

**PROJECTED ECONOMIC AND FISCAL IMPACT  
OF THE PROPOSED  
GRANITE FOX POWER PROJECT**











spent in sales taxes. This means that \$7,746,385 of the \$28.8 million in annual additional taxes collected by Washoe County

Even though it is not antici

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**i.**





created by the Project and from the spending by GFP in the local economy for all types of goods and services that the operation of the plant requires. This spending from GFP and its employees becomes income to those people who receive it as part of their earnings, which they would spend creating income for others and so on. These economic impacts are discussed in Squiions 4 and 7 of this report.

#### 4. ECONOMIC IMPACTS OF CONSTRUCTION

During the construction phase, the Project has three sources of economic impacts the economy in six different ways. The three sources of economic impact are the employment of *local* construction workers, the employment of *imported* construction workers, and on construction the building of the plants.

During the operation phase of the Project, there would be two sources of ways as during the construction phase. The operations are the *employment of workers* at the plant and *local expenditures* on goods and services for the operation of the plant.

The six impacts are *direct* economic impacts, *indirect* economic impacts, *induced* economic impacts, *direct* job support, *indirect* job support, and *induced* job support. The following tables define the nature of the construction phase, during operations, and, lastly, the nature of

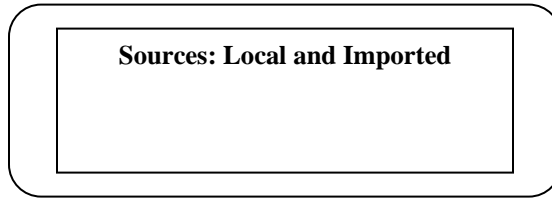
## Imported Construction Workers

These are workers who come from outside the local area of the construction project to work on the Project. The primary reason

families, pay local utility bills, go to local movie theaters, barbershops, salons, etc. In short, they would pr



**Diagram 4.1: The Process of the Direct, Indirect, and Induced Impacts**



#### **4-a. Local Construction Workers**

The most important factor to understand when determining the economic impact of employment is the *total amount of money spent* by the workers in the local economy. Technically, the local economy is all of Northern Nevada, although Washoe and Lyon



#### **4-b. Imported Construction Workers**

Imported construction workers impact the local economy in a different and smaller way than local construction workers do. Imported workers are those that come from outside the Northern Nevada area. They may come primarily from Northern California, but they may also come from Southern Nevada, Oregon, Southern California, or from places where construction work is slack. We have discussed previously that these workers would be expected to take much of their income back to their homes to spend.

The larger majority of these workers would live in the worker residence area that would be built at the Project site and would have all their needs provided for on-site. (TJ-10.4)

Ski270Craft

**4-c. Materials**

Construction of a project as technically complex and specialized as this one would require purchases of technology and equipment that are available from only a small number of suppliers and manufacturers world wide and are simply not produced or com



**Diagram 4.2: Expenditures and Adjusted Expenditures Resulting from the Project**

*Expenditures*





by the year of the construction project and the total number of jobs over the five-year construction schedule.

*Years*      *Expenditures*







**Table 5.2:**  
**SALES Taxes Generated by Employment Supported by the Project**

	<b>Washoe County</b>	<b>Lyon County</b>	<b>Churchill County</b>	<b>Carson City</b>	<b>TOTAL</b>
<b>2007-2008</b>	\$907,293	\$273,383	\$38,413	\$80,975	\$1,300,064
<b>2008-2009</b>	\$3,658,358	\$961,322	\$123,738	\$261,007	\$5,004,426
<b>2009-2010</b>	\$6,080,741	\$1,468,535	\$178,981	\$377,691	\$8,105,948
<b>2010-2011</b>	\$3,060,153	\$728,268	\$87,884	\$185,469	\$4,061,774
<b>2011-2012</b>	\$242,618	\$68,364	\$9,150	\$19,295	\$339,428
<b>TOTAL</b>	\$13,979,163	\$3,499,872	\$438,166	\$924,438	\$18,811,639

Second, the local construction workers who would work on the Project will already be here and will have already imposed whatever costs for government services that they require independently of the Project. Since these people live in the area and find work on a series of construction jobs over the years, of which the Project would be only one, there are no additional costs associated with one job.

would come from outside the area would, for the most part, reside at the worker residence area and would impact local governments primarily like tourists, which are also already



expenditure that stays in the local economy after non-local wholesale costs and other costs that go out of the locality are deducted. These values, as determined by GFP, would be the ultimate size of the direct impacts, before the indirect and induced effects are determined.

