4.8 ENERGY AND MINERAL RESOURCES

Would the proposal result in:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with adopted energy conservation plans?	☐	☐	☒	☐
b) Use non-renewable resources in a wasteful and inefficient manner?	☐	☐	☒	☐
c) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the state?	☐	☐	☒	☐

SETTING

Petroleum and natural gas supply most of the energy consumed in California. Petroleum (used primarily for transportation) provides about 50 percent of the state's energy needs, and natural gas provides about 29 percent (CEC, 1994). The remaining supply comes from a variety of energy resources, including coal, nuclear, wind, geothermal, and hydropower.

Roughly 21 percent of California's total energy use is consumed as electricity. Geothermal, hydropower, nuclear, and "other" (including wind, solar and biomass) account for about 50 percent of the electricity consumed; natural gas fuels about 31 percent and coal (from out-of-state power plants) accounts for about 19 percent of the power consumed in California. Petroleum accounts for less than 1 percent. (Actual percentages tend to vary quite widely depending upon weather; for example, hydropower generation in 1997-1998 was roughly double that in 1996-1997 because of the large amounts of precipitation caused by a strong El Niño effect during the latter wet season.) Nearly two-thirds of the energy used to create electricity is lost in the generating process, either in heat losses (such as the heat escaping up the smoke stack of a conventional gas-fired power plant) or transmission line and transformer losses. After accounting for losses, about 13 percent of the energy used to create electricity is consumed in the commercial sector, 10 percent in the industrial sector, and 10 percent in the residential sector (CEC, 1994).

The California Energy Commission (CEC) has formulated and adopted a set of energy policies. These include policies to develop programs that meet energy and environmental quality needs; to promote competitive markets and energy efficiency technologies; to balance energy, economic, and environmental goals; to collaborate with the electricity and natural gas industries to redefine government's energy regulatory role; and to implement policies to achieve cost-effective building and appliance efficiency (CEC, 1994).

Specific plans, recommendations, and action steps include:

- Increased efficiency should supply most of California's new energy needs because this option is usually the least expensive and most environmentally benign.
- California should encourage the most cost-effective and efficient operation of its existing electricity generation, transmission, and distribution systems to minimize the economic and environmental impacts of existing facilities or new construction.
- The full costs and benefits of environmental impacts should be included in the economic evaluation of all proposed energy activities to capture the full benefits of the marketplace (CEC, 1991).

The generating assets being divested use four primary fuels: natural gas, residual fuel oil, JP-5 jet fuel, and diesel fuel.

CHECKLIST ISSUES

a) CONFLICT WITH ENERGY CONSERVATION PLANS

SDG&E's proposed divestiture does not appear to conflict with the state's adopted energy conservation plans (described above).

A legislative goal of electrical restructuring, of which divestiture is a part, is to lower California's price of electricity below today's levels and cause more businesses to locate or expand their operations in California. Divestiture of power plants in California is expected to decrease electricity rates by promoting open competition among generators. A decrease in electricity rates could result in an increase in electricity consumption because of factors related to supply and demand; basic economic theory holds that a lower delivered price for a commodity will increase consumption of that commodity. The rate or proportion of increase is termed the price elasticity. The price elasticity for electric demand is estimated at 0.1 to 1.0, with the elasticity generally growing over time as consumers adapt to changing prices. This means that a 1 percent reduction in the cost of electricity could eventually cause up to a 1 percent increase in new demand (McCann, 1998).

Generation costs will likely be less than one-third of the average electric rate paid by consumers, and increased competition in generation resulting from divestiture of utility generation assets throughout California is unlikely to lower generation costs by more than 5 percent. Thus, the average electricity rate is likely to fall by less than 2 percent. Given these projections and the economic theory described above, electricity demand caused by decreases in consumer costs is unlikely to rise by more than 2 percent over the long term. Given that divestiture overall would not create a significant increase in demand, the change in demand as a result of this project would be less than significant.

One of the key features of Assembly Bill 1890, of which divestiture is a direct result, is that it contains provisions for supporting energy efficiency and research, development and

demonstrations (R&D) activities. Under restructuring, the CPUC will require minimum renewable resource purchases with tradable credits. Energy efficiency programs, low-income assistance programs, and public goods research development and demonstration will be funded by a non-bypassable surcharge charged to electricity customers. R&D activities in support of new generation technologies will be encouraged in the entrepreneurial market. None of these programs, which stem from restructuring, would conflict with any conservation plans.

The CEC discusses measures to achieve cost-effective energy efficiency that would promote energy conservation (CEC, 1994). These include:

- market-oriented programs to create advantages for energy-efficient buildings;
- better compliance with existing standards and improved installation of new equipment;
- improving quality, availability, and credibility of consumer information on energy use and potential savings from energy efficiency measures;
- coordination of future standards updates with industry; and
- promotion of cost-effective energy efficiency technologies and practices for consumers.

Energy conservation programs sponsored by SDG&E are tied to the distribution side (e.g., the consumer). These include energy-saving tips such as installing home insulation, energy-efficient lighting or energy-efficient windows, lowering the thermostat during cold months, and so on. Electricity generators are not involved in any of these programs, so that the programs would not be affected by divestiture.

Divestiture of the SDG&E generation facilities does not appear to conflict directly with any adopted energy conservation plans. As discussed in Chapter 3, energy use may increase slightly with divestiture versus without divestiture because the new owner(s) would have incentives to run the units at higher levels than they are operated at present. However, this would be a less-than-significant impact.

Conclusion

Divestiture does not conflict with any adopted energy conservation plans. Therefore, this would be a less-than-significant impact.

b) WASTEFUL OR INEFFICIENT USE OF NON-RENEWABLE RESOURCES

The new owner(s) of the power plants and the combustion turbines (CTs) being divested would have incentives to run the units at higher levels than they are operated at present. In addition, retirement of the units may be deferred, as compared to current regulated conditions. In order to compete in the electrical generation market, it is expected that overall efficiency of the units would be improved. Units that cannot compete would not be operated as much as more efficient units.

Conclusion

The increased use of energy resources that could result from divestiture is likely to be less wasteful or inefficient. This impact is less than significant.

c) LOSS OF AVAILABILITY OF KNOWN MINERAL RESOURCES

The projected increase in electricity generation from SDG&E's proposed divestiture would require additional fuel. However, divestiture would not be expected to significantly affect the availability of known resources, because the increased fuel demand would be met by existing in-state and out-of-state resources. Other mineral resources would not be affected by the project. Therefore, this would be a less-than-significant impact.

Conclusion

Because existing resources would meet the increased fuel demand, the impact would be less than significant.

REFERENCES — Energy and Mineral Resources

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