

SOCIOECONOMICS

Joseph Diamond Ph. D.

SUMMARY OF CONCLUSIONS

Staff has determined that the 163 MW Humboldt Bay Repowering Project (HBRP) would not cause a significant adverse direct, indirect or cumulative socioeconomic impact on the area's housing, schools, parks and recreation, police, emergency services, and hospitals. Gross public benefits from the project include capital costs, construction and operation payroll, property taxes and sales taxes, and the value of purchased materials and supplies.

INTRODUCTION

Staff's socioeconomic impact analysis evaluates the project induced changes on community services and/or infrastructure, and related community issues such as Environmental Justice (EJ). Staff discusses the estimated beneficial impacts of the construction and operation of the HBRP and related economic impacts.

LAWS, ORDINANCES, REGULATIONS AND STANDARDS

CALIFORNIA GOVERNMENT CODE, SECTIONS 65996-65997

These sections include provisions for school district levies against development projects. As Amended by Senate Bill (SB) 50 (Stats. 1998, ch. 407, sec. 23), these sections state that except for those fees established under Education Code 17620, public agencies at the state level may not impose fees, charges, or other financial requirements to offset the cost for school facilities.

SETTING

The affected area for socioeconomic as defined by the applicant in the HBRP Application for Certification (AFC) and considered by staff is expected to be in the unincorporated area of Humboldt County near the City of Eureka.

Research shows that construction workers will commute as much as two hours one-way from their communities rather than relocate (Electric Power Research Institute 1982). Staff agrees with the applicant's conclusion that during construction one-third of the workers would potentially be drawn from Humboldt County. About two-thirds of the construction labor force would be from other parts of California and the Western US (PG&E 2006a). Therefore, staff utilized this labor market area for its evaluation of construction worker availability and community services and infrastructure impacts from construction of the HBRP.

Humboldt County was used as the study area by staff in identifying fiscal and non-fiscal (private sector) benefits and other potential socioeconomic impacts from the HBRP.

DEMOGRAPHIC SCREENING

The purpose of an environmental justice screening analysis is to determine whether a below poverty level and/or minority population exists within the potentially affected area of the proposed site. Staff conducted the demographic screening in accordance with the “Final Guidance for Incorporating Environmental Justice Concerns in EPA’s NEPA Compliance Analysis” (Guidance Document) (EPA 1998). People of color populations, as defined by this Guidance Document, are identified where either:

- The minority population of the affected area is greater than 50% of the affected area’s general population; or
- The minority population percentage of the area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.
- One or more census blocks in the affected area have a minority population greater than 50%.

In 1997, the President’s Council on Environmental Quality issued Environmental Justice Guidance that defines minority as individuals who are members of the following population groups: American Indian or Alaskan Native, Asian or Pacific Islander; Black not of Hispanic origin; or Hispanic. Low-income populations are identified with the annual statistical poverty thresholds from the Bureau of the Census’s Current Population Reports, Series P-60 on Income and Poverty (OMB 1978).

Staff reviewed Census 2000 information that shows the minority population by census block (the smallest geographic unit for which the Census Bureau collects and tabulates data) is 18.29% and 17.53% which is less than staff’s threshold of greater than 50% within a six-mile and one-mile radius of the proposed HBRP (See **Socioeconomics Figure 1**). Census 2000 by census block group (a combination of census blocks and subdivision of a census tract) information shows that the below poverty population is 20.4% within the six-mile radius and 16.89% within the one-mile radius. Poverty status excludes institutionalized people, people in military quarters, people in college dormitories, and unrelated individuals under 15 years old.

ASSESSMENT OF IMPACTS

Staff reviewed the HBRP socioeconomics section of the AFC and other socioeconomic data. Staff used the socioeconomic data provided and referenced from various governmental agencies, trade associations and its own independent analysis to form the following socioeconomic analysis and conclusions.

