

**Fiscal and Economic Impacts**  
**of**  
**Idaho's Alternative Energy Sales and Use Tax Rebate**

Research by  
Center for Business and Economic Research  
Boise State University  
Dr. Geoffrey Black  
Dr. Don Holley

February 18, 2011

## **EXECUTIVE SUMMARY**

The Center for Business Research and Economic Development undertook research to estimate the economic and fiscal impacts of alternative energy development projects in Idaho and the effects of the sales and use tax rebate provisions for such projects. Our research shows that the development of alternative energy in the State creates significant positive economic impacts due to increased job creation and expenditures by producers and significant fiscal impacts by increasing tax revenues for state and local governments. The increased tax revenues are generated from the pre-construction and construction phases of such projects, throughout the life of project operations, until eventual decommissioning. While this study focuses on the fiscal impacts to the State, it should be kept in mind that these projects yield significant economic benefits in terms of increasing employment, incomes, and total output in the State. Coupled with the fiscal impacts, these additional economic impacts further support the positive net overall benefits realized by the State from the passage of Idaho Statute 63-3622QQ.

The issue for policymakers is whether the incentives offered by the tax rebate are significant enough to encourage alternative energy projects in Idaho as opposed to surrounding states. A central question for potential developers of alternative energy projects is where to locate such projects. The states surrounding Idaho have similar physical characteristics with regards to renewable energy resources, but the fiscal conditions vary. All of the states surrounding Idaho either have no sales and use tax or offer tax exemptions for purchases related to renewable energy development. In addition, all surrounding states offer additional tax incentives for alternative energy projects. Even with the current sales and use tax rebate program, Idaho ranks last in terms of fiscal incentives for alternative energy producers. Although some view the tax rebates for these projects as expenditures on the part of the State, it is important to note that if the developers of such projects decide to locate in other states due to more favorable

economic, fiscal, and physical factors, the state of Idaho realizes no increases in job creation and economic activity or associated tax revenues.

This study uses a representative wind project of 160 MW capacity and a representative low-impact hydroelectric project of 2.5 MW. The tax revenues from the wind project amount to just over \$33 million to state government and over \$44 million in property taxes to local governments. In addition to the revenues accruing to state and local governments the wind project will have a significant impact on employment and income in the state. For example, the direct and indirect effects of construction will require the equivalent of 380 full-time jobs per year in Idaho over a two to three year period and will add \$36.7 million of labor income for Idaho workers during the construction period. Operation and maintenance of the facility will be a \$10 million per year operation and creates the equivalent of 94 full time jobs per year in Idaho for the entire life of the project, adding over \$3.6 million in labor income per year for Idaho workers over the life of the project. These estimates are based on decommissioning after 25 years of operation. If the facility stays in operation beyond the 25 years, the revenues will continue. The developer of such a wind project would be eligible for approximately \$12 million in tax rebate under the current provisions of Idaho Statute 63-3622QQ.

The representative hydroelectric project is significantly smaller but yields proportionately higher fiscal and economic impacts. For example, the hydro project, which is not designed to be decommissioned, generates \$510,177 in tax revenues over 25 years, and \$1.3 million over 50 years. The developer of such a hydro project would be eligible for a rebate amount of \$187,718. In addition to these tax revenues, the construction of such a project would result in increased employment of 92 Idaho workers and an increase in labor income of \$3.3 million.

These results of this study are conservative estimates. For example, using different methodology and data sources, the Jobs and Economic Development Impact (JEDI) model developed by the U.S. Department of Energy estimates that a representative 150 MW wind project in rural states, generates over \$80 million in economic activity and over 800 jobs in the construction phase alone.

The estimates for alternative energy projects in Idaho, determined by the present BSU study, are on a per-project basis. Aggregated across all alternative development projects in the State, the economic and fiscal benefits of such developments are significant. To the extent that an extension of the sales and use tax rebate provisions past the sunset date of July 2011 will lead to the development of new alternative energy projects in Idaho, rather than in neighboring states, the positive net benefits of these projects will continue.

