

Exhibit 9

Economic Impact Analysis



Economic Impacts of a 50 Megawatt Wood-fueled Biopower Plant in Mason County, Washington

prepared for



ADAGE™ An AREVA/Duke Energy
advanced biopower company

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by

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Executive Summary

The economic impacts of a 50 megawatt (MW) wood-fueled biopower plant in Shelton, Washington, are summarized in **Table 1**.

Table 1. Economic impacts in Mason and Grays Harbor Counties from construction and operation of a 50 megawatt wood-fueled biopower plant.

Impacts	Change in Local Sales Output	Change in Local Employment	Change in Local Employee Earnings
One-time \$82 million construction expenditure	\$125 million	793	\$42 million
Annual operation of 50 MW wood biopower plant	\$63 million	213	\$11 million

Construction Impacts. Construction of a 50 MW wood-fueled biopower plant with ADAGE specifications involves one-time impacts spread over a 30-month time period, as follows:

- \$125 million of total sales added, with \$82 million in additional local sales of construction goods and services that would ripple (or “multiply”) throughout the economies of Mason and Grays Harbor Counties to create \$22 million of indirect impacts and \$21 million of induced impacts.
- 793 jobs created, with 450 people directly employed in the construction of the plant, plus 152 indirect and 191 induced jobs within the 2-county region.
- \$42 million increase in total income, with \$30 million in wages and salaries paid to construction workers and supervisors directly at the site, \$6 million from indirect impacts, and \$6 million from induced impacts, all within the local economy.

Operation Impacts. The biopower plant creates impacts that occur annually, as follows:

- \$63 million of total sales added, with \$30 million in additional local sales multiplying throughout the economy to create \$27 million of indirect sales impacts plus \$5.5 million of induced sales.
- 213 jobs created, with 24 jobs operating and maintaining the plant, plus 115 jobs to furnish fuelwood feedstocks, plus another 23 indirect jobs, and an additional 51 jobs induced from the operation of the plant and fuelwood feedstock delivery operations.
- \$11 million in annual income to workers in the two counties each year, with \$3 million from operation of the plant, \$5.6 million from fuelwood feedstock delivery, another \$0.9 million from indirect jobs, and an additional \$1.6 million in income induced from the operation of the biopower plant and fuelwood feedstock delivery.

Introduction

ADAGE announced in February 2010 its plan to develop a biomass power (“biopower”) plant in Mason County, Wash., 80 miles west of Seattle. ADAGE is a joint venture between AREVA and Duke Energy, and is in the business of designing, permitting, financing, constructing and operating biopower plants. This \$250 million project will produce 50 megawatts (MW) of electricity, enough for about 40,000 homes, using woody debris from logging operations in the region as the primary source of feedstocks. The plant will be built in an industrial park in the community of Shelton. Using data provided by ADAGE, impacts to the economies of Mason and Grays Harbor Counties were estimated with the IMPLAN input-output modeling system and other information acquired from regional experts.

Economic Impact Region

This study focuses on the economic impacts of the construction and operation of the proposed ADAGE power generation plant in Shelton, Washington on a 2-county area in western Washington (Mason and Grays Harbor Counties). Some of the wood residue feedstocks for the proposed biopower plant would come from Mason County, but most would come from Grays Harbor County. Additional feedstocks could also be obtained from other nearby counties, including Pierce and Thurston Counties. From an input-output modeling standpoint, where the woody material comes from is much less important than the economic impacts related to the use of labor and equipment to move woody material from one location to another. For example, if wood is moved from County A by loggers and truckers that live in County B to a location in County C, then most if not all of the economic impact of their efforts will be felt in county B rather than County A or County C.

