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CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES Part 24 – Other NEPA and CEQA Considerations and Issues

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Other NEPA and CEQA Considerations and Issues

Pursuant to the National Environmental Policy Act and California Environmental Quality Act, additional topics must be considered and evaluated relevant to implementation of the KMPUD Power Line Reliability Project. The following topics are discussed in this section:

- Growth Inducing Impacts
- Energy Conservation
- Short-term Uses and Long-term Productivity
- Significant Unavoidable Adverse Effects
- Irreversible and Irretrievable Commitments of Resources

Growth Inducing Impacts

This section defines growth-inducing impacts and evaluates the potential of the Proposed Action / Proposed Project and alternatives to directly or indirectly induce growth. The format of this section differs from other resource sections in the EIS/EIR because there are no specific thresholds from which to measure potential impacts. The significance of growth inducement is not the growth itself, but how the growth leads to impacts on the various environmental resources.

State CEQA Guidelines (§15156[d]) require that an EIR evaluate the growth inducing impacts of a proposed action. As described in §15156[d], growth inducing include:

The ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth. Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. In addition, the characteristics of some projects may encourage and facilitate other activities that could significantly affect the environment and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct effects would result if a project, for example, involved the construction of new housing. Indirect effects to growth inducement would result if a project established substantial new permanent employment opportunities, involved a construction effort with substantial short-term employment

opportunities that would indirectly stimulate the need for additional housing, or removed an obstacle to housing or development.

Affected Environment

The KMPUD service area serves both the Kirkwood residential community and Kirkwood Mountain Ski Resort. In 2009, there were approximately 700 full and part-time residences, with a maximum peak overnight population of approximately 3,000 persons. Future population growth within Kirkwood is regulated by the 2003 Kirkwood Specific Plan, which establishes goals, objectives, and policies for development within Kirkwood and identifies land use zoning designations and allowable maximum densities. Based on the approved 2003 Kirkwood Specific Plan, peak overnight population at build out of the community is estimated at 6,117 persons.

Kirkwood is surrounded entirely by Eldorado National Forest, and the proposed power line alignment would be located primarily (85 percent) within ENF lands. Population within the National Forest is limited to the existing recreational residences located at Bear River Reservoir, Silver Lake, Devil's Gate, and Kirkwood Lake. Recreational residences cannot be the principal residence of any recreational residence permit holder (ENF, 2000).

As described in the Land Use section of Chapter 3, private land is limited and scattered along the proposed power line alignment. Population growth within private land is regulated by county land use and zoning regulations.

Growth Inducing Effects

Construction Related Effects

The construction of the power line would not directly affect growth, as it does not result in the increase of housing, long-term employment, or demands for public facilities and services. As described in the Social and Economics Section of Chapter 3, it is estimated the maximum number of construction workers that would be present onsite during the first season would approach 53 individuals per day for a five week period during the months of July and August, while a maximum number of construction workers during the second construction season would be approximately 25 individuals per day. There is sufficient temporary housing within the local communities of Jackson, Pioneer, and Kirkwood to support the needs of the temporary increase in workers to the area. While the presence of the additional workers would have a localized beneficial effect as a result of spending on goods and services, this effect would be short term and would not be expected to result in a permanent increase in housing. There would be no growth inducing effects because the need for community facilities and services would be met by existing services and facilities.

Provisions for Additional Electric Power

Indirect effects to growth inducement would not occur as a result of the removal of existing constraints to development and growth by providing easier and/or cheaper access to power. While a cost estimate of electrical rates concludes that over the long-term, construction of the power line would provide less expensive power for KMPUD customers (reference Social and Economic Section), it would not increase the residential or commercial development within Kirkwood, because the number of residential units and square footage of commercial development has been established within the approved Kirkwood Specific Plan (2003).

Additionally, the 34.5 kV KMPUD power line is designed and sized to provide a maximum 10-megawatt load, which meets the KMPUD estimated power needs of the community and resort at the approved Specific Plan build-out (Kirkwood, 2003). Based on the proposed design, there is not excess power to support additional growth and development beyond what is currently approved by the Kirkwood Specific Plan and the 2003 Kirkwood Mountain Resort Mountain Master Development Plan. Therefore, the project would not result in a permanent increase in housing or need for community facilities beyond what is planned for and approved within Kirkwood. The project would facilitate growth within Kirkwood consistent with the approved Specific Plan.