## **Section 1: Introduction**

Idaho offers a sales-and-use tax rebate to purchasers of qualifying machinery and equipment used directly to produce a variety of alternative methods of electricity generation. These include fuel cells, low impact hydro, wind, geothermal, biomass, cogeneration, solar and landfill gas. This study evaluates the economic and fiscal impacts of the sales-and-use tax rebate for alternative energy production in Idaho. The current rebate program has been ongoing for the past five years and will expire in July 2011. This analysis examines the impacts of extending the ongoing alternative energy sales and use tax rebate program for an additional five years.

The focus of the study is the fiscal impacts on a variety of tax revenues received by the state. The decrease in sales tax revenues stemming from the rebate is compared to increased personal, corporate, sales, and other tax revenues stemming from increased incomes, employment, and total output from renewable energy development projects. The key result of this analysis is that the economic and fiscal impacts fully repay the State's initial rebate expenditure and yield significant additional tax revenues at both the state and local levels for the remaining life of each type of project. In addition to the effects on tax revenues, these projects yield significant increases in jobs and economic activity, especially at the local level.

## **Section 2: Economic and Fiscal Impact Study**

There are two main approaches to estimate the tax effects of alternative energy generation. First is the direct calculation of sales, PILOT<sup>1</sup>, and other taxes paid during the pre-construction, construction and operation phases of alternative electrical generation.

---

<sup>1</sup> These are payments in lieu of taxes. As described in Section 2, Idaho Statute 63-3502B offers alternative energy producers exemption from property taxes and instead requires payment in lieu of taxes equal to 3% of gross revenues.

We used permitting, construction, and operation expenditures for recently constructed and impending alternative energy projects in Idaho. As shown in Section Three below, these increased revenues to the State are significant. In addition to these direct fiscal calculations, this study estimates the increased tax revenues stemming from measurable increases in incomes, employment, total output of goods and services, and tax revenues. To do so, this study tracks the expenditures on goods and services purchased in the State during each phase of alternative energy development projects as well as the incomes of employees. The output that results from these expenditures by producers is known as the direct economic effects. For example, local expenditures by producers during the permitting, construction, and operation phases create increased economic activity and generate increased tax revenues.

In addition to these direct effects, this study evaluates the inter-industry effects on input suppliers and contractors and their employees. The purchases on the part of suppliers of goods and services to alternative energy producers also increase incomes and tax revenues.

Spending by households whose incomes have increased, and the corresponding fiscal impacts, are known as the induced effects in Input-Output analysis. Subsequent economic and fiscal impacts also occur and are known as the induced effects.

It should be noted that, as shown in the results in Section Four of this study, the direct economic effects are by far the largest component of the total economic impact. It is also important to note that the indirect and induced effects constitute real and important increases in incomes and tax revenues, in addition to increases in employment and output.

### **Section 3: Fiscal Impacts**

A fundamental issue in considering the extension of the sales and use tax rebate provisions for alternative energy producers in Idaho is the overall effect on the State's budget. This study calculates the initial rebate expenditure by the State for producers and compares that expenditure to the subsequent increases in tax revenues stemming from the increased incomes and expenditures due to the development and operation of alternative energy projects.

Much of the expenditures subject to the tax rebate provisions occur during the construction phase of these projects. For example, a significant portion of the costs of constructing alternative energy generation facilities are for machinery and equipment that qualifies for tax rebates under Idaho Statute 63-3622QQ. At the same time, there are capital expenditures that are not subject to the rebate as well as income to employees, landowners, and others that are subject to a variety of taxes. Further, a large majority of expenditures and incomes generated during the permitting and operation phases of these projects are not subject to the provisions of the sales and use tax rebate. As a result, these activities generate significant tax revenues prior to construction and for the duration of the operations phase of these projects. For example, estimated tax revenues for the representative wind project used in this study exceed \$33 million while tax revenues for the representative hydroelectric project approach \$2 million per project.

Overall Fiscal Impacts. The tax revenues resulting from the development of alternative energy development constitute positive contributions to the fiscal health of the State and counties. They should be compared to the expenditures on the part of the State in the form of sales and use tax rebates.