Multipliers

Exports of goods and services from an area bring new money into that area. This money is circulated among various sectors of the regional economy, creating a “multiplier” effect, or what is sometimes called a ripple effect. Higher multipliers reflect higher self-sufficiency in the regional economy of the area, and lower multipliers imply “leakages” due to imports into the region, savings, and taxes. As part of an industrial sector of the regional economy, the proposed biopower plant would have a multiplier that can be interpreted as the change in total regional output (whether sales or employment or income) per dollar of change in sales of electricity exported from the region. The multipliers calculated by IMPLAN can be interpreted as follows: for each dollar of sales of electricity from the proposed biopower plant an additional \$2.09 of sales of outputs in other industries are generated in the Mason and Grays Harbor economies (**Table 2**). Similarly for employment, each million dollars of electricity sales generates approximately 8.6 jobs in the Mason and Grays Harbor economies. These are not only direct employment jobs at the biopower plant, but also jobs indirectly generated elsewhere in the region by other businesses, especially those in logging and transportation of the fuelwood feedstocks for the plant. Similarly for income, each dollar of electric sales generates an additional \$3.63 of income in the Mason and Grays Harbor economies.

Table 2. Economic impact multipliers for Mason and Grays Harbor Counties, Washington, associated with the operation of a 50 megawatt wood-fueled biopower plant.

Output Multiplier	Employment Multiplier	Income Multiplier
Dollars of sales per dollar of electricity sales	Jobs per million dollars of electricity sales	Dollars of income per dollar of electricity sales
2.09	8.60	3.63

Construction Costs and Impacts

Construction impacts are a one-time event, spread out over 30 months while the biopower plant is under construction and then terminating when the plant begins operations. The multiplier effects or impacts from the construction may last longer than thirty months, but for modeling purposes are reflected as a singular occurrence. Only the portion of construction costs purchased within the region can effect a change in regional demand. For example, if the project design engineers fly in from somewhere outside the region for short infrequent visits, the money spent on design engineers does not circulate in the regional economy and thus does not create a regional economic impact. On the other hand, the money spent to purchase concrete from a local batch plant does circulate in the regional economy and does create a regional economic impact.

The IMPLAN model estimates impacts from construction of the biopower plant by industry sector. The change in total direct regional sales from the construction phase of the project would be \$82 million (**Table 3**). These expenditures for local goods and services would ripple throughout the economy of Mason and Grays Harbor Counties to create \$22 million of indirect and \$21 million of induced impacts, for a total economic impact of \$125 million from construction (**Table 3**). The model estimates that 620 people would be directly employed in the construction of the plant; the change in local employment resulting from the direct employment of construction workers plus the indirect and induced employment totals to 964 jobs (**Table 4**). Approximately \$30 million would be spent directly on wages and salaries paid to workers and supervisors at the construction site, with total (direct, indirect, plus induced) local employee earnings in the regional economy increasing by \$42 million (**Table 5**).

Table 3. Construction sales output impacts for Mason and Grays Harbor Counties, Washington, from a 50 megawatt biopower plant.

Industry (by NAICS code)	Direct	Indirect	Induced	Total
11 Agric., forestry, fishing & hunting	0	700,793	463,831	1,164,624
21 Mining	0	4,298	1,076	5,375
22 Utilities	0	19,884	29,416	49,300
23 Construction	82,000,000	129,152	155,142	82,284,296
31-33 Manufacturing	0	8,081,460	2,458,273	10,539,732
42 Wholesale trade	0	1,590,868	834,068	2,424,937
44-45 Retail trade	0	2,904,326	2,811,601	5,715,927
48-49 Transportation & warehousing	0	1,087,766	443,991	1,531,757
51 Information	0	800,555	442,814	1,243,369
52 Finance & insurance	0	768,554	1,134,492	1,903,045
53 Real estate & rental	0	1,057,120	4,048,127	5,105,247
54 Professional, scientific & tech svc.	0	2,380,024	398,369	2,778,394
55 Management of companies	0	63,618	34,229	97,847
56 Administrative & waste services	0	501,679	263,861	765,540
61 Educational services	0	2,857	131,220	134,077
62 Health & social services	0	406	2,672,958	2,673,364
71 Arts, entertainment & recreation	0	23,292	479,421	502,713
72 Accommodation & food services	0	373,736	1,552,396	1,926,133
81 Other services	0	1,021,297	1,005,898	2,027,196
92 Government & non-NAICs	0	488,280	1,213,073	1,701,353
ADAGE biopower plant	0	0	243,697	243,697
Total	82,000,000	21,999,965	20,817,953	124,817,923

Table 4. Construction employment impacts for Mason and Grays Harbor Counties, Washington, from a 50 megawatt biopower plant.

