CHAPTER 6
ALTERNATIVES

6.1 OVERVIEW

In accordance with CEQA and the *CEQA Guidelines* (Section 15126.6(a)), an EIR must describe a range of reasonable alternatives to the project, or to the location of the project that would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project. The range of alternatives required in an EIR is governed by the "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. An EIR is required to discuss only feasible alternatives, that is, alternatives that could feasibly attain most of the project's basic objectives. Statutes and regulations governing CEQA generally define "feasible" to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological and legal factors. Factors generally taken into account in determining whether an alternative is feasible also include, but are not limited to, site suitability, economic viability, availability of infrastructure, General Plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and an ability to acquire, control or access an alternative site. While the EIR must discuss alternatives that may feasibly attain most of the project's basic objectives, the Lead Agency may ultimately reject any alternatives deemed to be infeasible based on factors such as those listed above.

CEQA guidelines also state that the discussion of alternatives need not be exhaustive. The key issue is whether the range of alternatives spans the fundamental ways in which the alternatives to the program or project can be formulated to reduce environmental impacts. With this information, the EIR provides decision-makers and the public with mitigation measures and the alternatives available to minimize or avoid those substantial adverse effects that would result from the proposed project or program. However, an EIR need not consider alternatives for which the effects cannot be reasonably ascertained and for which implementation is remote and speculative.

This chapter addresses alternatives to the program, describes the rationale for including them in the EIR, discusses the environmental impacts associated with each alternative, compares the impacts of each alternative relative to those of the project and each of the other alternatives, and discusses the relationship of each alternative to the program objectives.

6.2 FACTORS IN SELECTION OF ALTERNATIVES

The CEQA *Guidelines* suggest, but do not explicitly require, that an EIR should briefly describe the rationale for selecting the alternatives to be discussed, identify any alternatives that were considered by the lead agency but were rejected as infeasible, and briefly explain the reasons underlying the lead agency's determination (*CEQA Guidelines*, Section 15126.6(c)).

The alternatives addressed in this EIR were selected in consideration of one or more of the following factors:

- The extent to which the alternative would accomplish most of the basic objectives of the program (see *Program Objectives* below);
- The extent to which the alternative would avoid or lessen any of the identified significant environmental effects of the program;
- The feasibility of the alternative, taking into account site suitability, economic viability, availability of infrastructure, general plan consistency, and consistency with other applicable plans and regulatory limitations; and
- The appropriateness of the alternative in contributing to a "reasonable range" of alternatives necessary to permit a reasoned choice

6.3 PROGRAM OBJECTIVES

SCG/SDG&E's primary objective is to request Commission authorization to implement a new service allowing any Carriers to place fiber optic cable in conduit installed in SCE/SDG&E's active gas pipelines in compliance with tariffed rates terms and conditions under new Schedule No. G-FIG. Under Schedule G-FIG, SCE/SDG&E would recover all out-of-pocket costs for making its pipelines ready for the installation of empty conduit to accommodate fiber optic cable, and for on-going operating and maintenance costs.

Secondary objectives would be to provide a less environmentally invasive method for the installation of fiber optic cable for commercial and residential consumers and to deploy fiber optic cable and networks more rapidly thereby reducing costs.

6.4 ALTERNATIVES SELECTED FOR CONSIDERATION

This chapter addresses three alternatives to the proposed program: (1) a No Project Alternative; (2) standard Fiber Optic Cable Installation Alternative; and (3) Use of Existing Infrastructure Alternative. These alternatives are described below, followed by a discussion of their impacts and how they would differ from those of the proposed program.

The alternatives analyzed in this EIR do in some cases either reduce impacts or result in impacts greater than those associated with the proposed program. However, none of the proposed

alternatives would meet the basic objective of the program as proposed by SCE/SDG&E. It should be noted that as gas corporations and not telecommunications carriers, SCG and SDG&E would not currently be in a position to implement Alternatives Two or Three. However, these alternatives have been included because the Carriers that would utilize the new service as proposed by SCE/SDG&E could potentially employ these alternative approaches to install fiber optic cable not using the FIG technology or the applicant's line as gas pipelines for fiber optic cable deployment, therefore, it was deemed important to briefly describe the effects associated with these alternatives for informational purposes to more fully inform the public.