For the 160 MW representative wind project used for this analysis, the project developer would be eligible for approximately \$12 million in tax rebate based on the qualifying expenditures on machinery and equipment directly related to energy production. The vast majority of the expenditures eligible for the sales and tax rebate accrues during the construction phase and result from the purchase of wind turbines and related equipment. It should be noted that, at the same time, many of the expenditures during this phase of projects are subject to sales tax and, in addition, significant sales and other tax revenues are generated over the operating life of these projects.

In order to determine the net effects on tax revenues in Idaho, the stream of positive tax revenues must be compared to the initial rebate expenditure. As seen in Table 1, given the assumed twenty-five year life of the representative wind project, there are significant revenues that are generated during the construction, operation, and decommissioning of these projects, and the overall net effect on state tax revenues is overwhelmingly positive with cumulative tax revenues exceeding \$33.1 million in state tax revenues and an additional \$44.2 million to taxing districts in the counties.

The fiscal impact of the low-impact hydroelectric project is shown in Table 2. As can be seen, the project would generate \$242,393 in tax revenues to the state in three years. After fifty years the project would yield \$1.3 million to state government. This compares favorably with the initial tax rebate of nearly \$187,718.

#### **Section 4: Conclusion**

If projects are located in Idaho's neighboring states, where the tax incentives available to alternative energy developers are more favorable, the positive economic and fiscal benefits of these projects are not realized in Idaho. To the extent that Idaho Statute 63-3622QQ results in projects locating in Idaho when, in the absence of such an incentive,

they would locate elsewhere, the economic and fiscal impacts are unambiguously positive.

In the case where a project would be located in Idaho even without the incentive offered by the sales and use tax rebate, the cost to the State's tax revenues of the rebate provision consist of rebated tax revenue that the State could have retained. Even in these cases, this study demonstrates that there are significant and positive net effects on tax revenues to state and local governments in Idaho. In other words, the benefits in terms of increased tax revenues to the State exceed the costs. Positive net benefits in terms of tax revenues, however, are not the only payback to the State. Coupled with the fiscal impacts, the additional economic impacts of increasing employment, incomes, and total output in the state further support the positive net overall benefits realized by the State from the passage of Idaho Statute 63-3622QQ. Given that the extension of the provisions of this statute past the sunset date of July 2011 will lead to the development of new alternative energy projects, the positive net benefits of these projects will continue to increase revenues and economic activity into the future.

**Table 1: Total Tax Revenues Generated to the State of Idaho and Idaho County Governments from the Construction and Operation of a Windpower Facility (Individual Income Tax, Corporate Income Tax, Sales Tax, Cigarette Tax, Tobacco Tax, Beer Tax, Wine Tax, Motor Fuels Tax, Liquor Dispensary, Insurance Premium Tax)**