Industry (by NAICS code)	Direct	Indirect	Induced	Total
11 Agric., forestry, fishing & hunting	0	3.1	4.2	7.3
21 Mining	0	0	0	0
22 Utilities	0	0.1	0.1	0.2
23 Construction	450	0.7	0.9	451.5
31-33 Manufacturing	0	16.6	4.6	21.3
42 Wholesale trade	0	12.3	6.5	18.8
44-45 Retail trade	0	41.5	40.0	81.5
48-49 Transportation & warehousing	0	9.2	4.1	13.3
51 Information	0	3.0	1.5	4.5
52 Finance & insurance	0	3.9	6.6	10.5
53 Real estate & rental	0	4.8	7.8	12.7
54 Professional, scientific & tech svc.	0	23.9	4.0	27.9
55 Management of companies	0	0.4	0.2	0.6
56 Administrative & waste services	0	8.1	3.9	12.0
61 Educational services	0	0	2.3	2.3
62 Health & social services	0	0	36.5	36.5
71 Arts, entertainment & recreation	0	0.5	5.9	6.3
72 Accommodation & food services	0	6.4	28.7	35.1
81 Other services	0	11.4	19.0	30.4
92 Government & non-NAICs	0	5.7	14.2	20.0
ADAGE biopower plant	0	0	0	0
Total	450	152	191	793

Table 5. Construction income impacts for Mason and Grays Harbor Counties, Washington, from a 50 megawatt biopower plant.

Industry (by NAICS code)	Direct	Indirect	Induced	Total
11 Agric., forestry, fishing & hunting	0	154,469	102,866	257,335
21 Mining	0	1,436	360	1,796
22 Utilities	0	5,324	7,890	13,214
23 Construction	30,330,854	47,772	57,385	30,436,012
31-33 Manufacturing	0	868,234	199,879	1,068,113
42 Wholesale trade	0	581,523	304,884	886,406
44-45 Retail trade	0	1,247,223	1,196,161	2,443,384
48-49 Transportation & warehousing	0	412,646	175,273	587,919
51 Information	0	135,233	70,052	205,285
52 Finance & insurance	0	218,205	318,100	536,304
53 Real estate & rental	0	122,891	176,293	299,184
54 Professional, scientific & tech svc.	0	1,153,106	193,007	1,346,113
55 Management of companies	0	25,698	13,827	39,525
56 Administrative & waste services	0	219,259	110,449	329,708
61 Educational services	0	1,069	49,090	50,159
62 Health & social services	0	217	1,494,203	1,494,420
71 Arts, entertainment & recreation	0	5,200	90,365	95,565
72 Accommodation & food services	0	120,794	501,032	621,826
81 Other services	0	354,041	384,147	738,188
92 Government & non-NAICs	0	283,166	703,492	986,658
ADAGE biopower plant	0	0	25,163	25,163
Total	30,330,854	5,957,505	6,173,917	42,462,227

Operating Costs and Impacts

Annual economic impacts of the ongoing operation and maintenance (O&M) of the biopower plant are estimated using several steps: 1) run the IMPLAN model for the regional economy without the biopower plant O&M costs; 2) add a hypothetical biopower plant in the social accounting matrix of the IMPLAN model, including the costs of fuelwood as part of the plant's O&M costs, and 3) run the IMPLAN model with the biopower plant O&M costs, and then 4) to estimate impacts of the plant, subtract the results of step 1) from step 3) in order to ascertain the difference or change in the regional economy with and without the biopower plant.

Operation and Maintenance (O&M) Costs

The costs for operation and maintenance (O&M) of the biopower plant are annual costs for running the plant and obtaining and delivering the fuelwood feedstocks for the plant. Because Mason County does not have a biopower industry in the county economy, we constructed a hypothetical ADAGE biopower power plant sector and added it to the IMPLAN social accounting matrix. The production recipe for this sector is based upon the operating budget expenses provided by ADAGE for its typical 50 MW reference plant.

