
CHAPTER 5: ADDITIONAL TOPICS

5.1 GROWTH-INDUCING IMPACTS

5.1.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires a discussion of the ways a proposed project could directly or indirectly induce growth. CEQA Guidelines Section 15126.7(d) identifies a project as growth-inducing if it fosters economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth. An example might be the extension of a road into previously inaccessible open space resulting in increased residential and commercial growth and demand on public services. Increases in population may tax existing services and facilities and require new facilities that may cause significant environmental effects. CEQA also requires the discussion of the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

Direct forms of population growth could be new employees hired for commercial or industrial projects, or population growth resulting from the development of a new planned community or planned urban development. Direct forms of growth often have secondary effects of expanding the size of a local market by attracting additional economic activity into an area.

5.1.2 ECONOMIC OR POPULATION GROWTH FACTORS

Growth-inducing potential of a project could be considered significant if the project stimulates population or housing growth above that of adopted local or regional plans, or in population projections made by regional agencies. Significant growth impacts could also occur if a proposed project provides service capacity or needed infrastructure to accommodate growth levels beyond those permitted by local or regional plans or policies.

The City of Riverside's population has grown steadily, due in part to annexations. The City's estimated January 1, 2010 population was 304,051 (DOF 2010) or 3,731 persons per square mile (81.5 square miles). The population estimates have already exceeded the estimated build-out of the Proposed Project area in the General Plan 2025 Program approved Environmental Impact Report (EIR) certified by the City Council in November, 2007.

The goal of a General Plan is to facilitate the amount and kind of growth necessary to achieve a city's social and fiscal goals without promoting excessive growth, which could be costly to the city in terms of environmental impacts and service providers.

Within the City of Riverside Public Utilities' (RPU's) service area, demand is already exceeding capacity to provide reliable electric power from external generation sources. The Proposed Project will allow RPU to meet current demand for energy service within the city limits, as well as projected demand related to population and economic growth in the City's planned sphere of influence.

The City of Riverside Sphere of Influence (SOI) anticipates future City Limit expansions in northeastern and southern quadrants adjacent to the current city boundaries. According to the Local Agency Formation Commission (LAFCO) staff, many of the potential annexations are inhabited and are already being served by local electric suppliers. As these areas are annexed over time, they will convert over to service provided by the City of Riverside Public Utilities (RPU).

The General Plan 2025 analyzed the SOI and all needs associated therewith, including utilities. The Proposed Project will not increase population above what has been analyzed in the General Plan 2025. It will allow for and accommodate the anticipated population growth, eliminating potential failures in the future.

RTRP, as constructed and placed into operation, allows RPU the opportunity to purchase electric power on “just in time” increments of demand. While accommodation of future electric demand is partially dependent on the provision of third party generation, distribution of this energy is the responsibility of RPU.

5.1.3 GROWTH CAUSED BY INDIRECT AND DIRECT EMPLOYMENT

Construction and operation of the Proposed Project would not alter the employment patterns in the Riverside area. Southern California Edison (SCE) and RPU would employ approximately 260 workers throughout project phases over the 14- to 18-month construction period. Additionally, a small number of environmental monitors would be required. The majority of workers would come from the Inland Empire area, although contractors from outside of the Inland Empire area may be required. These contractors may stay at local hotels during construction. There is an adequate supply of local temporary housing to serve the out-of-town contractors and their crews.

Project operation and maintenance (O&M) would be incorporated into current O&M plans and be accomplished by current SCE and RPU employees, and would therefore not create new jobs. No new permanent staff would be required; new substations would be unattended. The Proposed Project would not result in an increase in employment during either the operation or maintenance phase, and thus would not increase the demand for new housing.

5.1.4 LEVEL OF SIGNIFICANCE

The Proposed Project’s direct and indirect growth-inducing impacts noted above are not considered significant. The Proposed Project would improve system reliability, upgrade system elements, and support current and already-planned energy requirements within the City of Riverside. Increases in demand would not be caused by the Proposed Project. Thus, the Proposed Project is not considered to be growth-inducing. No new mitigation is required as a result of growth-inducement. The Proposed Project is not expected to stimulate population growth, but would provide energy supplies in response to increased demand within the framework of the City’s General Plan 2025, and could therefore be considered to be growth-accommodating rather than growth-inducing.