Year	Tax Revenues to the State from the Construction, Operation, Decommissioning, and Payments in Lieu of Taxes		Tax Revenues to the State from Use Taxable Purchases		Tax Revenues to the State from Lease Payments Paid to Private Landowners		Cumulative Tax Revenues to State Government		Payments to Counties in Lieu of Taxes		Cumulative Tax Revenues to the State and to County Governments
	Annual Tax Revenues Generated to the State	Cumulative Revenues Generated to the State	Annual Tax Revenues to the State from Use Taxable Purchases	Cumulative Tax Revenues to the State from Use Taxable Purchases	Annual Tax Revenues to the State from Lease Payments Paid to Private Landowners	Cumulative Tax Revenues to the State from Lease Payments Paid to Private Landowners	Cumulative Tax Revenues to the State Including Taxable Purchases and Lease Payments to Private Landowners	Annual Revenues to County Governments from Payments in Lieu of Taxes	Cumulative Tax Revenue to County Governments from Payments in Lieu of Taxes		
1	\$ 4,043,062	\$ 4,043,062	\$ 937,036	\$ 937,036	\$ 75,523	\$ 75,523	\$ 5,055,621	\$ 1,182,614	\$ 1,182,614	\$ 6,238,235	
2	\$ 485,237	\$ 4,528,299	\$ 167,163	\$ 1,104,199	\$ 80,187	\$ 155,710	\$ 4,851,172	\$ 1,210,997	\$ 2,393,611	\$ 7,244,783	
3	\$ 509,687	\$ 5,037,986	\$ 173,750	\$ 1,277,949	\$ 82,192	\$ 232,902	\$ 5,449,638	\$ 1,240,061	\$ 3,633,671	\$ 9,083,309	
4	\$ 535,491	\$ 5,573,477	\$ 177,225	\$ 1,455,173	\$ 84,247	\$ 327,149	\$ 6,072,851	\$ 1,269,822	\$ 4,903,494	\$ 10,976,345	
5	\$ 562,730	\$ 6,136,207	\$ 180,769	\$ 1,635,943	\$ 86,353	\$ 408,502	\$ 6,725,479	\$ 1,300,298	\$ 6,203,791	\$ 12,929,270	
6	\$ 591,486	\$ 6,727,693	\$ 184,385	\$ 1,820,328	\$ 88,512	\$ 497,014	\$ 7,409,092	\$ 1,331,505	\$ 7,535,296	\$ 14,944,388	
7	\$ 621,946	\$ 7,349,639	\$ 225,639	\$ 2,045,967	\$ 90,725	\$ 587,739	\$ 8,162,917	\$ 1,363,461	\$ 8,898,757	\$ 17,063,674	
8	\$ 653,905	\$ 8,003,544	\$ 230,152	\$ 2,276,119	\$ 92,993	\$ 680,732	\$ 8,914,328	\$ 1,396,184	\$ 10,294,942	\$ 19,209,270	
9	\$ 687,762	\$ 8,691,306	\$ 234,755	\$ 2,510,874	\$ 95,318	\$ 776,049	\$ 9,702,011	\$ 1,429,693	\$ 11,724,634	\$ 21,426,645	
10	\$ 723,521	\$ 9,414,827	\$ 239,450	\$ 2,750,324	\$ 97,701	\$ 873,750	\$ 10,527,927	\$ 1,464,005	\$ 13,188,639	\$ 23,716,567	
11	\$ 761,293	\$ 10,176,120	\$ 244,239	\$ 2,994,564	\$ 100,143	\$ 973,893	\$ 11,394,153	\$ 1,499,141	\$ 14,687,781	\$ 26,081,934	
12	\$ 801,197	\$ 10,977,317	\$ 316,069	\$ 3,310,632	\$ 102,647	\$ 1,076,540	\$ 12,369,826	\$ 1,535,121	\$ 16,222,902	\$ 28,592,728	
13	\$ 843,356	\$ 11,820,673	\$ 322,390	\$ 3,633,023	\$ 105,213	\$ 1,181,752	\$ 13,324,716	\$ 1,571,964	\$ 17,794,865	\$ 31,119,581	
14	\$ 887,903	\$ 12,708,576	\$ 328,838	\$ 3,961,861	\$ 107,843	\$ 1,289,595	\$ 14,326,910	\$ 1,609,691	\$ 19,404,556	\$ 33,731,466	
15	\$ 934,977	\$ 13,643,553	\$ 335,415	\$ 4,297,275	\$ 110,539	\$ 1,400,135	\$ 15,379,002	\$ 1,648,323	\$ 21,052,879	\$ 36,433,882	
16	\$ 984,727	\$ 14,628,280	\$ 342,123	\$ 4,639,398	\$ 113,303	\$ 1,515,437	\$ 16,483,740	\$ 1,687,883	\$ 22,740,762	\$ 39,224,502	
17	\$ 1,037,309	\$ 15,665,589	\$ 348,965	\$ 4,988,364	\$ 116,135	\$ 1,629,573	\$ 17,644,027	\$ 1,728,392	\$ 24,469,155	\$ 42,113,182	
18	\$ 1,092,890	\$ 16,758,479	\$ 355,945	\$ 5,344,308	\$ 119,039	\$ 1,748,611	\$ 18,862,935	\$ 1,769,874	\$ 26,239,028	\$ 45,101,964	
19	\$ 1,151,647	\$ 17,910,126	\$ 363,064	\$ 5,707,372	\$ 122,015	\$ 1,870,626	\$ 20,143,716	\$ 1,812,351	\$ 28,051,379	\$ 48,195,095	
20	\$ 1,213,765	\$ 19,123,891	\$ 370,325	\$ 6,077,697	\$ 125,065	\$ 1,995,691	\$ 21,489,807	\$ 1,855,847	\$ 29,907,226	\$ 51,397,033	
21	\$ 1,279,443	\$ 20,403,334	\$ 377,731	\$ 6,455,428	\$ 128,192	\$ 2,123,882	\$ 22,904,848	\$ 1,900,387	\$ 31,807,614	\$ 54,712,462	
22	\$ 1,348,890	\$ 21,752,224	\$ 385,296	\$ 6,840,715	\$ 131,396	\$ 2,255,279	\$ 24,392,689	\$ 1,945,997	\$ 33,753,610	\$ 58,146,299	
23	\$ 1,422,328	\$ 23,174,552	\$ 392,992	\$ 7,233,706	\$ 134,681	\$ 2,389,960	\$ 25,957,404	\$ 1,992,701	\$ 35,746,311	\$ 61,703,715	
24	\$ 1,499,992	\$ 24,674,544	\$ 400,852	\$ 7,634,558	\$ 138,048	\$ 2,528,008	\$ 27,603,305	\$ 2,040,525	\$ 37,786,836	\$ 65,390,141	
25	\$ 1,582,133	\$ 26,256,677	\$ 408,869	\$ 8,043,427	\$ 141,500	\$ 2,669,508	\$ 29,334,954	\$ 2,089,498	\$ 39,876,335	\$ 69,211,288	
26	\$ 1,669,013	\$ 27,925,690	\$ 417,046	\$ 8,460,473	\$ 145,037	\$ 2,814,545	\$ 31,157,181	\$ 2,139,646	\$ 42,015,981	\$ 73,173,161	
27	\$ 2,017,833	\$ 29,943,523	\$ 164,267	\$ 8,624,740	\$ 148,663	\$ 2,963,208	\$ 33,070,898	\$ 2,190,998	\$ 44,206,978	\$ 77,277,876	