Only those goods and services purchased locally circulate in the regional economy. The regional purchase coefficient (RPC) proportion of local O&M expenditures is reflected in the estimated RPCs. These take on values for each industrial sector between zero and one. A zero value means no local purchases of a good or service, a 0.5 value means half of the good or service is purchased locally, and 1.0 means all of it purchased locally. The RPCs for major industry sectors in the region are provided in Table 6.

Table 6 identifies the O&M expenditures by industrial sector. A total of \$21.76 million in operating expenses is required each year and of that \$17.25 million is purchased locally. Most all (95%) of the fuelwood feedstock input is purchased in either Mason or Grays Harbor Counties, allowing for some feedstock imports from elsewhere, including Pierce or Thurston Counties.

Table 7 summarizes direct sales output and identifies value added to the economy of Mason and Grays Harbor Counties from this output. Value added totals \$8.2 million, and is comprised of

\$2.5 million in employee wages and salaries, \$2.0 million in returns to capital and proprietor's income, and \$3.7 million in business taxes.

Table 6. Inputs purchased by a 50 megawatt biopower plant in Mason County, Washington for day-to-day operations, and origin of inputs.

Industry	Gross Absorption	Gross Inputs	Regional Purchase Coefficient	Regional Absorption	Locally Purchased Inputs
Forestry	0.450000	13.50	0.947188	0.426234	12.79
Mining	0.034157	1.02	0.002750	0.000177	0.01
Utilities	0.000323	0.01	0.484681	0.000225	0.01
Maintenance	0.009723	0.29	0.892293	0.008676	0.26
Manufacturing	0.020925	0.61	0.157289	0.012362	0.37
Trade	0.001705	0.05	0.719754	0.000897	0.03
Transportation	0.169853	5.10	0.510699	0.107716	3.23
Services	0.039645	1.17	0.429931	0.017909	0.54
Government	0.000421	0.01	0.967949	0.000407	0.01
Total	0.726752	21.76	not meaningful	0.574603	17.25

Table 7. Regional sales output, employment, and value added for operation of a 50 megawatt biopower plant in Mason County, Washington.

Sales Output	Employment	Employee Compensation	Returns to Capital and Proprietors' Income	Indirect Business Taxes	Total Value Added
\$30.0 million	24	\$2.5 million	\$2.0 million	\$3.7 million	\$8.2 million

Fuelwood Feedstock Costs

The biopower plant needs approximately 600,000 green tons of fuelwood feedstocks per year, whether from logging slash, pre-commercial thinnings, or other sources of woody debris such as municipal tree trimmings or landfill material. This is a substantial amount of wood. ADAGE has determined that there is enough wood residue in the area to sustain the plant's feedstock needs. Collecting and moving logging residues from the woods to the biopower plant will not only help communities with a waste disposal problem, but also will create new jobs in the region.

Forestry operations in costs per green ton are based on best estimates of logging residue availability, labor and equipment to collect and grind it into "hog fuel" and transportation to move the hog fuel to the biopower plant site. This information was provided by subcontractor Bruce Lippke, professor emeritus, University of Washington. The units for logging residues were provided as dry tons, which are converted to green tons using the common assumption that moisture content of green wood is 50%, and therefore one dry ton equals two green tons.

According to ADAGE the biopower plant will consume 600,000 green tons per year (gt/yr) of woody debris. There is adequate logging residue in Mason County (180,000 gt/yr) and Gray Harbor County (465,000 gt/yr). Due to market uncertainties, it is desirable to have twice as much material in the area as actually needed. There may be logging residues in Pierce County (190,000 gt/yr) and Thurston County (99,000 gt/yr) within a 40-mile radius from Shelton (including 10 miles of road system wiggles to make a 50-mile haul, the common rule-of-thumb for an economical transportation distance). We assumed all logging and trucking operators reside in the county in which the feedstocks are found, and in the IMPLAN modeling exercise allowed that 5% of the feedstocks would come from outside the Mason and Grays Harbor 2-county economic region.

Total annual costs for the fuelwood feedstocks are \$13.5 million per year for forestry and logging activities, and \$4.2 million per year for truck transportation. Forestry and logging includes collection of 600,000 gt/yr of woody debris at \$17.50/gt and grinding it into hog fuel after collection at the logging site for \$5/gt. Truck transportation is a function of road distance traveled, and for this modeling exercise is averaged at \$7/gt.