5.2 SIGNIFICANT IRREVERSIBLE CHANGES

CEQA Guidelines Section 15126.2 requires that an EIR identify and focus on the significant environmental impacts of a proposed project, and Section 15126.2(c) specifically directs that irretrievable commitments of resources should be evaluated to ensure that consumption of nonrenewable resources, during the course of project construction or operation, is justified.

CEQA Guidelines Section 15127 further clarifies:

The information required by Section 15126.2(c) concerning irreversible changes, need be included only in EIRs prepared in connection with any of the following activities:

- (a) The adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency;
- (b) The adoption by a Local Agency Formation Commission of a resolution making determinations; or
- (c) A project which will be subject to the requirement for preparing an environmental impact statement pursuant to the requirements of the National Environmental Policy Act of 1969, 42 U.S.C. 4321–4347.

As the Riverside Transmission Reliability Project (RTRP) would not meet any of the conditions stipulated above that would trigger the inclusion of analysis of Significant Irreversible Changes as a result of the Proposed Project, that analysis is not included in this Draft Environmental Impact Statement (EIR).

5.3 ELECTRIC AND MAGNETIC FIELDS

Standard CEQA analysis does not include a discussion of potential environmental impacts from electric and magnetic fields (EMF) due to the lack of a consensus among scientists that EMF exposure poses a risk to human health. Nor are there any CEQA standards regarding the analysis of potential human health risks caused by EMF exposure. However, this DEIR does contain a discussion of EMF to accommodate the public's interest and concern regarding potential human health effects related to EMF exposure.

There are many sources of power frequency¹ EMF, including internal household and building wiring, electrical appliances, and electric power transmission and distribution lines. Magnetic fields are created by the flow of electrical current and are measured in milliGauss (mG). Magnetic fields are not shielded by buildings, trees or most other objects. Electric fields are created by voltage and are measured in Volts/meter. These fields are easily shielded by objects such as buildings or trees.

There have been numerous scientific studies about the potential health effects of EMF. After many years of research, the scientific community has been unable to determine if exposure to EMF causes health hazards. State and federal public health regulatory agencies have determined that setting numeric exposure limits is not appropriate (CPUC 2006). Most of the focus of health concerns has been on magnetic field rather than electric field exposures. This is because electric

¹ In the U.S., it is 60 Hertz (Hz).

field exposures in residences near power lines are minimized due to shielding by structures. Additionally, existing health research offers little to support a connection between electric field exposures and adverse health effects.

Many of the questions about possible connections between EMF exposures and specific diseases have been successfully resolved due to an aggressive international research program. However, potentially important public health questions remain about whether there is a link between EMF exposures and certain diseases, including childhood leukemia and a variety of adult diseases (e.g., adult cancers and miscarriages). As a result, some health authorities have identified magnetic field exposure as a possible human carcinogen. As summarized in greater detail below, these conclusions are consistent with the following published reports: the National Institute of Environmental Health Sciences (NIEHS 1999), the National Radiation Protection Board (NRPB 2001), the International Commission on non-Ionizing Radiation Protection (ICNIRP 2001), the California Department of Health Services (CDHS 2002), and the International Agency for Research on Cancer (IARC 2002).

The federal government conducted EMF research as a part of a \$45-million research program managed by the NIEHS. This program, known as the EMF RAPID (Research and Public Information Dissemination), submitted its final report to the U.S. Congress on June 15, 1999 (NIEHS 1999). The report concluded that:

- “The scientific evidence suggesting that ELF[extremely low frequency]-EMF exposures pose any health risk is weak.”
- “The NIEHS concludes that ELF-EMF exposure cannot be recognized as entirely safe because of weak scientific evidence that exposure may pose a leukemia hazard.”
- “The NIEHS suggests that the level and strength of evidence supporting ELF-EMF exposure as a human health hazard are insufficient to warrant aggressive regulatory actions; thus, we do not recommend actions such as stringent standards on electric appliances and a national program to bury all transmission and distribution lines. Instead, the evidence suggests passive measures such as a continued emphasis on educating both the public and the regulated community on means aimed at reducing exposures. NIEHS suggests that the power industry continue its current practice of siting power lines to reduce exposures and continue to explore ways to reduce the creation of magnetic fields around transmission and distribution lines without creating new hazards.”