Construction Operation  
Decommissioning

**Table 2: Total Tax Revenues Generated to the  
State of Idaho and Idaho County Governments  
from the Construction and Operation of a Small  
Hydro Project  
(Total Sales Tax Rebate = \$187,718)**

Year	Annual Tax Revenues to the State from All Sources	Cumulative Tax Revenues to the State from All Sources
1	\$ 47,869	\$ 47,869
2	\$ 97,262	\$ 145,131
3	\$ 97,262	\$ 242,393
4	\$ 97,262	\$ 339,654
5	\$ 4,264	\$ 343,918
6	\$ 4,520	\$ 348,438
7	\$ 4,791	\$ 353,229
8	\$ 5,078	\$ 358,307
9	\$ 5,383	\$ 363,690
10	\$ 5,706	\$ 369,396
11	\$ 6,048	\$ 375,444
12	\$ 6,411	\$ 381,855
13	\$ 6,796	\$ 388,651
14	\$ 7,204	\$ 395,855
15	\$ 7,636	\$ 403,491
16	\$ 8,094	\$ 411,585
17	\$ 8,580	\$ 420,165
18	\$ 9,094	\$ 429,259
19	\$ 9,640	\$ 438,899
20	\$ 10,219	\$ 449,118
21	\$ 10,832	\$ 459,949
22	\$ 11,482	\$ 471,431
23	\$ 12,170	\$ 483,601
24	\$ 12,901	\$ 496,502
25	\$ 13,675	\$ 510,177
26	\$ 14,495	\$ 524,672
27	\$ 15,365	\$ 540,037
28	\$ 16,287	\$ 556,323
29	\$ 17,264	\$ 573,587
30	\$ 18,300	\$ 591,887
31	\$ 19,398	\$ 611,285
32	\$ 20,562	\$ 631,847
33	\$ 21,795	\$ 653,642
34	\$ 23,103	\$ 676,745
35	\$ 24,489	\$ 701,235
36	\$ 25,959	\$ 727,193
37	\$ 27,516	\$ 754,709
38	\$ 29,167	\$ 783,877
39	\$ 30,917	\$ 814,794
40	\$ 32,772	\$ 847,566
41	\$ 34,739	\$ 882,304
42	\$ 36,823	\$ 919,127
43	\$ 39,032	\$ 958,159
44	\$ 41,374	\$ 999,534
45	\$ 43,857	\$ 1,043,390
46	\$ 46,488	\$ 1,089,878
47	\$ 49,277	\$ 1,139,156
48	\$ 52,234	\$ 1,191,389
49	\$ 55,368	\$ 1,246,757
50	\$ 58,690	\$ 1,305,447