Operation Impacts

The operation of the biopower plant in Mason County will continue to impact the local economy after the construction phase has ended. Impacts resulting from operation were estimated using. The size of the multiplier and final demand determine the impact in the economy; that is, the sum of direct, indirect, and induced effects. The increase in electricity sales is the driving force in the economy, with a change in economic output driven by demand for electricity outside the region. This change in final demand (driven by exports) times the output multiplier results in a change of output.

Table 8 details by sector how the operation of the biopower plant not only directly adds about \$30 million in sales per year into the economy, but also how these revenues generate, in turn, about \$27 million in indirect sales plus \$5.5 million of induced sales per year in the local economy. In total, about \$63 million of sales (direct plus indirect plus induced) will be added to the economies of Mason and Grays Harbor Counties each year.

Table 9 presents similar impacts on employment. The operation of the plant will require 24 full-time jobs. Another 138 jobs will be indirectly required to provide inputs to operate the plant. Most of this indirect employment is in forestry and logging (85 jobs) and transportation of fuelwood feedstocks (30 jobs). Another 51 jobs are induced by direct and indirect employment. In total, about 213 jobs (direct plus indirect plus induced) will be added permanently to the economies of Mason and Grays Harbor Counties.

Table 10 identifies annual income in Mason and Grays Harbor that will increase directly by about \$3 million from operation of the biopower plant. Indirectly, payrolls in the region will increase by \$6.5 million, due mostly to the wages and salaries paid to workers in forestry and transportation. In total, about \$11 million in income (direct plus indirect plus induced) will be added to worker payrolls in Mason and Grays Harbor Counties each year.

Table 8. Operations sales output impacts for Mason and Grays Harbor Counties, Washington, from a 50 megawatt biopower plant.

Industry (by NAICS code)	Direct	Indirect	Induced	Total
11 Agric., forestry, fishing & hunting	0	19,739,754	122,829	19,862,584
21 Mining	0	5,339	285	5,624
22 Utilities	0	2,764	7,799	10,563
23 Maintenance	0	291,482	41,288	332,770
31-33 Manufacturing	0	1,363,042	651,764	2,014,806
42 Wholesale trade	0	424,078	221,170	645,248
44-45 Retail trade	0	43,532	751,766	795,298
48-49 Transportation & warehousing	0	3,669,285	118,345	3,787,631
51 Information	0	102,565	117,544	220,109
52 Finance & insurance	0	236,202	302,158	538,361
53 Real estate & rental	0	184,429	1,078,433	1,262,862
54 Professional, scientific & tech svc.	0	341,342	106,017	447,360
55 Management of companies	0	10,196	9,102	19,299
56 Administrative & waste services	0	133,667	70,263	203,930
61 Educational services	0	3,869	35,146	39,015
62 Health & social services	0	57	710,391	710,448
71 Arts, entertainment & recreation	0	5,622	128,039	133,661
72 Accommodation & food services	0	181,025	413,722	594,747
81 Other services	0	261,155	268,369	529,524
92 Government & non-NAICs	0	157,690	321,534	479,224
ADAGE biopower plant	30,000,000	0	64,398	30,064,400
Total	30,000,000	27,157,095	5,540,362	62,697,464

Table 9. Operations employment impacts for Mason and Grays Harbor Counties, Washington, from a 50 megawatt biopower plant.

Industry (by NAICS code)	Direct	Indirect	Induced	Total
11 Agric., forestry, fishing & hunting	0	85.1	1.1	86.2
21 Mining	0	0	0	0
22 Utilities	0	0	0	0.1
23 Maintenance	0	2.2	0.3	2.5
31-33 Manufacturing	0	0.8	1.3	2
42 Wholesale trade	0	3.3	1.7	5
44-45 Retail trade	0	0.6	10.7	11.3
48-49 Transportation & warehousing	0	29.7	1.1	30.8
51 Information	0	0.4	0.4	0.8
52 Finance & insurance	0	1.2	1.8	3
53 Real estate & rental	0	0.6	2.1	2.7
54 Professional, scientific & tech svc.	0	3.4	1.1	4.5
55 Management of companies	0	0.1	0.1	0.1
56 Administrative & waste services	0	2.2	1	3.3
61 Educational services	0	0.1	0.6	0.7
62 Health & social services	0	0	9.7	9.7
71 Arts, entertainment & recreation	0	0.2	1.6	1.7
72 Accommodation & food services	0	3.4	7.6	11
81 Other services	0	2.7	5.1	7.8
92 Government & non-NAICs	0	1.9	3.8	5.6
ADAGE biopower plant	24	0	0	24
Total	24	138	51	213

