cultural resources.
Agricultural-Preservation of farmlands as viable units.

Further, the Energy Facility Siting Section promotes the goals of the Air Quality and Energy Elements through support of alternative energy technologies that provide relatively clean, safe electricity.

GENERAL ENERGY FACILITY POLICY

Objective: Minimize the health, safety, aesthetic, cultural, and biological impacts of energy facilities in Sacramento County.

Intent: The specific benefits and impacts of an energy facility vary with the type of facility, location, and community issues. The Board of Supervisors and Policy Planning Commission may evaluate energy production facility siting based upon many factors including safety, community economics, efficiency, reliability, aesthetics, and resource conservation. The priority of the siting factors may vary from project to project, requiring the decision-making body to compromise some policies in favor of others. In order to maintain the integrity of the policies, yet allow flexibility in decision making, the Board must provide findings explaining actions contrary to policies in this section.

Policies:

PF-70. The Board of Supervisors and the Policy Planning Commission may approve, or recommend approval, of development projects for energy facilities that are contrary to any of the policies in this section only when justification is provided through findings.

PF-71. Locate and design production and distribution facilities so as to minimize visual intrusion problems in urban areas and areas of scenic and/or cultural value including the following:

Recreation and historic areas.
Scenic highways.
Landscape corridors.
State or federal designated wild and scenic rivers.
Visually prominent locations such as ridges, designated scenic corridors, and open viewsheds.
Native American sacred sites

PF-72. Locate and design energy production and distribution facilities in a manner that is compatible with surrounding land uses by employing the following methods when appropriate to the site:

Visually screen facilities with topography and existing vegetation and install landscaping consistent with surrounding land use zone development standards where appropriate, except where it would adversely affect photovoltaic performance or interfere with power generating capability.
Provide site-compatible landscaping.
Minimize glare through siting, facility design, nonreflective coatings, etc.
Site facilities in a manner to equitably distribute their visual impacts in the immediate vicinity.

PF-73. Minimize the potential adverse impacts of energy production and distribution facilities to environmentally sensitive areas by, when possible, avoiding siting in the following areas:

Wetlands.
Permanent marshes.
Riparian habitat.
Vernal pools.
Oak woodlands.
Historic and/or archaeological sites and/or districts

PF-74. Energy production and distribution facilities shall be designed and sited in a manner so as to protect the residents of Sacramento County from the effects of a hazardous materials incident.

ELECTRIC GENERATION POLICY

COGENERATION: COMPLIANCE WITH REGULATIONS

Objective: Develop cogeneration facilities in compliance with land use plans, ordinances, regulations, standards, and zoning restrictions.

Intent: The Sacramento Municipal Utility District (SMUD) is promoting clean, efficient, and reliable energy production through the use of cogeneration technology. These policies set forth regarding cogeneration facilities are not intended to apply to SMUD facilities which are expressly exempt from zoning ordinances under California Government Code Section 53091.

The following siting policies guide the development of cogeneration technology in Sacramento County. The policies address some of the primary issues common to all energy projects which are not covered within existing zoning and planning ordinances. The County requires mitigation of specific impacts associated with cogeneration facilities utilizing the guidelines provided the Background Report.

Policies:

PF-75. Cogeneration facilities may be located in commercially zoned areas provided that the thermal host associated with the cogeneration facility is a conforming commercial use and the cogeneration facility does not adversely affect other commercial uses in the area.

PF-76 Locate and screen cogeneration facilities in a manner that minimizes visual impacts on adjoining residential and/or commercial uses. These facilities shall also comply with noise ordinance requirements otherwise applicable in the area, or in adjacent zones that are potentially affected by facility noise.

COGENERATION: RESOURCE PROTECTION

Objective: Develop cogeneration potential without degrading natural and cultural resources.

Intent: Cogeneration land use issues are typically minor in most urban locations, however displacement caused by cogeneration projects may significantly impact existing biological and cultural resources in rural areas. Although natural gas is the cleanest fossil fuel, cogeneration units emit nitrogen oxides and particulate matter and are often noisy. Some projects may use toxic chemicals, generate hazardous wastes, and may cause other environmental impacts if not properly mitigated. Mitigation measures for cogeneration operations are in the Background Report.

Policies:

PF-77 Cogeneration facilities are prohibited outside the Urban Service Boundary, except as part of an existing processing operation.