METHOD AND THRESHOLD FOR DETERMINING SIGNIFICANCE

According to Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a project may have a significant effect on population, housing and public services if the project will:

- induce substantial population growth in an area, either directly or indirectly;

- displace substantial numbers of people and/or existing housing, necessitating the construction of replacement housing elsewhere; or
- adversely impact acceptable levels of service for fire and police protection, schools, parks and recreation, and other public facilities.

A socioeconomic analysis looks at beneficial impacts on local finances from property and sales taxes as well as potential adverse impacts on public services. In order to determine if a project would have any significant impacts, staff analyzes whether the current status of these community services and capacities can absorb the project related impacts in each of these areas. If the project's impacts could appreciably strain or degrade these services, staff considers this to be a significant adverse impact and would propose mitigation. A project's property taxes, sales tax or local school impact fees or development fees can help local governments to augment public services required to meet project needs.

In this analysis staff used fixed percentage criteria for environmental justice in evaluating potential impacts. For environmental justice, staff uses a threshold of greater than 50% for minority/below poverty population as a subset of the total population in the local area. Criteria for subject areas such as utilities, fire protection, water use and wastewater disposal are in the **Water Resources, Reliability, Safety and Fire Protection**, and **Waste Management** sections of this Preliminary Staff Assessment (PSA). Education impacts are subjectively determined or determined with input from local and state agencies but are ultimately moot, as described later. Impacts on housing, parks and recreation, medical services, law enforcement, and cumulative impacts are based on subjective professional judgments or input from local and state agencies. Substantial employment of people who come from regions outside the study area has the potential to result in significant adverse socioeconomic impacts.

DIRECT/INDIRECT/INDUCED IMPACTS

Staff reviewed the HBRP AFC, Vol. I, Socioeconomics section (PG&E 2006a). Based on staff's use of the socioeconomic data provided and referenced from governmental agencies, trade associations and staff's independent analysis, staff completed the following socioeconomic analysis and derived the following conclusions.

Population and Employment

The 2000 U.S. Census shows that California had a total population of 33,871,648, with a minority (non-white and white-Hispanic) population of 18,054,858 (53.%), and a white population of 15,816,790 or (46.7%). Humboldt County had a total population of 126,518 with 103,230 or 81.6 white non-hispanic (California Department of Finance 2000 and PG&E 2006a). By 2010, projections show a California population of 39,246,767 and 133,136 residents in Humboldt County (California Department of Finance 2000 and PG&E 2006a).

The unemployment rate for Humboldt County was 5.3% in August 2006 (not seasonally adjusted). This is not full employment for Humboldt County but close. Full employment has been defined as approximately 4 to 5% unemployment over the last few decades. For California, the unemployment rate was 4.9% in August 2006 (State of California 2006).

Staff believes that construction workers travel to a job site on a daily basis that may involve as much as a one or two-hour commute. **Socioeconomics Table 1** shows that available labor, by skill, in Del Norte, Humboldt, Lake, and Mendocino counties, with annual averages for 2002 and a projection for 2012, is adequate when compared to the HBRP needs. It is largely (except for Lake County) within a two hour commute to the HBRP site, or construction workers can relocate to the site during the week and return to their families on the weekend. The applicant used the Humboldt and Del Norte Building Trade Council and information from the California Employment Development Division (EDD) presented in AFC Table 8.10-12 Available Labor Skill in Humboldt County, 2002 to 2012 (which is similar to staff's **Socioeconomics Table 1**) and concluded that the workforce in Humboldt County would be adequate to fulfill HBRP's labor requirements for construction (PG&E 2006a).

SOCIOECONOMICS Table 1
Available Labor in The North Coast Region (Del Norte, Humboldt, Lake, and Mendocino Counties) by Skill for Construction and Operations

Occupational Title	Annual Averages		Maximum Needed Per Month By HBRP
	2002	2012	
Carpenters	820	950	20
Cement Masons & Concrete Finishers	180	240	25
Painters, Construction & Maintenance	310	400	5
Sheet Metal Workers	110	150	10
Electricians	190	250	55
Iron Workers	N/AV*	N/A	20
Industrial Truck & Tractor Operators	660	730	2
Helpers, Laborers	160	190	55
Plumbers, Pipefitters, & Steamfitters	190	260	50
Labor	N/AV	N/AV	55
Plant & System Operators	460	550	18
Millwright	180	200	35
Teamster (Truck Drivers, Heavy and Tractor Trailer)	1,170	1,440	2
Insulation Worker	N/AV	N/AV	10

Source: PG&E 2006a and CAEDD 2007.