ALTERNATIVE 1: NO PROJECT ALTERNATIVE

The No Project Alternative assumes that the Tariff as requested under the G-FIG application by SCE/SDG&E would be denied and the institution of the proposed new service to provide Carriers with conduit installed in live gas pipelines for the purpose of deploying fiber optic cable would not occur.

Environmental Effects of No Project Alternative

Under the No Project Alternative, none of the potentially significant impacts identified as resulting from the proposed program would occur. Specifically, and as analyzed in the EIR, there would be no impacts related to aesthetics, air quality, biological resources, cultural resources, hazards and public safety, noise, public services, transportation and traffic and utilities and service systems. It should be noted that even under the proposed program scenario all impacts would have been mitigated to a level of insignificance.

In general, the No Project alternative has no significant impact on the environment; however, as noted earlier, neither does it meet the program objective to implement a new service to provide carriers with conduit installed in live gas lines for the purpose of deploying fiber optic cable for commercial and residential consumers. In addition, the potential to save time and lower costs to install fiber optic cable afforded by the proposed program and the more rapid deployment of the attendant services to customers would not occur.

The telecommunications market is constantly changing as new technology is introduced, and there are corresponding changes in regulations, supply, and demand. Given the increasing number of users of telecommunications services and the greater number of available devices (internet, digital television, and video conferences), the demand for additional telecommunications capacity will continue to increase whether or not the proposed program is implemented. Consequently, the changes to the environment from the proposed program would foreseeably occur regardless if the program were not approved and, in the case of air quality, noise, and biological and cultural resources, environmental impacts could be greater due to the use of other construction methods which are more invasive even with mitigation.

ALTERNATIVE 2: STANDARD FIBER OPTIC CABLE INSTALLATION

Alternative 2 considers the deployment of telecommunications infrastructure development by utilizing only currently available standard installation techniques including both underground and aerial construction techniques. This alternative would allow for substantial flexibility for installation of fiber optic facilities by utilizing existing electric utility transmission line towers or existing distribution poles (aerial installation, and undergrounding utilizing existing railroad, public roadway, and electric utility transmission and distribution rights-of-way. These standard installation methods were analyzed to determine if they would have a greater or lesser impact on the environment than the proposed program. For purposes of this discussion, standard installation techniques have been divided into two categories: aerial and underground.

Environmental Effects of Alternative 2

Aerial Installation

Aerial installation methods generally have environmental impacts that are construction-related and thus temporary. Potentially significant impacts that have been identified for aerial installation and that would be applicable to this alternative include impacts related to aesthetics, air quality, land use, noise, recreation, or traffic/circulation. However, because aerial installation results in no significant ground disturbance, impacts related to agricultural resources, biology, cultural resources, hydrology/surface water quality, would still potentially occur but be greatly reduced, and therefore not significant. There are disadvantages to utilizing aerial facilities for the deployment of fiber optic cable. Transmission towers and corridors are typically only accessible if the Carrier holds agreements with the utility company with ownership of the corridor. The utility company must also have legal authority from the CPUC to lease its utility structures for fiber optic facilities. Moreover, multiple jurisdictions' rules throughout the proposed study area are currently placing all existing aerial facilities underground or disallowing additional attachments to existing facilities. Compliance with these local jurisdictions could become an issue in those areas where transmission towers may only be available for use to a substation; however, connection between the substation and the building or customer would not be obtained through aerial installation due to local jurisdiction limitations or lack of availability of existing structures.

Underground Installation

Underground installation methods which are most often typified by horizontal directional drilling (HDD) and trenching generally have environmental impacts that are only temporary and construction-related. Following installation, the fiber optic facilities installed using underground construction methods are minimally visible and therefore result in no permanent impacts. Potentially significant impacts would include impacts to biological and cultural resources, air quality, transportation and traffic, noise, land use, aesthetics, and recreation. Temporary construction-related impacts associated with underground installation may result in the greatest level of overall potentially significant impacts, as such construction methods that are utilized to cross sensitive resources, such as stream crossings, often provide the highest risk for potential impacts. In particular, streams are commonly traversed by the HDD technique to avoid direct

impacts to biological resources and surface water quality from trenching, accidental drilling fluid releases are nearly unavoidable and unpredictable even when implementing strict prevention methods and monitoring. Besides the increased risk for impacts to biological resources and surface water quality, cultural resources may also be impacted in areas where alternative methods of installation may not be employed, as ground disturbance can impact unanticipated cultural resources or previously recorded sites.