## **APPENDIX 1**

### **Study Methodology and Data**

As mentioned, this study focuses on the tax revenue effects of these increases in economic activity and incomes during the permitting, construction, and operation of alternative energy generation projects. To do so, this analysis employs a standard economic technique, known as Input-Output (I-O) Analysis, for tracking how the direct effects of increased economic activity, incomes and expenditures are transmitted throughout the Idaho economy and, in turn, result in increased tax revenues. A variety of I-O models are available and this study uses a detailed, sophisticated, and widely used model known as IMPLAN. This model was originally developed for estimating the effects of natural resource development projects. Like all I-O models, the one employed here captures the interconnectedness of the regional economy by taking into account the fact that different types of industries buy inputs from each other and sell their products to each other. This is one way in which increases in output and employment in one industry will cause increases in output and employment in all the industries from which the first industry purchases its inputs. It has been refined and expanded for analyzing a wide variety of economic activity and incorporates detailed inter-industry data on a county-by-county basis in Idaho across 440 sectors of the Idaho economy to account for the flows of economic activity throughout the State.

Information about the size and location of purchases that alternative energy producers make in Idaho, purchases made outside the state, employment, and other data were provided by developers of wind-powered electrical generation facilities of different sizes in Idaho in addition to similar data on one low-impact hydroelectric generation facility in Idaho. The IMPLAN model tracks the direct employment and expenditure effects of these projects throughout the Idaho economy as well as the subsequent indirect and induced effects on Idaho suppliers and their employees.

The fundamental question to be addressed in this study is whether the sales and use tax rebate program results in a net gain or loss in terms of tax revenues to the state of Idaho. Rather than approach this issue in the aggregate, by examining total rebate expenditures and tax revenues on a statewide basis, a more accurate approach is to examine rebate expenditures and tax revenue effects on a per-project basis. One reason for this is that aggregated tax revenue data on a per-industry basis is not available. Another, and principal, reason for approaching the question on a per-project basis is that, by doing so, the variety of tax revenues resulting from the development of alternative energy in the state can be estimated in much greater detail and with much more accuracy.

A variety of types and sizes of alternative energy production projects have been undertaken in the State over recent years. Further, several are currently in the development phase. Pre-construction, construction, and operating phase data for several wind facilities in the state were obtained from producers. The projects generally fell into two size ranges of approximately 80 - 100 MW and 150 – 170 MW capacity. Under the assumption that economies of scale for these projects are not significant, the question of whether the net effects of the sales and use tax rebate provision are positive or negative is invariant with respect to these differences in project size. In addition, the payback period for the initial rebate expenditure is similarly invariant to project size. Further, the relative size of the effects on tax revenues is proportional across project size. In other words, larger projects will involve larger rebate expenditures but will also generate larger increases in other tax revenues. Thus, this study uses a representative wind project of 160 MW capacity to estimate the size of sales and use tax rebate expenditures by the State and to compare those expenditures with offsetting increases in tax revenues from the increased economic activity from such a project. In addition, a representative low-impact hydroelectric project of 2.5 MW capacity is evaluated to determine the fiscal effects from this type of alternative energy production.