PF-78. The design and scale of a cogeneration project should be consistent with the existing design and scale of the host plant. All on-site landscaping should comply with the landscaping development standards of the surrounding land use zone~

PE-79. Conduct an analysis of non-potable water availability prior to the development of any new cogeneration facility. The results of such an analysis shall be submitted to the State Water Resources Control Board for review and approval.

SOLAR ELECTRIC FACILITIES

Objective: Site solar electric facilities for maximum operational efficiency and minimum aesthetic and environmental impact in designated areas.

Intent: At present there are two types of solar electric technologies: solar thermal and photovoltaics (PV). Small-scale distributed power photovoltaic (PV) systems offer a variety of potential environmental and energy benefits. Such systems are to be encouraged and where practical sited near load centers, utilizing rooftops, commercial buildings and integrated into building envelopes. PV's are an excellent means of providing efficient, clean energy. The main siting factors are aesthetic, biological, and cultural. Glare from solar facilities, defined as the reflectance of a harsh, uncomfortable brilliant light, is a potential problem that is usually mitigated through careful siting and design. Sprawling solar facilities can despoil pristine landscapes and natural resources such as oak woodlands and vernal pools. Larger scale multi-megawatt Pv systems should be designed in a manner that minimizes land use and environmental impacts, and therefore should be located away from sensitive habitats.

The following policies minimize the impact of future solar projects to the County's open space. They also regulate on-site construction and maintenance procedures for solar facilities in order to minimize related off-site impacts. The County shall require mitigation for specific impacts associated with cogeneration facilities utilizing the guidelines provided the Background Report.

These policies address commercial electrical energy production by solar facilities and do not apply to SMUD owned solar facilities. These policies regulate private solar collectors that do not provide energy for purchase. The Zoning Code does not specifically address collectors, but provides language for regulating structural features incorporated into building design as incidental uses, subject to routine height limitations (24 feet in residential zones).

Policies.

PF 80. The County supports the concept of a dispersed system of small-scale solar collectors that feed energy into the electric delivery system. The County may support large-scale solar collector projects as a secondary alternative.

PF-81. Large multi-megawatt solar facilities should be sited with appropriate consideration for their land use impacts.

PF-82. New solar facilities should be designed and developed so as to minimize impacts to sensitive biological resources such as oak woodlands and vernal pools, cultural resources (including designated historic landscapes), or prime farmlands as defined by the California Department of Conservation and shown on page 21 of the General Plan's Open Space Element.

PF-83. Solar facilities should be excluded from areas of scenic value and should not be sited in visually prominent locations such as ridges, designated scenic corridors, designated historic areas, and open viewsheds.

PF-84. Locate solar facilities, and design and orient solar panels in a manner that addresses potential problems of glare consistent with optimum energy and capacity production.

ELECTRIC DISTRIBUTION POLICY

The following objectives and their associated policies address the main issues related to transmission and subtransmission facilities in Sacramento County. The policies address land use issues including aesthetics, human health and safety, and preservation of biological and cultural resources.

Sacramento County does not dictate policy regarding the development and efficiency of the energy supply system. The County, however, supports planning initiatives such as SMUD's energy source diversification and demand-side conservation. Furthermore, other methods of reducing impacts associated with energy production, including impact offset opportunities, could be incorporated into the Use Permit procedure.

Sacramento County recognizes that SMUD has the primary responsibility for providing electric service within Sacramento County, and that paramount within that responsibility is the performance of the electric system. It is the intention of these policies to ensure that County land-use planning/development activities are coordinated with the associated facilities development responsibilities of SMUD.

ELECTRIC TRANSMISSION AND SUBTRANSMISSION DELIVERY SYSTEM

Objective: **Ensure the provision or safe, reliable, efficient and economical electric service while minimizing potential land use conflicts, and health, safety, environmental, and aesthetic impacts of transmission facilities.**

Intent: Rising energy demands will require additional transmission facilities for local needs and for transporting electricity across the county. However, large-scale and widely distributed facilities have the potential to cause significant land use, environmental, aesthetic, and safety impacts. Therefore, it is imperative that new transmission facilities, whether for regional or local use, be sited in manner that protects the county's visual and aesthetic resources to the best extent possible. To effectively accomplish this, the Planning Department needs to play a more active role in the siting of new transmission facilities (i.e., bulk substations). Therefore, proposals to site new large-scale transmission facilities should be submitted to the Planning Department under the guise of a General Plan conformity review request. It is also recommended that an aggressive outreach and education program be initiated and incorporated into SMUD's existing public notification process.