* Not Available (N/AV)

Project construction (power generation facility including the natural gas pipeline) is expected to occur over an 18-month period. The greatest number of construction workers (peak) would occur in the 11th and 12th month of construction. The number of construction workers would range from about four in the last month of construction to 236 workers at peak construction. The HBRP's peak construction activity (236 workers) represents about 10% of the North Coast Region's labor market construction workforce of 2,300 (CAEDD 2006). There would be an average of 101 workers per month during construction.

During operation of the project, about 17 workers would be needed to maintain and operate the project. The operational workers are expected to come from Humboldt

County. Staff estimates that this small increase in employment would have little effect on employment rates.

While it is anticipated that there is sufficient available labor supply to construct the HBRP from the North Coast Labor Region comprised of four counties as shown in **Socioeconomics Table 1** or Humboldt County as discussed earlier, the applicant has stated that about one-third of the labor force would come from areas nearby Eureka, Humboldt County, and surrounding areas. Two-thirds will be imported from other California and Western U.S. areas. This is a conservative scenario which staff views as useful and accepts. The operations workforce would come entirely from Humboldt County (PG&E 2006a).

The Impact Analysis for Planning (IMPLAN) model (an input-output model), used by the applicant to estimate employment and income impacts from the HBRP on the study area is acceptable to staff. The University of California at Berkeley uses the IMPLAN model for regional economic assessment, and it has been used to assess other generating projects in California and the U.S. IMPLAN is a disaggregated type of model that divides the (regional) economy into sectors and provides a multiplier for each sector (Lewis et al. 1979). Social Accounting Matrix (SAM)¹ multipliers were used for the applicant's economic impact analysis. SAM multipliers are similar to Type II² multipliers because they both include the indirect and induced effects (secondary impacts). IMPLAN multipliers were used to calculate direct, indirect, and induced jobs and expenditures in the regional economy.

The IMPLAN runs estimate total construction employment at 185 total jobs (84 secondary jobs) based on an average of 101 project-related construction jobs. The HBRP annual construction income of \$6.35 million would result in positive or beneficial secondary impacts of approximately \$2.35 million and positive or beneficial total impacts of approximately \$8.71 million. As reported by the applicant, the HBRP's construction employment multiplier is approximately 1.8 and the construction income multiplier is approximately 1.4

For HBRP operations, 17 direct operations jobs and 49 jobs as secondary impacts yield an estimated total of 66 jobs. \$2,100,000 annual operations expenditures yield a positive or beneficial secondary impact of approximately \$1,495,820 and a total income impact of approximately \$3,595,820 (PG&E 2006a and CH2MHILL 2007a). As reported by the applicant, the HBRP's operation employment multiplier is approximately 3.9 and the income multiplier is approximately 1.7.

Staff finds the economic impact analysis reasonably consistent with the economic literature cited by many economists (Moss et al. 1994 and Mulkey et al. 2000) and

¹ Type SAM multipliers capture inter-institutional transfers and account for social security and income tax leakages, institutional savings, and commuting.

² A Type I multiplier is the ratio of the direct plus indirect change to the direct change resulting from a unit increase in final demand for any given sector. A Type II multiplier is the ratio of the direct, indirect, and induced change to the direct change resulting from a unit increase in final demand. The Type II multiplier takes into account the HBRP repercussionary effects of secondary rounds of consumer spending in addition to the direct and indirect inter-industry effects (Richardson 1972). Both multipliers can be of an income or employment type. Indirect changes are production changes in industries supplying the original industry (backward linkages). Induced changes are changes in regional household spending levels caused by regional employment impacts.

therefore finds these projected beneficial economic impacts close enough to the benchmarks to be considered reasonable.