The following table lists the total payroll and the adjusted payroll (which is the



<i>Salary Range</i>	<i>Payroll</i>	<i>Adjusted Payroll<sup>1</sup></i>	<i>Direct Impacts</i>
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## **8. GFP's RELATIVE ECONOMIC IMPACT**

There have been many new companies that have moved into Northern Nevada over the past several years, and Granite Fox is expected to rank among the top in terms of overall economic impact. Using the number of employees and, where available, the annual economic impact of each business, Granite Fox would rank fourth in number of employees and sixth in economic impact compared with the last six years of business growth in Northern Nevada (see Table 8.1 below).

**Table 8.1:  
Economic Impact of New Businesses in Northern Nevada**

RS Furniture Home Store	25	\$ 2,261,901	2004

## **9. FISCAL IMPACTS OF OPERATION**

There are two aspects to the fiscal impact of any major development project. The first aspect is the *additional revenue received* by governments that would be generated by the project in increased sales tax and property tax revenues. The second aspect is the *additional costs incurred* by governments to provide services to the project. These services generally include public safety, education, and road maintenance.

### **9-a. Preerty Taxes**



**Table 9.2:**  
**Annual Tax Revenue Increases for Lyon County**

<b>Sales Tax from Spending of Employees</b>	<b>\$ 134,136</b>
<b>Sales Tax from Impacts of Employees</b>	<b>\$ 131,898</b>











**Table 4. Craft Labor Employee Distribution: Projected Demand for Construction Camp**

<i>Low Average<sup>1</sup></i>	<i>High Average<sup>2</sup></i>	<i>Low Peak</i>	<i>High Peak</i>
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**Table 6. Non-Manual Field Labor and Subcontractor Distribution: Projected Demand for**

## Introduction

GFP Energy Resources (GFP) is proposing to build a 1,420-megawatt coal-fired electrical generating facility in the vicinity of Gerlach, Nevada, which is located in northern Washoe County. This project is a large-scale project.

The Center for Economic Research (CER) at the University of Nevada, Reno has been engaged by GFP to determine the probable distribution of the construction and permanent operations workforces. This report sets forth the analysis and the conclusions derived from this analysis.

The study examined the following factors:

- Estimated construction and permanent workforce size and composition;
- Alternative residential options available for workers, including “capacity” limitations where applicable; and
- Commute patterns within northern Nevada.



## Alternative Residential Options Available

### Construction Camp:

The Granite Fox Work Camp will encompass 60 acres inside the designated parcel of

444 households, as of 2000. According to the 2000 Census, the Gerlach-Empire geographic area has a population of 499 and 234 households. There are 305 housing units, of which over 50 percent were built prior to 1960.

The town of Gerlach has very few available building sites, and essentially none of the infrastructure needed to support any sizeable additional residential development. For the purposes of this analysis,

housing units if every vacant parcel was developed in conformance with its zoning.



dependent on many factors including the national and local economic

Carson City, Nevada

With this understanding, we looked at the residential location and commute patterns for other remote projects in Nevada.

Cortez/Pipeline:

The Cortez/Pipeline project is operated by US Placer Dome Mines as a joint venture with Kennecott Minerals. The mine began operations in 1996 after an initial construction

45 to 59 minutes	1,955	11.67%	4495	2.74%	6,450	3.57%
60 to 89 minutes	1,371	8.18%	3189	1.94%	4,560	2.52%
90 or more minutes	499	2.98%	2248	1.37%	2,747	1.52%

Source: Census Transportation Planning Package U.S. Census Bureau, Census 2000

The Town of Crescent Valley offers few services. There is a small convenience store and restaurant. There is a new elementary school constructed by Eureka County School District and town government and utility offices. According to the Nevada State Demographer, the Town of Crescent Valley had a population of 300 in 2003 declining about 25 percent since 1998. This period of time roughly corresponds to peak construction at the mine site (1996–1998). Most of the housing in the area is comprised of mobile homes. The Town of Crescent Valley operates a water system supplying individual parcels within approximately one square mile town site.