Policies:

The first three policies listed below represent siting priorities for transmission lines, in order of most to least desirable.

PF-85. New transmission corridors should, whenever possible, avoid existing and planned urban areas; specifically those areas designated for residential and commercial uses. When avoidance is not possible transmission lines should be placed underground.

PF-86. New transmission lines constructed within existing and planned urban areas should utilize existing transmission corridors whenever practical. Secondary preferred locations are railway and freeway corridors. If feasible, existing towers should be upgraded to accommodate additional circuits rather than erecting new towers.

PF-87. To minimize visual impacts and protect the county's visual and aesthetic resources new bulk substations should be located in industrial and non-retail commercial areas. To further minimize visual intrusion and potential land use conflicts, substations shall be enclosed with an eight foot high security fence in concert with a 25-foot landscaped setback along all public street frontages.

PF-88. Proposals to locate all new bulk substations and all other large scale energy distribution facilities shall be submitted to the Planning Department for review and comment in the form of a General Plan Conformity request.

PF-89. Locate and design new transmission towers in urban areas in a manner that minimizes visual and environmental impacts, including impacts to historic buildings and view sheds.

PF-90. In order to avoid interference with take-off and landing procedures locate new transmission towers away from airport runways. The distances from the runway shall be determined consistent with Code of Federal Regulations, Part 77.

PF-91. Transmission line rights-of-way located in undeveloped areas shall be maintained as parks, recreation areas, and open spaces and solar distributed generation sites subject to land owners' current and intended uses of the property. Pursuant to terms of standard utility facility easements, proposed uses and improvements within utility rights-of-way are subject to review and consent by the affected utility.

ELECTRIC TRANSMISSION FACILITY SITING AND DESIGN

Objective: Plan and design transmission facilities to minimize visual impacts, preserve existing land uses, and avoid biological and cultural resources.

Intent: Policies throughout this Plan commit the County to preserve its important resources such as wetlands habitat, prime soils that support intensive farming, and aggregate deposits suitable for surface mining. New rights-of-way located in these areas may infringe upon existing land -uses. The following policies provide guidelines that minimize land use conflicts with high voltage transmission power lines. In rural areas, as in urban areas, it is often impossible to select a right-of-way which uncompromisingly meets all the policies. The intent is to arrive at an alignment which achieves the objective stated above. Undergrounding portions of the line may be a desirable mitigation measure in some instances, but these policies do not require undergrounding to achieve policy compliance.

These policies apply only to the extent statutory authority expressly grants local agency zoning authority over public-owned transmission facilities. Also, these policies are applicable to the transmission facilities of publicly-owned utilities as per state legislation granting local agencies siting review authority. These policies are advisory for PG&E and WAPA facilities and are useful for formulating recommendations regarding proposed route alignments in Sacramento County

Policies:

PF 92 Wherever feasible, utilize existing transmission poles to accommodate new overhead transmission lines. Existing and future transmission corridors should be shared by more than one utility company.

PF-93. Transmission rights-of-way should avoid bisecting parcels wherever possible.

PF-94. The crossing of prime or statewide importance farmland with transmission lines should be avoided whenever possible. In those cases when crossing farmland in these categories is unavoidable routing of the lines along the periphery of the site is the preferred alternative.

PF-95. Transmission lines should avoid to the greatest extent possible, cultural resources and

biological resources such as wetlands, permanent marshes, riparian habitats, vernal pools, and oak woodlands. When routed through such areas, transmission lines should have maximum line spans and cross at the narrowest points which involve minimal cutting and cropping of vegetation, maintaining the drainage regime of wetland basins. Additionally, when feasible, such routes should be maintained to serve as biological dispersion corridors between areas of high biodiversity.

PF-96. Protect native and non-native bird populations by incorporating electrocution prevention measures into the design of transmission towers.

PF-97. Avoid routing transmission lines through areas currently used or projected to be used for subsurface mining operations. Preferred routing should follow mining setbacks to adjacent roadways.