Economic changes on a net basis (the new HBRP replaces the old Humboldt Bay Power Plant (HBPP), which is Units 1 and 2) were provided by the applicant in response to staff's data request in Table DR36-2 (CH2MHILL 2007a). Some of the following net negative impacts are noted:

- The operational workforce is reduced by 27; secondary impacts within Humboldt County are reduced by 45 workers.
- Total expenditures for Operation and Maintenance drops by \$8,015,300.
- Annual local operations expenditures for Operations and Maintenance are reduced by \$4,700,000.
- Operational payroll drops by \$3,335,300 (CH2MHILL 2007a).

Net annual property taxes are estimated by staff at approximately \$2,559,916 (PG&E 2006c and PG&E 2007a).

It should be noted that the HBPP will shut down after the HBRP is operating and on-line but the workforce reduction would be phased in over several years (PG&E 2006a). A net calculation is for a point in time which may vary by indicator. The HBRP would be in operation for approximately 30 years or for the long-run.

Overall, the reduction of 27 workers represents less than 1% of the Humboldt County, August 2006 (not seasonally adjusted), labor force of 60,000 (State of California 2006).

Fiscal and Non-Fiscal Effects

Some fiscal (having to do with the public treasury) impacts (all dollars are 2006 for construction and 2009 for operations (PG&E 2006a and c) of the HBRP include:

- Property taxes: \$2.8 million annually
- Construction total local sales tax: \$5.8 million
- Operation sales tax: \$377,000 annually
- School Impact Fee: None

Non-fiscal (private sector) impacts include:

- Total capital costs are estimated at \$250 million.
- The construction payroll is \$30 million over eighteen months. The operations payroll is \$2.1 million.
- Approximately \$2.6 million would be spent locally on construction materials and supplies and \$150,000 each operation year of the HBRP for locally purchased materials as part of an operation and maintenance budget within Humboldt County (PG&E 2006a&c).

Housing

As of January 1, 2006, there were approximately 58,739 housing units in Humboldt County. The vacancy rate for this housing averages approximately 8.35% for Humboldt County which includes single family, multi-family and mobile homes. There were 12,162 units in the City of Eureka with a vacancy rate of 5.82% (PG&E 2006a).

There is an adequate supply of hotel/motels in Humboldt County. For the non-local construction workers who relocate, there are 35 large hotel and motels with more than 1,500 rooms in the Eureka area (PG&E 2006a). These hotel/motels have an occupancy rate of 90% in July and August and from 50-60% in the winter (Smither 2006). Peak construction is planned for January and February 2009, or the off-peak period. Because about 157 non-local workers may temporarily relocate to Humboldt County during this two-month period and 600 to 750 hotel/motel rooms would be available, staff concludes that housing resources would be adequate.

Again, 33% of the average construction workforce or 34 workers are expected to come from Humboldt County and neighboring counties and 66% or 67 construction workers would be from other parts of California and the western US beyond a two hour commute distance and likely relocate (PG&E 2006a). Staff concludes that the supply of permanent and temporary housing would be adequate to accommodate the estimated 67 average non-local construction workers who would relocate. Staff does not expect the HBRP to cause any housing to be displaced (moved) as a result of this project.

The entire permanent operational workforce is expected to commute from within Humboldt County (PG&E 2006a).

As a result of the discussion on housing, there are no significant adverse socioeconomic impacts related to housing resources as a result of the HBRP.