Battle Mountain is a community of about 4,000 people providing most community services. The availability of housing is sometimes limited and mobile homes have been used to house mining employees and others who have moved to the area. The City of Elko is a relatively large full-serv







At present, projections indicate that roughly 60 percent of the personnel in both categories (craft-labor and non-manual field personnel/contractors) will come from the local area (Carson City, Churchill County, Lyon County and Washoe County), while 40 percent will be imported.

Projected residential location of craft labor during the construction phase:

It is estimated that 60 percent of the imported labor will reside in the construction camp on a full-time basis during their employment on this project: approximately 10 percent will reside in the Reno/Sparks area, 10 percent will reside in the Fernley area (these employees will, for the most part, commute daily), and about 20 percent will reside in the construction camp during their work week and commute to residences in the region (more than 120 miles but less than 400 miles from the project) on weekends. These and subsequent projections are all highly dependent upon other factors, such as the availability of employee mass transportation between the job site and Fernley and/or the Reno/Sparks area. These projections are based upon the current position of GFP that such buses would be provided only from the construction camp to the job site.

“Local” is defined as those areas within 120 highway miles of the proposed project (roughly 2 hours drive). This equates to portions of Carson City, Churchill County, Lyon County and Washoe County. This projected distribution from within this area was determined by first looking at the existing population distribution in these counties and then adjusting for the effect of





These estimates indicate the construction camp capacity will accommodate the worker demand for the camp except for the pe

If we assume the same percentages of demand for construction camp accommodations from the non-manual field personnel and subcontractors as predicted for the craft labor categories, then it becomes apparent that demand will exceed the planned capacity during the peak labor periods under either construction scenario. However, if we assume that the construction camp facilities will not be ma



family members. However, these amenities are all available to Fernley residents with a 30-minute drive to Reno.

Based upon these different amenities and the approximate half-hour shorter commute time from Fernley to Granite Fox, we predict that approximately 50 percent of the permanent employees will reside in the Fernley area and 50 percent will reside in the Reno/Sparks area.

**Table 8. Tenure by Household Size of Occupied Housing Units**

## **12. TECHNICAL APPENDICES**

### **Explanation of IMPLAN Model:**

IMPLAN (**IM**Impact Analysis for **PLAN**ing) was originally developed by the USDA Forest Service in cooperation with the Federal Emergency Management Agency and the USDI Bureau of Land Management to assist the Forest Service in land and resource management planning. The Minnesota IMPLAN Group (MIG) began work on IMPLAN databases in 1987 at the University of Minnesota. In 1993, Minnesota

Housing .....	\$12,640	\$12,640	
Shelter .....	\$7,524		
Owned dwellings .....	\$5,198		
Mortgage interest and charges .....	\$3,321		
Property taxes .....	\$1,079		
Maintenance, repairs, insurance, other expenses .....	\$797		
Rented dwellings .....	\$2,050		
Other lodging .....	\$276		
Utilities, fuels, and public services .....	\$2,694		
Natural gas .....	\$298		







***Input-Output Model (See Appendix 2.0):***

IMPLAN Pro (Minnesota IMPLAN Group, Inc.)