In 2001, Britain’s NRPB (NRBP 2001) arrived at a similar conclusion:

After a wide-ranging and thorough review of scientific research, an independent Advisory Group to the Board of NRPB has concluded that the power frequency electromagnetic fields that exist in the vast majority of homes are not a cause of cancer in general. However, some epidemiological studies do indicate a possible small risk of childhood leukemia associated with exposures to unusually high levels of power frequency magnetic fields.

In 2002, three scientists for CDHS (CDHS 2002) concluded:

To one degree or another, all three of the [C]DHS scientists are inclined to believe that EMFs can cause some degree of increased risk of childhood leukemia, adult brain cancer, Lou Gehrig's Disease, and miscarriage.

They [CDHS] strongly believe that EMFs do not increase the risk of birth defects, or low birth weight.

They [CDHS] strongly believe that EMFs are not universal carcinogens, since there are a number of cancer types that are not associated with EMF exposure.

To one degree or another they [CDHS] are inclined to believe that EMFs do not cause an increased risk of breast cancer, heart disease, Alzheimer's disease, depression, or symptoms attributed by some to a sensitivity to EMFs. However, all three scientists had judgments that were "close to the dividing line between believing and not believing" that EMFs cause some degree of increased risk of suicide, or

For adult leukemia, two of the scientists are "close to the dividing line between believing or not believing" and one was "prone to believe" that EMFs cause some degree of increased risk.

Also in 2002, the World Health Organization's (WHO) IARC concluded:

"ELF magnetic fields are possibly carcinogenic to humans", based on consistent statistical associations of high-level residential magnetic fields with a doubling of risk of childhood leukemia...Children who are exposed to residential ELF magnetic fields less than 0.4 microTesla (4.0 milliGauss) have no increased risk for leukemia." In contrast, "no consistent relationship has been seen in studies of childhood brain tumors or cancers at other sites and residential ELF electric and magnetic fields."

In June of 2007, the WHO issued a report on their multi-year investigation of EMF and the possible health effects (WHO 2007). After reviewing scientific data from numerous EMF and human health studies, they concluded:

"Scientific evidence suggesting that everyday, chronic low-intensity (above 0.3-0.4 μ T [3-4 mG]) power-frequency magnetic field exposure poses a health risk is based on epidemiological studies demonstrating a consistent pattern of increased risk for childhood leukaemia.

In addition, virtually all of the laboratory evidence and the mechanistic evidence fail to support a relationship between low-level ELF magnetic fields and changes in biological function or disease status. Thus, on balance, the evidence is not strong enough to be considered causal, but sufficiently strong to remain a concern.

A number of other diseases have been investigated for possible association with ELF magnetic field exposure. These include cancers in both children and adults, depression, suicide, reproductive dysfunction, developmental disorders, immunological modifications

and neurological disease. The scientific evidence supporting a linkage between ELF magnetic fields and any of these diseases is much weaker than for childhood leukemia and in some cases (for example, for cardiovascular disease or breast cancer) the evidence is sufficient to give confidence that magnetic fields do not cause the disease.

Furthermore, given both the weakness of the evidence for a link between exposure to ELF magnetic fields and childhood leukemia, and the limited impact on public health if there is a link, the benefits of exposure reduction on health are unclear. Thus the costs of precautionary measures should be very low.”

Recognizing the scientific uncertainty over the connection between EMF exposures and health effects, the California Public Utilities Commission (CPUC) adopted a policy that addresses public concern over EMF with a combination of education, information, and precaution-based approaches. Specifically, Decision 93-11-013 established a precautionary based “no-cost and low-cost” EMF policy for California’s regulated electric utilities based on recognition that scientific research had not demonstrated that exposures to EMF cause health hazards and that it was inappropriate to set numeric standards that would limit exposure.