Schools

Humboldt County has 33 school districts and 19,244 students in 2005-2006. The South Bay Union School District (junior high and high school) serves the HBRP site area. These schools are not considered overcrowded (PG&E 2006a). The average number of non-local construction workers over the HBRP's 18-month construction period would be approximately 67. Using the 2000 Census for Humboldt County, average family size of 2.95 (about one child per family) (Wikipedia 2006), staff and the applicant conservatively estimate 64 additional school children. This represents less than 1% increase in enrollment for the South Bay Union Elementary District and Eureka City Unified District using 2005-06 enrollment estimates. The addition of 64 students for a period of 18 months is a minor short term impact in two school districts which are not considered overcrowded. Even so, this worst-case scenario is unlikely to occur since the non-local construction workers would not likely relocate family members for the relatively short duration of construction and would instead likely commute to work.

Seventeen workers would be required for operation of the HBRP and are expected to come from the Humboldt County labor force (PG&E 2006a). Since all employees are expected to be from Humboldt County and are expected to commute, there should be no significant adverse socioeconomic impacts.

Education Code section 17620 authorizes a school district to levy a fee against any construction within a district. State agencies are precluded from imposing additional fees or other required payments on development projects for the purpose of mitigating possible enrollment impacts to schools.

School impact fees to South Bay Union Elementary and Eureka City Unified School Districts are zero since these two districts do not assess fees on new development, only redevelopment (PG&E 2006a). Staff verified this point that there would be no school impact fees on HBRP and found that there was not a school impact fee structure in place for that location (part of Humboldt County) for neither South Bay Union Elementary nor Eureka City Unified School District (Riendeau 2007).

Staff concludes that there would be no significant adverse socioeconomic impacts on educational resources as a result of the HBRP.

Parks and Recreation

About two-thirds of the construction labor force for this project would be drawn from non-local non-commuting labor markets. Still the construction labor force that relocates is unlikely to bring dependents and the months of high labor input are in the off-peak tourist season in the fall and winter. Overall, short-term construction labor requirements for the HBRP (an estimated 156 workers in December 2008 and January 2009) and a small operational workforce of 17, (all local residents i.e., from Humboldt County), should not have a significant adverse socioeconomic impact on parks and recreation.

Law Enforcement

The main responsibility for law enforcement in Humboldt County is its Sheriff's Department. The HBRP would be served by the Eureka Main Station at 826 Fourth Street, Eureka. The Main Station Patrol unit has one lieutenant, six sergeants, and 21 deputy sheriffs, and one community services officer. This station provides law enforcement services to unincorporated areas of Humboldt County south of Arcata and this would include HBRP (PG&E 2006a). Staff estimates the Eureka Main Station is about five or six miles from the HBRP site. There are three other stations of the Humboldt County Sheriff's Department.

Staff concludes that there would be no significant adverse socioeconomic impacts on law enforcement resources as a result of the HBRP because the likely impact will be small and there are adequate law enforcement resources. In addition, PG&E has its own security forces at the existing HBPP, who will continue service for construction and operation of HBRP.

Medical Services

Emergency response to the HBRP site is provided by the Humboldt Fire District #1. All firefighters are trained to the level of Emergency Medical Technician 1 and can provide basic life support services. Some staff members are trained to the paramedic level. The closest full staffed fire station that would provide emergency service for HBRP is Humboldt Fire District #1 (one of two full service fire stations). This is staffed on a 24-hour basis and has an average response time of four minutes (PG&E 2006a and Chief Zimmer 2006).

Two hospitals are located in the City of Eureka. These are St. Joseph's Hospital, with approximately 100 beds, and General Hospital with approximately 95 beds. St. Joseph's Hospital is the closest and is about six miles from HBRP (PG&E 2006a). Staff concludes that the emergency medical services (EMS) and other hospital services are adequate.

Finally, the HBRP would not displace significant numbers of people or directly or indirectly induce substantial population growth. Hence, there are no significant socioeconomic impacts that might trigger adverse physical impacts in the provision of emergency medical services. For additional discussion see the **Worker Safety** Section of this PSA.

CUMULATIVE IMPACTS

A project may result in a significant adverse cumulative impact where its effects are cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. (Cal. Code Regs., tit. 14, section 15130.)

Cumulative impacts could occur when more than one project has an overlapping construction schedule that creates a demand for workers that cannot be met by local labor, resulting in an influx of non-local workers and their dependents.