Wind Projects: Data and Methodology. Detailed information on pre-construction permitting expenses, construction phase expenditures, and operating expenditures over the life of each project was provided on wind energy projects either recently completed or currently under development by four different producers. During the pre-construction phase involving permitting and transmission preparation activities, expenditures include expenses for contractors, engineers, leasing and lease option payments, initial site development, leasing, meteorological data collection, mapping, personnel, lodging, transportation, and related expenses. During the construction phase, expenses include the costs of purchasing and installing wind turbines and related equipment, site preparation and construction, meteorological tower equipment and installation, engineering services, construction management, concrete and other materials, road improvement and construction, personnel, lodging, transportation, and related expenses. During the operations phase, expenses include ongoing lease and royalty payments, PILOT expenditures, repair and service costs (warranty and non-warranty), insurance, mitigation payments, tower and equipment maintenance, spare parts, road and site maintenance (including snow clearing and weed control), and decommissioning costs at the end of the useful life of the project.

To determine the tax revenue implications, sales taxes were directly calculated for relevant purchases not subject to the sales and use tax rebate during each phase of project development and operation. In addition, PILOT payments and income and sales taxes stemming from royalty payments were also calculated directly from expenditure data received from producers. The Input-Output model was used to calculate tax revenues stemming from increases in corporate and personal income from the direct, indirect, and induced economic impacts. These include individual income, corporate income, sales, cigarette and tobacco, beer and wine, motor fuels, liquor, and insurance premium taxes.

Low Impact Hydroelectric Projects: Data and Methodology. The methodology used to determine the fiscal impacts of hydroelectric projects is similar to that described above

for wind projects. Data on sales and other taxes paid on equipment and materials not subject to the sales and use tax rebate were collected. In addition, expenditures on goods and services during the pre-construction, construction, and operations phases were gathered. The vast majority of expenditures occur during the construction phase, with annual operating expenses being relatively low. In addition to the direct calculation of sales and other taxes, Input-Output analysis was performed to calculate tax revenues associated with increased personal and corporate incomes. As with the analysis for wind projects, these include individual income, corporate income, sales, cigarette and tobacco, beer and wine, motor fuels, liquor, and insurance premium taxes.

## APPENDIX 2

### Current Law in Idaho and Other States

The location of several types of alternative energy facilities are subject to economic factors as well as geographic factors. For example, several states surrounding Idaho are suitable locations for wind, solar, low impact hydroelectric, biomass, cogeneration, and landfill gas energy production. Favorable physical factors such as wind and solar characteristics are found throughout the intermountain west. In essence, states in the region compete with each other during the process of producers deciding to locate production facilities in one state versus another. The economic climate influencing such decisions depends in part on the tax regimes of the states under consideration. The sales and use tax rebate in Idaho provides an important incentive to the development of new alternative energy production in the state. In turn, such development provides significant economic and tax revenue benefits in Idaho. At the same time, it is important to note that other western states have fiscal incentive programs that, for the most part, are more generous to producers than Idaho's. This section reviews these incentive programs in Idaho and other western states.

Idaho. The sales and use tax rebate for alternative energy production is authorized under Idaho Statute 63-3622QQ. To receive the rebate, the purchaser must pay any sales and use tax on the machinery and equipment and then a public, cooperative, or municipal utility or the Idaho Public Utilities Commission must certify that the project will generate at least 25 kW of electricity. After certification, the taxpayer may file a refund request with the Idaho State Tax Commission by the end of the third calendar year after the taxes to be refunded were paid.

Machinery and equipment that qualifies for a rebate on sales and use taxes paid must be industrial fixtures, devices, and support facilities that are integral and necessary to the generation of electricity from the specified alternative energy sources. The rebate does

not apply to machinery and equipment such as hand-powered tools, repair or replacement parts, hand tools, buildings or building fixtures not integral to generating electricity.

In addition to the sales and use tax rebate, Idaho Statute 63-3502B offers a property tax exemption for wind and geothermal energy producers. Property included in this exemption includes real estate, fixtures, or property related to the production of renewable energy systems. In lieu of paying property taxes, this provision specifies that wind and geothermal producers pay a tax of three percent (3%) of annual energy earnings to the county.