Table 10. Operations income impacts for Mason and Grays Harbor Counties, Washington, from a 50 megawatt biopower plant.

Industry (by NAICS code)	Direct	Indirect	Induced	Total
11 Agric., forestry, fishing & hunting	0	4,232,430	27,243	4,259,673
21 Mining	0	1,784	95	1,879
22 Utilities	0	749	2,092	2,841
23 Construction	0	107,816	15,272	123,088
31-33 Manufacturing	0	47,808	53,045	100,854
42 Wholesale trade	0	155,017	80,846	235,863
44-45 Retail trade	0	18,694	319,829	338,523
48-49 Transportation & warehousing	0	1,379,212	46,723	1,425,934
51 Information	0	17,537	18,597	36,134
52 Finance & insurance	0	66,882	84,701	151,583
53 Real estate & rental	0	15,243	46,971	62,215
54 Professional, scientific & tech svc.	0	165,378	51,365	216,743
55 Management of companies	0	4,119	3,677	7,796
56 Administrative & waste services	0	59,953	29,418	89,371
61 Educational services	0	1,447	13,148	14,596
62 Health & social services	0	31	397,114	397,144
71 Arts, entertainment & recreation	0	1,585	24,131	25,716
72 Accommodation & food services	0	58,409	133,529	191,938
81 Other services	0	89,697	102,554	192,251
92 Government & non-NAICs	0	91,448	186,466	277,914
ADAGE biopower plant	3,097,670	0	6,649	3,104,319
Total	3,097,670	6,515,239	1,643,466	11,256,374

Glossary

Direct effects. Economic activity generated by **exports** from a regional economy.

Exports. Sales (both domestic and international) of goods and services outside the region.

Final demand. **Exports** outside the region, capital, inventory purchases, and federal and **state and local government** purchases that drive the **Social Accounting Matrix (SAM)**.

Government transfers to households. Payments received by households from the Social Security Administration for retirement, disability, survivorship, etc.

Hog fuel. Unprocessed mix of coarse chips of bark and wood fiber; piece size between 2 and 5 inches. Possible origin: the grinding machine used to create it is sometimes referred to as a “hog,” meaning it consumes a lot of material.

Household consumption. Payments by individuals or households for goods and services used for personal consumption.

Indirect effects. Effects generated by industries purchasing inputs from other local businesses that support the sales of **exports**, and generated by industries paying wages to employees who are involved in **export** activities (the wages are used to purchase goods and services from other local businesses).

Induced effects. Effects associated with consumption of local goods and services by proprietors and wage earners employed by local firms generating **direct effects** and **indirect effects**.

Jobs. Full- and part-time employment as specified by the U.S. Department of Commerce.

Jobs or employment multiplier. Sum of direct and indirect jobs required to sustain an additional \$1 million of sales to exports from a given industry.

NAICS. North American Industry Classification System (NAICS) is the standard used by federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.

Regional purchase coefficients (RPCs). Reflects how much of a given good or service in a regional economy is purchased within the region. RPCs can range from zero to 1. When all production from an industrial sector is exported, $RPC = 0.0$; when all production is consumed within the region, $RPC = 1.0$.

Sales or output multiplier. Sum of the direct and indirect output required from all sectors of the local economy needed to sustain \$1 of sales to **exports** from a given industry.

Social Accounting Matrix (SAM). A numerical representation of transactions among the sectors in the regional economy that can be used to determine changes in the economic impact of economic agents. The four components in a SAM are: production; household consumption that is supported by provision of factor inputs (labor and **wages**); accumulation in institutions (resident households and **state and local government**); and **final demand**. The SAM allows the estimation of **direct effects** and **indirect effects**.