The HBRP would average 101 workers per month and 236 during the peak month, for 18 months, with construction occurring from approximately March 2008 to August 2009.

Other projects licensed or planned in Humboldt County are:

- The Independent Spent Fuel Storage Installation (ISFSI) construction, which has been under construction from March to November 2007, adds an additional 20 workers to Humboldt County. This does not coincide with the start-up for construction of the HBRP, which is slated to start construction in March 2008 (PG&E 2006a).
- After the HBRP is constructed and operating, Units 1 and 2 will be closed and demolished. Over time, the 44 workers currently employed will be phased out, gradually having a minor adverse socioeconomic impact (HBRP 2006a). According to the applicant, it is not possible to project average and maximum construction workforce levels or to schedule the time frame for demolition (CH2MHill 2007c). There is no cumulative labor force activity to report.
- Two Mobile Emergency Power Plants (MEPPS) and the Unit 3 (nuclear reactor) are expected to be removed as soon as the HBRP begins commercial operation. Planning the demolition of Unit 3 has not reached the point at which it is possible to project average and minimum construction workforce levels or to schedule the time frame for demolition (CH2MHill 2007c). There is no cumulative labor force activity to report.

Because the above projects would not occur at the same time as construction of the HBRP, staff concludes that there would be no significant adverse cumulative socioeconomic impacts for the HBRP.

NOTEWORTHY PUBLIC BENEFITS

Important public benefits discussed under the fiscal and non-fiscal effects section are: capital expenditures, construction payroll, annual property taxes and sales taxes, and the value of locally purchased construction and operation equipment and materials.

AGENCY AND PUBLIC COMMENTS

No comments were received from agencies or members of the public regarding the HBRP.

CONCLUSIONS

Estimated gross public benefits from the HBRP include increases in property and sales taxes, employment, and income for Humboldt County. For example, there are estimated to be an average of 101 direct project-related construction jobs for the 18 months of construction. The HBRP is estimated to have total capital costs of \$250 million. The HBRP construction payroll is estimated at \$30 million for 18 months and the operation payroll is \$2.1 million annually. Property taxes are estimated at \$2.8 million annually for a project life of 30 years. The total sales and use tax during construction is estimated at \$5.8 million and during operation the local sales tax is estimated to be \$377,000 annually over the life of the project. An estimated \$2.6 million would be spent locally for materials and equipment during construction, and an additional \$150,000 would be spent annually for operations and maintenance budget.

Staff concludes that construction and operation of the HBRP would not cause a significant direct or cumulative adverse socioeconomic impact on the study area's housing, schools, law enforcement, emergency services, hospitals, and utilities.

The HBRP, as proposed, is consistent with applicable LORS.

Finally, the following **Socioeconomics Table 2** provides a summary of socioeconomic data and information from this analysis, with emphasis on economic benefits of the HBRP Project.

SOCIOECONOMICS Table 2 Data And Information³

Estimated Project Capital Costs	\$250 million
Estimate of Locally Purchased Materials	
Construction	\$2.6 million
Operation (Operation and Maintenance)	\$150,000 per year
Estimated Annual Property Taxes	\$2.8 million annually
Estimated School Impact Fees	Zero
Estimated Direct Employment	
Construction (average)	101 jobs (average per month)
Operation	17 jobs
Estimated Secondary Employment	
Construction	84
Operation	49 jobs
Estimated Local Secondary Income	
Construction	\$2,354,560
Operation	\$1,495,820
Estimated Payroll	
Construction	\$30 million
Operation	Average: \$2.1 million annually
Estimated Sales Taxes	
Construction	\$5.8 million
Operation	\$377,000 annually
Existing Unemployment Rates	Existing – 5.3% in August 2006, for Humboldt County (Not Seasonally Adjusted)
Percent Minority Population (6 mile radius)	18.29%
Percent Poverty Population (6 mile radius and beyond)	20.4%
Percent Minority Population (1 mile radius)	17.53%
Percent Poverty Population (1 mile radius)	16.89%

³ Table 3 uses 2006 dollars for construction and 2009 for operations, construction is for 18 months and the projects life is planned for 30 years. Economic (non-fiscal and fiscal) impacts and unemployment is from Humboldt County, the study area. The results of the IMPLAN/Input-Output modeling are for Humboldt County and show secondary, indirect and induced impacts, as well as direct impacts. Population is for a six and one mile radius from the power plant except as noted.