***Input-Output Data:***

Washoe & Lyon County input-output matrices developed by the Minnesota IMPLAN Group, Inc. using the following sources:

Covered Employment & Wages (ES-202), Bureau of Labor Statistics, U.S. Department of Labor

Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

County Business Patterns, U.S. Census Bureau, U.S. Department of Commerce

Consumer Expenditure Survey Depa4 Bureau of Labor Sc0 Twe3: Statist(.)0.14.3(t)pendix509.4135 -1..02 Tm6.00-7.3(f)0.1 Tcmerce

Appendix 1.3: Employment Impacts - Construction Phase  
*(2003 Dollars)*



## **TECHNICAL APPENDIX, Part 2**

### **APPENDIX 2.1**

**Total Positions, Wages, and Compensation in Current Dollars**

<b>Total Supervisory Hourly Nonexempt -</b>	<b>16</b>	<b>\$610,000.00</b>	<b>\$844,056.00</b>	<b>\$1,429,219.00</b>
E & I Technician	12	\$62,400.00	\$105,235.00	\$1,262,818.00
Mechanic	20	\$58,240.00	\$98,219.00	\$1,964,383.00
Lead Shift Technician	6	\$68,640.00	\$115,758.00	\$694,550.00
Plant Operations Technician A	10	\$58,240.00	\$103,140.00	\$1,031,399.00





Operations Consumables

452 \$ 12,000



**APPENDIX 2.4**  
**Annual Monetary Impacts of GFP Workers**

<i>Salary Range</i>	<i>Payroll</i>	<i>Adjusted Payroll<sup>1</sup></i>	<i>Direct Impacts</i>	<i>Indirect Impacts</i>	<i>Induced Impacts</i>	<i>Total</i>
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## APPENDIX 2.5

### Annual Monetary Impacts of Expenditures on Materials

<i>Expenditures</i>	<i>NAICS Classification</i>	<i>Amount</i>	<i>Direct Impacts</i>	<i>Indirect Impacts</i>	<i>Induced Impacts</i>	<i>Total</i>
Business/Professional Dues	5614	\$ 3,500				
Cellular Phones & Pagers	443	\$ 33,600				
Community Relations	5418	\$ 12,500				
Computers and Hardware	443	\$ 18,750				

Operations Consumables	452	\$	12,000
Overtime Meals	722	\$	50,000
Safety Equipment	454	\$	22,500
Tools	444	\$	22,500
Water Treatment Chemicals (Not DI or			



**APPENDIX 2.7**  
**Jobs Created by Expenditure4000n Goods and Services**

Laboratory Equipment	454	\$ 5,000
Operations Consumables	452	\$ 12,000



# Appendix 2.8

## GRANITE FOX POWER PROPERTY TAX ESTIMATE

Assumptions:

Start Construction	Jan-07	<u>Drawdown</u>	
COD Unit			
1	Nov-10	Date	Cumulative
COD Unit			
2	Nov-11	1/1/2007	0.9%
Assessment Ratio	35%	1/1/2008	27.7%
2004 Tax Rate	2.698 %	1/1/2009	63.8%
Tax Rate Escalation	1%	1/1/2010	90.1%
		1/1/2011	98.5%
		12/31/2011	100.0%

	Real Property	Personal Property	TO	TAL -- Real and Personal Property
Year	Cost	Percent		

	879,181		641,802			265,849	907,652	317,678		10,960
2030	879,181	71.5%	628,615	1,678,341	11.76%	197,373	825,987	289,096	3.4845%	10,074
2031	879,181	70.0%	615,427	1,678,341	7.50%	125,876	741,302	259,456	3.5193%	9,131
2032	879,181	68.5%	602,239	1,678,341	7.50%	125,876	728,115	254,840	3.5545%	9,058
2033	879,181	67.0%	589,051	1,678,341	7.50%	125,876	714,927	250,224	3.5901%	8,983
2034	879,181	65.5%	575,864	1,678,341	7.50%	125,876	701,739	245,609	3.6260%	8,906
2035	879,181	64.0%	562,676	1,678,341	7.50%	125,876	688,552	240,993	3.6622%	8,826
2036	879,181	62.5%	549,488	1,678,341	7.50%	125,876	675,364	236,377	3.6989%	8,743
2037	879,181	61.0%	536,301	1,678,341	7.50%	125,876	662,176	231,762	3.7359%	8,658
2038	879,181	59.5%	523,113	1,678,341	7.50%	125,876	64008 8	227,146	3.7732%	8,571
2039	879,181	58.0%	509,925	1,678,341	7.50%	125,876	635,801	222,530	3.8109%	<u>8,481</u>
									TOTAL:	<u><u>488,901</u></u>