Provision of electrical grid power through the Highway 88 corridor area where it was previously unavailable would not be a trigger for growth because power from the KMPUD owned power line would not be made available to adjacent properties, and therefore would not alleviate a constraint where limitations on power availability are curtailing development. As described in the Purpose and Need section in Chapter 1, the purpose of the proposed project is to provide the KMPUD service area with a cost-stable and reliable source of energy. Providing electrical service to properties outside of the KMPUD service area is not within the purpose and need of the project.

Land outside of the Kirkwood valley is located within the PG&E service area and is outside of the KMPUD service boundary, and it would be unlawful for KMPUD to serve lands outside its service area boundaries. Similarly, as the line is owned by KMPUD, PG&E would not have the right to use power from the line to serve customers within its service area. A city or district that supplies power cannot serve electricity outside its boundaries without first receiving the approval of the Local Agency Formation Commission, or LAFCo, in the affected county (California Government Code 56133(a)). The requirements for LAFCo approval for out of area service are restrictive and require a demonstrated need. The LAFCo can authorize out of boundary service in anticipation of the district expanding its boundaries to annex, or include a new area. Such an annexation would require, among other things, a public vote in order to permit electric service (Government Code sections 56129, 56130). KMPUD has no plans or interest in annexing lands along Highway 88. As the private lands at Kirkwood are completely surrounded by ENF, it is not likely that KMPUD could expand its service area through acquisition of additional lands or annexation.

The project would not provide electricity to properties along the power line corridor because of the service area restrictions and the design limitations of the line, therefore the project would not assist in future growth of the area outside Kirkwood.

Energy Conservation Measures

The California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient wasteful and unnecessary consumption of energy (Public Resources Code Section 21100(b)(3)).

The Kirkwood Community has expressed a desire and commitment to be a “greener” community through incorporation of renewable resources and energy conservation. Individually, homeowners at Kirkwood have installed solar and geothermal systems to reduce their reliance on fossil fuels. Collectively, community members have developed a Renewable Energy Advisory Committee to KMPUD to promote energy conservation and alternative energy use by homeowners and Kirkwood Mountain Resort. KMPUD supports the efforts of this group and has pledged to purchase 100 percent of the solar energy generated by homeowners in excess of the homeowner’s use.

Diesel fired internal combustion engines have generated power in the Kirkwood valley since 1972. Implementation of the proposed project would substantially reduce residential reliance on fossil fuels, limiting operation of the diesel fired combustion engines to backup use only. Interconnection to the regional electrical grid allows Kirkwood to access power generated from large-scale wind and solar farms and hydroelectric power, which currently supply power to the regional electric grid. Additionally, the project would also allow for commercial and residential use of alternative power generation to supply energy to the grid from individual or combined solar or wind energy generation systems located in-valley.

As part of the Kirkwood community, Kirkwood Mountain Resort has implemented many energy conservation measures to reduce the energy consumption at the resort. Since 2005, Kirkwood has systematically completed energy saving retrofits in 100 percent of the resort buildings including bulb replacements, weather stripping, windows, and insulation. These measures are summarized in Table 90 and have reduced wasteful, inefficient, and unnecessary consumption of energy in Kirkwood.

Table 3-90. Kirkwood Mountain Resort Energy and Water Conservation and Solid Waste Reduction Measures

Energy Conservation Measures	Conserved Energy Realized Annually
Bulb replacement and light switch replacement with motion sensors	7,500 kWh
Weather-stripping, window replacement, increased roof insulation	Not available
Water heater blankets in employee housing units	184 kWh
Energy-efficient heating panels in employee housing units	1,000 kWh
Employee Energy Conservation Incentive Program	Not available
New Apex Dish Machines	2,100 kWh
Car pooling programs	Not available
Water Conservation Measures	Conserved Water Realized Annually
Low flow Fixture retrofit for toilets, shower heads	Not available
New Apex Dish Machines	7,300 gallons
Linen re-use program	2,500 gallons
Solid Waste Reduction Measures	Reduction Realized Annually
Glass, plastic and aluminum can recycling	85%
Battery, light bulb, cardboard, cooking oil, and motor oil recycling	100%

Short-term Uses and Long-term Productivity

NEPA requires consideration of "the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity" (40 CFR 1502.16). As declared by the Congress, this includes using all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans (NEPA Section 101).

For Alternatives 2, 3, and 4 the short-term activities in the KMPUD project area environment to install the power line and related appurtenances would provide the opportunity to obtain, generate and disseminate renewable power and conserve fossil fuels over the long term. In order to meet the purpose and need for more reliable electrical power, construction related ground disturbance would increase impacts to habitat, watersheds, and soils for the short-term. However, watersheds, soils, and habitat are expected to recover over the long-term, without a loss in long-term productivity.