PF-98. Transmission lines should avoid paralleling recreation areas, historic areas, rural scenic highways, landscaped corridors, and designated federal or state wild and scenic river systems.

PF-99. Locate transmission facilities in a manner that maximizes the screening potential of topography and vegetation.

PF-100. Utilize monopole construction, where practicable, to reduce the visual impact on a corridor's middle and distant views.

ELECTRIC SUBTRANSMISSION FACILITY SITING AND DESIGN

Objective: Site subtransmission facilities without compromising community aesthetic, health, and safety standards.

Intent: Policies for siting subtransmission facilities, typically 69 kV power lines and distribution substations, will provide guidance to minimize land use conflicts.

The following policies are intended to minimize visual impacts and address community safety concerns of subtransmission facilities without compromising the system's functional integrity, efficiency, or burdening local utilities with extraordinary costs. Undergrounding power lines may mitigate many aesthetic problems, however the extra cost (approximately tenfold) and installation and maintenance problems make it feasible only under special circumstances. In most instances the impact of subtransmission power lines will be mitigated through appropriate design, placement, and landscaping.

Policies PF-102 to PF-108 and PF-110 to PF-113 are advisory since the County does not have the authority to regulate subtransmission line easements. Their intent is to foster a common ground for a coordinated approach to line siting.

Policies:

PF-101 The Board of Supervisors should utilize policies in this section as a basis for formulating recommendations for locating subtransmission facilities, commenting on SMUD's electric facilities siting plans, and when adopting subtransmission siting locations for County Community Plans.

PF-102. Overhead subtransmission line routes serving residential neighborhoods should all be selected to equitably distribute the visual impact burden.

PF-103. Minimize overhead wire congestion using techniques such as combining lines on poles or undergrounding.

PF-104. Galvanize-coated steel poles should be used where practical.

PF-105. Route new overhead subtransmission lines within existing transmission line corridors, along railroad tracks, or major roadways. In an effort to reduce the visual impact of new lines combine circuits on existing 69 kV power poles, wherever feasible.

PF-106. The preferred route when installing overhead subtransmission lines through residential neighborhoods should be the landscape corridors located within arterial roadways

PF-107. Where easements for subtransmission facilities parallel landscape corridors, they should be entirely contained within the landscape corridor.

PF-108. Subtransmission lines within landscape corridors shall be situated street-side of the corridor's center line to minimize the visual impact to adjacent residences, but at a distance that will not affect traffic safety.

PF-109. Landscaping shall be included in corridor design which meets the standards of the surrounding land use zone and is compatible with the overhead line design.

PF-110. To help reduce visual intrusion landscape corridors with planned power lines along major streets in residential areas should be no less that 30 feet in width.

PF-111. In residential areas, route subtransmission line easements along rear property lines where no better alternative exists. In such cases, the easements should be granted as a project's conditions of approval, be shared by adjacent back fence property owners, should enable little access acceptable to the utility, and should avoid schools, public parks, and recreation areas.

PF-112. To the maximum extent possible locate distribution substations serving residential areas in adjacent commercial properties. When not feasible, these facilities should be designed in a manner to harmonize visually with the surrounding development, including the use of landscaped buffers.

PF-113. To minimize visual intrusion problems enclose all substations with a security fence at least eight feet high, provide a setback 25 feet from public street frontages, and provide landscaping consistent with the development standards of the surrounding land use zone when in non-industrial areas.

PF-114. Public facility financing plans for developing neighborhoods may include the cost of undergrounding new and existing subtransmission lines. Costs may be shared by all participating developers.

PF-115. In areas of renovation and redevelopment, install subtransmission and distribution lines underground, when feasible, with installation costs provided to the utility by redevelopment funds. Installation should be designed in a manner that minimizes impacts to any historical features.

ELECTRIC AND MAGNETIC FIELD POLICY

Objective: Develop new land uses adjacent to transmission facilities without compromising the safety and health of residents.