In 2006, the CPUC completed its review and update of its EMF Policy in Decision 06-01-042 (CPUC 2006). This decision reaffirmed the finding that state and federal public health regulatory agencies have not established a direct link between exposure to EMF and human health effects, and the policy direction that (1) use of numeric exposure limits was not appropriate in setting utility design guidelines to address EMF, and (2) existing “no-cost and low-cost” precautionary-based EMF policy should be continued for proposed electrical facilities.

“No-cost and low-cost” measures to reduce magnetic fields will be incorporated into the design of this project in accordance with the California EMF Design Guidelines for Electrical Facilities. These measures will be documented in the Field Management Plan for the Proposed Project. The Field Management Plan will be filed as an appendix to the Proposed Project’s Application for a Certificate of Public Convenience and Necessity (CPCN) filed with the CPUC. The CPCN and the Field Management Plan will be available for public review prior to approval by the CPUC.

5.4 CEQA GUIDELINES APPENDIX F: ENERGY CONSERVATION

Appendix F of the CEQA Guidelines states:

Potentially significant energy implications of a project should be considered in an EIR. The following list of energy impact possibilities and potential conservation measures is designed to assist in the preparation of an EIR. In many instances, specific items may not apply or additional items may be needed.

A. Project Description may include the following items:

1. Energy consuming equipment and processes which will be used during construction, operation, and/or removal of the project. If appropriate, this discussion should consider the energy intensiveness of materials and equipment required for the project.
2. Total energy requirements of the project by fuel type and end use.
3. Energy conservation equipment and design features.
4. Initial and life-cycle energy costs or supplies.

5. Total estimated daily trips to be generated by the project and the additional energy consumed per trip by mode.
- B. Environmental Setting may include existing energy supplies and energy use patterns in the region and locality.
- C. Environmental Impacts may include:
 1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
 2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.
 3. The effects of the project on peak and base period demands for electricity and other forms of energy.
 4. The degree to which the project complies with existing energy standards.
 5. The effects of the project on energy resources.
 6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.
- D. Mitigation Measures may include:
 1. Potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal. The discussion should explain why certain measures were incorporated in the project and why other measures were dismissed.
 2. The potential of siting, orientation, and design to minimize energy consumption, including transportation energy.
 3. The potential for reducing peak energy demand.
 4. Alternate fuels (particularly renewable ones) or energy systems.
 5. Energy conservation which could result from recycling efforts.
- E. Alternatives should be compared in terms of overall energy consumption and in terms of reducing wasteful, inefficient and unnecessary consumption of energy.
- F. Unavoidable Adverse Effects may include wasteful, inefficient and unnecessary consumption of energy during the project construction, operation, maintenance and/or removal that cannot be feasibly mitigated.
- G. Irreversible Commitment of Resources may include a discussion of how the project preempts future energy development or future energy conservation.
- H. Short-Term Gains versus Long-Term Impacts can be compared by calculating the energy costs over the lifetime of the project.
- I. Growth Inducing Effects may include the estimated energy consumption of growth induced by the project.

The RTRP is an energy project. Energy use and conservation were considered during the development of the Proposed Project's Purpose and Need, Project Description, and Environmental Analysis. The Proposed Project would improve energy distribution within the RPU service area, allow the City of Riverside to access more renewable energy sources, support already-planned growth, and be constructed in an energy efficient and low-emission manner. Elements of Appendix F recommendations are addressed in Chapter 1, Chapter 2, Chapter 3, Chapter 5, and Chapter 6. Section 1.5 in Chapter 1 (Purpose and Need) describes how the Proposed Project will address peak demand issues and reduce the need for energy-consuming internal generation during peak events. Also here is discussed the fact that the Proposed Project

would respond to an existing need for greater capacity but not create a need for greater capacity. In Chapter 2 may be found information on the Proposed Project's design, construction and operational characteristics. Construction equipment types and duration of use are listed for all construction elements. During operation and maintenance of the Proposed Project, little energy will be consumed (see Section 2.6). Section 3.2.3 (Air Quality and Greenhouse Gas Emissions) in Chapter 3 discusses energy use from fossil fuel combustion during construction and operations and maintenance of the Proposed Project. A description of how route development resulted in a Proposed Project that minimized ground disturbance and thereby equipment/fuel use during construction may be found in Chapter 6.