Unavoidable Adverse Effects

Implementation of the Proposed Action / Project and action alternatives would result in some unavoidable adverse environmental effects. However, with one exception, implementation of the project design criteria would reduce these effects to less than significant levels. Implementation of Alternative 2 would cause unavoidable, *significant* impacts to cultural resources in Segment 6 of the buried line corridor. While it may be possible to mitigate these impacts, the impacts would be permanent. Alternative 3 would eliminate unavoidable, significant long-term impacts to cultural resource.

As described in the environmental Effects Analysis sections for each resource area, all alternatives have some unavoidable adverse environmental effects that are reduced to less than significant levels through project design and incorporation of design criteria. These *less than significant* adverse effects are summarized below.

- Project construction would result in temporary closures of some recreational areas. During construction, temporary lane closures on Highway 88 and Bear River Road would cause increased traffic congestion that would cause delays and disrupt scenic driving. Noise from construction activities would create a temporary nuisance to nearby recreationists and residences.
- Although emissions would comply with state and local air quality rules and regulations, temporary impacts to air quality from construction would result in increased dust and exhaust from heavy equipment from implementation of Alternatives 2, 3 and 4.
- Construction and long-term management of the overhead power line would have a negative effect on forest vegetation from the removal of large trees, and would affect sensitive species habitat. Impacts to vegetation along the buried line for construction access would be short-term in duration.
- Soil disturbance and compaction would occur although rehabilitation of the temporary construction right-of-way would reduce these effects.
- Unknown occurrences of sensitive or special interest plants could be damaged or destroyed by construction activities associated with the action alternatives.

Implementation of the No Action / No Project Alternative would result in increasing emissions from the diesel fired generators and a corresponding long-term decrease in air quality within Kirkwood Valley.

Irreversible and Irretrievable Commitments of Resources

Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. Irretrievable commitments are those that are lost for a period of time such as the temporary loss of timber productivity in forested areas that are kept clear for use as a power line rights-of-way or road.

Section 1512.6 (c) of the CEQA Guidelines states that significant irreversible environmental changes that would be involved with a project may include:

- Uses of non-renewable resources during the initial and continued phases of the project which would be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely;
- Primary impacts and, particularly, secondary impacts which commit future generations to similar uses; and
- Irreversible damage which may result from environmental accidents, associated with the project.

The following sections describe the irreversible and irretrievable commitments of resources as a result of energy and materials consumption, accidental release of hazardous materials, land disturbance, and visual impacts.

Energy and Materials Consumption

Implementation of the proposed project would result in the consumption of energy and materials. Fossil fuels would be required for construction and the project, as well as operation and maintenance. Based on estimated time of equipment use during construction, a total of 140,000 – 160,000 gallons of diesel fuel and 24,000 gallons of aviation fuel would be consumed during construction.

Use of the diesel fueled engines for back up power and testing would also require use of non-renewable resources. While the amount of diesel used for backup power generation would be directly related to the number of power outages along the line, under current power demands, up to 2,000 gallons of diesel fuel per day are needed during peak use. To meet peak demand at build out, approximately 6,000 gallons of diesel fuel per day are needed.

Construction of the power line and substations would require the manufacture of new materials, much of which would not be recyclable upon decommission of the line. The raw materials and energy required for the manufacture of these materials would also result in an irretrievable commitment of natural resources. Operation and maintenance of the power line would not cause a substantial increase in the consumption or use of non-renewable resources.

Land Disturbance and Long-term Use

Implementation of Alternative 2 or Alternative 3 would result in an irretrievable loss of overstory vegetation within approximately 28.2 and 27.6 miles, respectively, along the maintained power line right-of-way and the ecological functions and habitat that it provides. However, the site productivity would remain and these effects are not irreversible because the power line could be abandoned and vegetation / habitat allowed to re-establish. Construction of the KM Green substation would result in 0.4 acres of irretrievable loss of forested vegetation at either evaluated substation locations. These impacts would not be irreversible because the power line could be abandoned and site productivity restored.

Soil compaction, loss of soil productivity, and reduced hydrologic function caused by construction activities would be considered an irreversible commitment of resources. Soil loss due to erosion and transport would be both irreversible and irretrievable. Implementation of the design criteria specified in Chapter 2 and BMPs outlined in Appendices A and B would reduce the overall magnitude of these potential losses to less than significant.