Intent: Land use regulations in Sacramento County serve many purposes, preserving a sense of public safety being paramount. How to regulate land uses with regard to EMF exposure is an issue addressed in this section. In spite of the numerous studies conducted in the past 20 years the scientific community has been unable come to a clear consensus with respect to the link between EMF exposure and long-term health risks. In July 1997, the National Cancer Institute (NCI) released the results of an eight-year study, which many EMF experts consider to be the most definitive to date. The research seems to conclude that there is no link between exposure to EMF and health effects (i.e., cancer). However, there are those in the scientific community that contend there is a statistical association between exposure to EMF and at least one type of cancer, acute lymphoblastic leukemia (ALL), the most common type of childhood cancer. Therefore, due to the lack of consensus it seems prudent to take steps to safeguard children. Sacramento County is putting forth a policy that is consistent with the State's school siting regulations, which impose distance requirements for locating potential public school sites near high voltage transmission lines. The formulation of the siting standards is based on a graph of field strengths provided to the State School Facility Planning Division by the Southern California Edison Company. As a note, for many years these standards were considered guidelines, however in December of 1993 the State Legislature took action to adopt them as part of Title 5 of the California Code of Regulations (Chapter 1 of Division 13, Section 14010). The County has opted to craft policy language that covers both public and private school facilities. Lastly, it is recognized that EMF research is far from complete, meaning that any policy language put forth at the state or local level will need to be reevaluated at some time in the future. Additional information on the EMF issue may be found in the Background Documentation Section of this Element.

Policies:

PF-116. It is the policy of Sacramento County not to locate public schools or grant entitlements for private schools within, or directly adjacent to power line corridors as specified below:

Power Line Capacity	Setback from the Corridor (measured from edge of easement)
100-133kV	100 feet
220-230 kV	150 feet
500-550 kV	350 feet

The construction of transmission lines proximate to *an* existing and/or planned public or private school site and subject to the County Siting Process (100 kV or greater) should also comply with the distance criteria listed above unless compliance with these setbacks would result in a greater EMF impact on other adjacent uses.

Implementation Measures:

A. Continue to coordinate with electric utilities and utility regulatory agencies on transmission line routing and EMF buffers.

B. Continue to monitor scientific research on EMF-related health effects.

C. Reexamine this policy approach as new information becomes available, but not later than the end of the year 2000.

D. Employ no-and low-cost measures to reduce EMF levels at new and upgraded facilities. Such measures should be considered on a project-specific basis. These measures include, but are not limited to the following:

- Increase distance from conductors and equipment
- Reduce conductor spacing
- Minimize current
- Optimize phase configuration

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COORDINATION WITH ENERGY PROVIDERS

Objective: Well-planned and timely siting of efficiently operating energy delivery facilities

Intent: The County Planning Department and local utility companies must cooperate and coordinate to provide efficient electric and gas service. In new developments the planning is relatively simple; utilities are installed before or during the construction phase. In existing residential areas, however, power and gas line and substation proposals may encounter opposition from local residents. Coordination is also needed to ensure appropriate development practices in the vicinity of existing utility facilities to ensure continued safe, reliable maintenance and operation.

The County, SMUD, and PG&E are responsible for accommodating energy demand through growth planning. Successful utility planning requires the ready transfer of information between the County Planning Department and the utilities responsible for establishing and implementing long-term plans. The following policies support this objective.

Policies:

PF-119. Community Plan land use designations and policies should be consistent with the policies of this Energy Facilities Siting section of the Public Facilities Element.

PF-120. All Community Plans shall include an Energy Facility Siting Element which indicates the location of existing and planned energy facilities. Community Plan Siting Elements and SMUD's Electric Study Plans for the corresponding area shall be consistent.

PF-121. All tentative subdivision maps should identify the location of all utility easements sufficient to accommodate existing and future needs as determined by SMUD and PG&E.

PF-122. The County Planning Department will notify SMUD's Government Affairs Office and PG&E's Land Department when the Planning Department initiates studies to prepare, modify, or update the County General Plan, a Community Plan, or Public Facilities Infrastructure Plan.

Implementation Measures:

A. Refer all pertinent subdivision and land use applications to SMUD and PG&E for review and comment within 30 days of the time of application. (Planning)

B. Monitor and update coordination procedures between the County and SMUD per the Memorandum of Understanding. (Planning and SMUD)

C. Coordinate with SMUD, PG&E, and other utilities on pertinent land use proposals. (Planning, SMUD, and PG&E)

D. Represent existing and planned subtransmission lines and substations on tentative subdivision maps. Label existing utility easements on Community Plans and other planning maps.