Oregon. Unlike Idaho's current sales and use tax rebate program for selected machinery and equipment used in alternative energy generation, Oregon has no sales and, as a result, producers do not pay sales any purchases related to energy production. In addition, Oregon offers a tax credit for renewable energy resource generation, as part of its Business Energy Tax Credit program, equal to fifty percent (50%) of the construction costs of new facilities or the improvement of existing facilities. The credit is generally taken for a period of five years at ten percent (10%) per year. Eligible costs include all costs directly related to the scope of a qualifying project. This includes equipment costs, engineering and design fees, materials, supplies and installation costs. The cap for the credit is \$20 million and firms must receive certification that a project qualifies by January 1, 2014.

Oregon also offers the Energy Trust program that offers cash incentives for renewable energy projects that are 20 megawatts (MW) or less in capacity. In addition, Oregon offers a variety of low-interest loans and grants to firms that demonstrate that projects meet certain economic development and environmental criteria. Many renewable energy generation projects are suitable for these loans and grants.

Washington. Alternative energy producers in Washington are exempt from paying sales tax on machinery and equipment used to generate electricity from renewable sources such as fuel cells, wind, biomass, tidal or wave energy, and geothermal. As a result, the same incentive extant in Oregon applies to alternative energy producers in Washington. Under current law, the sales tax exemption is in effect until June, 2013, at which time the exemption rate drops from 100% to 75%. In addition to the sales tax exemption, Washington offers incentives to be paid to producers of renewable energy by utilities in the state. The base level of this incentive program is \$0.015 per kWh and is increased for electricity produced from solar or wind generators. Utilities receive a tax credit equal to the amount of the incentive payments to producers. These incentives apply to power generated until June 30, 2021.

Nevada. As with other neighboring states, Nevada provides a host of incentives to producers of alternative energy producers. Nevada provides for an abatement of sales and use taxes for machinery and equipment used to generate electricity from renewable resources. In addition, renewable energy producers may receive a 55% property tax reduction over a 20-year period on real and personal property used to generate electricity. Nevada also implemented a renewable energy portfolio standard that requires state investor owned utilities and retail suppliers of electricity to supply 25% of all electricity from renewable resources by 2025.

Utah. As with other states surrounding Idaho, Utah exempts purchases of machinery or equipment used to produce alternative energy from sales and use taxes. Producers of electricity from wind, solar, biomass, landfill gas, anaerobic digestion, hydroelectricity, and geothermal resources are exempt from state sales tax at least until June 30, 2019. In addition, Utah offers a refundable tax credit for up to 100% of corporate, withholding and other state taxes under the state's Renewable Energy Development Incentive (REDI) provision. Utah further encourages the development of its renewable energy sources by having a renewable portfolio standard goal of 20% of adjusted retail sales by 2025.

Wyoming. Wyoming provides a sales tax exemption for alternative energy producers similar to Washington. The exemption is for 100% of equipment used to generate electricity from renewable energy sources, including wind, biomass, small hydroelectric, geothermal, and others. Machinery and equipment eligible for Wyoming's sales tax exemption is more broadly defined than under Idaho's sales and use tax rebate program. Under current law, the sales tax exemption for projects generating more than 25 kW of electricity will sunset on December 31, 2011.

Colorado. Under Colorado Statute 39-26-724, individuals and firms are exempt from sales taxes on all components used in the production of renewable energy facilities. These include wind turbines, solar modules, trackers, generating equipment, supporting structures, towers, foundations, wiring, and other components. Under current law, the statute will sunset on July 1, 2017. Colorado also offers property tax reductions for wind-energy facilities installed on or after June 1, 2006. In addition, Colorado offers a variety of utility grant and loan programs to renewable energy producers. For example, Colorado offers the New Energy Economic Development Grant Program for up to \$2 million per project.

Montana. Under Montana Statute 15-24-1401, Montana offers a reduction in property taxes for new alternative energy generation facilities and for expansion of existing facilities. The taxable value of the property is reduced by 50% over five years with the value of the reduction being phased out over the following five years. In order to qualify for the reduction, generating facilities must exceed 1 MW of electricity from renewable energy sources. In addition, this statute authorizes an alternative energy tax credit for up to 35% of income generated by any alternative generating facility located in the state. The tax credit applies to the first seven years of production from a facility on non-reservation land. For facilities located on Indian reservations, the tax credit applies for 15 years. There is currently no expiration date for this program.