CONDITIONS OF CERTIFICATION

None proposed.

REFERENCES

California Department of Finance. 2000. Demographic Research Unit California State Census Data Center Census 2000 PL94-171 Table Two Population by Race/Ethnicity Incorporated Cities by County.

California Energy Commission Statewide Transmission & Power Plant Maps 2006, Census 2000 PL-171 Data-Matrix PL2.

CH2MHILL 2007a - CH2MHill/D. Davy (tn: 38912). Applicant's Responses to CEC Staff's Data Requests 1-57. 1/12/2007. Rec'd 1/12/2007.

CH2MHill 2007c – CH2MHill/D. Davy (tn: 39225). Applicant's Responses to CEC Staff's Data Requests 58-78 and Workshop Queries 1-22. 2/13/2007. Rec'd 2/13/2007.

Electric Power Research Institute. 1982. Socioeconomics of Power Plants.

EPA (U. S. Environmental Protection Agency). 1998. Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analysis. April, 1998.

Lewis, Eugene, Russell Youmans, George Goldman, Garnet Premer. 1979. Economic Multipliers: Can a rural community use them? Western Rural Development Center 24.

Moss, Steven J., Richard McCann, and Marvin Feldman. 1994. A Guide For Reviewing Environmental Policy Studies. Spring, 1994.

Mulkey, David and Alan W. Hodges. 2000. Using Implan to Assess Economic Impacts. University of Florida IFAC Extension FE 168.

PG&E 2006a – PG&E/R. Kuga (tn: 38050). Humboldt Bay Repowering Project AFC Vol. 1 & 1, 1 AFC CD and 1 Air Modeling CD. 9/29/2006. Rec'd 9/29/2006.

PG&E 2006c – PG&E/R. Kuga (tn: 38321). Data Adequacy Supplement. 11/01/2006. Rec'd 11/03/2006.

PG&E 2007a – Humboldt Bay Repowering Project (tn:39502). E-Mail from Susan Strachan entitled 5 Year Study of Property Taxes From Humboldt Bay Power Plant to John S. Kessler, Commission Staff. March 6,2007.

Richardson, Harry W. 1972. Input-Output and Regional Economics.

Riendeau, Gloria. 2007. Humboldt County Planning Department: Telephone Conversation with Joseph Diamond, Commission Staff. February 22.

Smithers, Tony. 2006. Humboldt County Convention and Visitors Bureau, Telephone conversation with Joseph Diamond, Commission Staff. October 10.

State of California, Employment Development Department. 2006. Report 400C Monthly Labor Force Data for Counties. August 2006.

State of California, Employment Development Department 2007. Labor Market Information Occupational Employment Projections 2002-2012 North Coast Region (Del Norte, Humboldt, Lake and Mendocino Counties). www.wedd.cahwnet.gov/.

U.S. Office of Management and Budget (OMB). 1978. Current Population Reports, Series P-60 on Income and Poverty.

Wikipedia. 2006. Humboldt County, California. October 6. http://en.wikipedia.org/wiki/Humboldt_County,_California. Web site visited on 10/6/2006.

Ziener, Chief. 2003. Humboldt #1 Fire Protection District History and Profile of HFD No.
1. <http://www.firedept.net/humfire/history.htm>. Web site visited on 10/10/2006.

SOCIOECONOMICS - FIGURE 1

Humboldt Bay Repowering Project - Census 2000 Minority Population by Census Block - One and Six Mile Buffer

NOVEMBER2007

SOCIOECONOMICS