There is a much higher probability for significant impacts occurring from underground installation techniques as represented by this alternative because the mitigation(s) to offset the identified impacts that may result from trenching, for example, are often implementation of alternative methods of installation (i.e., aerially spanning a waterway to avoid direct impacts to biological resources and water quality).

This alternative would not be considered environmentally superior to the proposed program as all the potential impacts that result from underground construction are neither less nor as readily avoidable. Aerial installation impacts would be less than those imposed by undergrounding (and are generally temporary and mitigable) but are still greater than impacts associated with the proposed program.

ALTERNATIVE 3: USE OF EXISTING INFRASTRUCTURE ONLY

As Alternative 2 limits the program to standard installation techniques (aerial or underground), Alternative 3 limits the program to use of existing infrastructure only, with no need for ground disturbance or installation of new facilities with the possible exception of handhole/manhole installation to maintain access to its facilities. Existing facilities include utilizing idle petroleum and natural gas pipelines and existing underground conduit in public rights-of-way which could include municipal sewer pipelines.

Environmental Effects of Alternative 3

As Alternative 3 utilizes existing facilities, no additional construction would be required with the possible exception of minimal excavation for handhole/manhole installation. The potentially significant impacts identified for the proposed program and particularly for Alternative 2 resulting from ground disturbance during construction would not occur for this alternative. They include impacts to aesthetics, air quality, biology, cultural resources, hydrology/surface water quality, land use, noise public services and utilities and recreation. Potential impacts could occur due to traffic/circulation when access to the existing facilities require installation equipment within roadways, however, due to the temporary nature of the impact and the required coordination with the local authorities, it would not be considered significant.

Using existing underground ducts within roadways or other rights of way can be an environmentally benign alternative. If an existing underground duct has available room for the proposed fiber optic cable, there are negligible environmental impacts associated with opening the duct and installing the cable. Most of these facilities are located under city streets where construction causes only short term, and minor vehicle traffic disruption while the optical fibers

are pulled through the ducts and connected to existing facilities. This alternative greatly reduces the number of impacts identified for the proposed program, and is therefore considered environmentally superior.

A substantial limitation of this alternative is that existing underground duct facilities are absent or over subscribed in many areas throughout the study area making availability difficult. Moreover, the use of existing infrastructure is extremely limiting to reach potential customers because connections to those customers could only occur where existing infrastructure is present. In many cases, no infrastructure now exists which could be used to reach many residential and commercial consumers. This is one of the advantages the FIG technology and use of existing gas distribution pipelines accords.

The cost effectiveness of this option is dependent upon the owner of the unutilized space and the willingness of the owner to allow use of the space. Where there is unused capacity in existing underground ducts, this construction method is the most preferable as it is cost-effective, buildable in a timely manner, and avoid or mitigates program impacts to less than significant levels. However, because the applicant owns very few of these types of rights, this method of installation would not be feasible as the primary installation method.

Another potential public right of way location for the installation of duct for installing fiber optic cable is municipal sewer pipelines. There are currently several companies that are utilizing this existing infrastructure to install conduit for fiber optic lines. Just as gas pipelines are generally available to the majority of commercial and residential customers in the proposed areas of service for SCE/SDG&E so to are sewer lines. Installation of conduit poses less safety risks due to the nature of the sewer environment. There are no high pressure pipe environments to cause concern and no natural gas that could be ignited by a construction, puncture of a line, and gas release accident or static electricity. However, the sewer environment is still harsh and highly corrosive and potential capacity issues exist depending on the size of the line, in particular to residential customers. Still, this avenue for the installation of fiber optic cable has few potentially significant impacts and those are generally related to temporary construction.

Again, the use of existing infrastructure is the environmentally superior alternative as it uses existing facilities to provide a location for the deployment of fiber optic cable. This method of installation does meet the secondary program objectives of providing a less environmentally invasive method for installation and potential reduced costs by providing a more rapid method to provide connection to commercial and residential customers. However, there are capacity limitations to this method and while it offers an alternative to the Carrier to deploy fiber optic cable again the primary objective of the proposed program is not met.