E. Amend Zoning Code Section 301-12 (Mitigation Measures for Transmission Facilities) to read as follows:

> "Overhead electrical transmission lines of 100,000 volts or greater capacity shall be in installed in a manner so as to minimize adverse health, safety, biological, archeological, visual, and aesthetic impacts. When feasible, SMUD shall relocate and combine existing overhead transmission poles and lines with new installation.
>
> Substations shall be designed and constructed in such a manner so as to minimize off-site visual and noise impacts. Planted or landscaped setbacks of at least (25) feet shall be provided on all public street frontages of the parcel.

F. Amend the Zoning Code to be consistent with California Government Code Section 53091 with respect to the County's regulatory authority (i.e., use permit is not required) for power plants, cogeneration facilities, and solar electric facilities, including mitigation measures for minimizing adverse health, safety, biological, historical, and archeological impacts.

301-10. Permit Determination for Transmission Facilities of Sacramento Municipal Utility District (SMUD)

SMUD electrical transmission lines or substations, or both, with less than 100,000-volt capacity are permitted with no review required by the County. Within sixty (60) days of receipt of a proposal from SMUD to locate and construct electrical transmission lines or substations or both of 100,000 volts or greater capacity, the Board of Supervisors shall conduct a public hearing to consider the compliance of such proposal with the provisions of this Code, and shall adopt a resolution approving, approving an alternative, or disapproving the proposed facilities. Any such resolution shall contain findings concerning:

(a) The consistency of the proposed facilities with the County's adopted General Plan and community plan;

(b) Feasible alternatives to the proposal;

(c) The necessity for, as compared to the impact of, the proposed facilities on the health, convenience, safety and welfare of County residents.

301-11. Siting Transmission Facilities

(a) Electrical transmission lines of 100,000 volts or greater capacity may be located in any zone and shall be located in easements or rights-of-way which permit access for maintenance with minimal disruption to surrounding properties. Preference shall be given to the location of transmission lines in the rank order specified below; every reasonable effort shall be exerted to avoid established residential areas. In the event SMUD determines that it has no alternative but to route a 100,000 volt or greater capacity transmission line through an established residential area, such lines shall be installed underground except when SMUD can demonstrate that it is not feasible to do so. "Feasible" shall be defined in California Government Code, Section 53096 (c).

(1) Within existing SMUD transmission rights-of-way or those anticipated for other projects proposed subject to this Code.

(2) Adjacent to railroads or adopted freeway routes.

(3) Along or adjacent to major arterial streets where existing or planned uses are commercial or industrial.

(4) Adjacent to or through existing or planned commercial, industrial or agricultural uses.

(5) Along arterial streets where residential uses designated in an adopted plan are RD-20 or greater density.

(6) Through areas where land uses in an adopted plan are predominately commercial, but include residential uses.

(7) Through residential areas, including side and rear yards, irrespective of density.

(b) Substations for the purposes of this Code means any structure with 100,000 volts or greater incoming capacity which either:

(1) Converts electrical energy to a lesser voltage for the purpose of subregional or localized distribution;

(2) Functions as a transition point from overhead to underground electrical transmission lines; or

(3) Acts as the point of convergence for two or more transmission lines. Substations may be located on sites in all zones, provided mitigation measures are instituted as provided in Section 301.12. Preference shall be given to the location of substations in the following rank order:

(aa) Areas designated for industrial or commercial land uses in an adopted plan.

(bb) Undeveloped areas designated for residential use in an adopted plan.

(cc) Areas designated Agricultural-Urban Reserve in an adopted plan.

(dd) Sites designated for residential use in an adopted plan and surrounded by existing residential uses.

301-12. Mitigation Measures for Transmission Facilities

Overhead electrical transmission lines of 100,000 volts or greater capacity shall be installed in such a manner as to minimize adverse visual impacts. When feasible, SMUD shall relocate and combine existing overhead transmission poles and lines with new installations.

Substations shall be designed and constructed in such a manner as to minimize off-site visual and noise impacts. Planted or landscaped setbacks of at least twenty-five (25) feet shall be provided on all public street frontages of the parcel.

SMUD proposals to the Board of Supervisors to locate and construct electrical transmission lines and/or substations subject to this Code shall include a discussion of mitigation measures to be utilized and a plan indicating the specific site treatments to be employed.