State and local government. State and local government purchases are divided among public education, non-education, and investment. State and local investment are expenditures for capital goods and construction.

Value added (VA). The sum of wages and salaries, plus proprietor’s income, plus indirect business taxes, plus dividends, interest, and rents. The sum of VA across all sectors of the economy equals the gross regional product.



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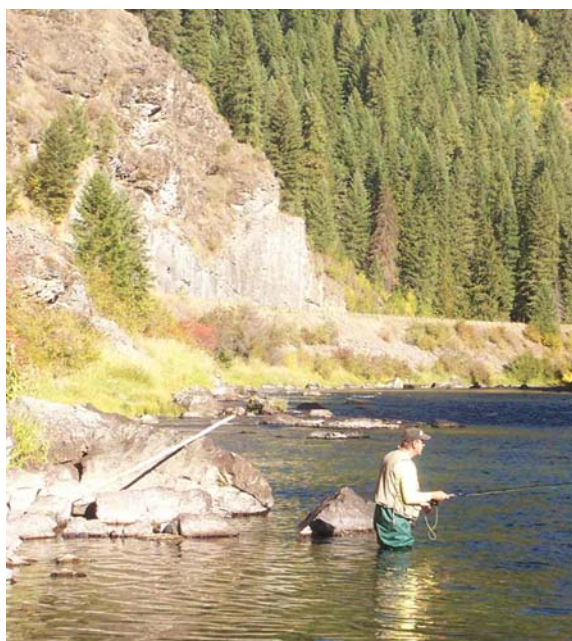
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The Idaho Legislature created the Policy Analysis Group (PAG) in 1989 as a way for the University of Idaho to provide objective analysis of natural resource issues important to citizens of the state. Jay was hired as the first director of the PAG in 1989 to do this full-time job, and the legislature has funded it each year with a special appropriation. PAG analyses are suggested by an advisory committee of natural resource leaders and published in several formats (see <http://www.cnr.uidaho.edu/pag>) and also communicated through invited presentations to various groups. In 2009, for example, Jay gave 24 off-campus presentations on wood bioenergy and/or forest carbon management topics.

Before moving to Idaho in 1989, he taught and conducted research in forest policy and economics at Texas A&M University. He has a BS in business finance from the University of Denver and before earning forestry MS and PhD degrees at the University of Minnesota he was a US Army artillery officer in Vietnam. In 2000 Jay was elected Fellow of the Society of American Foresters and he remains active in SAF policy affairs at regional and national levels.

Jay has spent most of his waking moments in the past three years studying, writing, and talking about how forests can be managed sustainably while helping meet society's needs for renewable energy and reducing carbon emissions. In his role as chair of the Forestry Task Force for the Idaho Strategic Energy Alliance in 2009 he published a report titled *Wood Bioenergy: Homegrown Baseload Energy for Idaho*.^{*} It identifies opportunities and challenges in converting woody biomass to energy. Jay also serves on the Alliance's Carbon Issues Task Force as well as the Idaho Carbon Sequestration Advisory Committee. He is a charter member of the Western Governors' Association – Forest Health Advisory Committee and is Co-chair of its Biomass Utilization & Energy Production Subcommittee.

^{*}http://www.energy.idaho.gov/energyalliance/d/forest_packet.pdf



I know the resemblance to Brad Pitt in the "River Runs Through It" is uncanny. The similarity ends at looks; I'm a better fly fisherman and economist than Brad. Evident in the photo is my multi-tasking abilities -- intent on casting to the rise while concentrating on Idaho economics. The stream is the St. Joe in mid September and the Westslope Cutthroats are hitting a size 16 Light Cahill -- as fast as I can cast and release.



Dr. Garth Taylor

Associate Professor

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- **Education:** PhD, Colorado State University.
- **International** (Pakistan, Egypt) regional economics, agribusiness and water economics
- **Consulting on** business feasibility, water demand, energy development impacts, electricity demand.
- **Extension**
 - Resource and agricultural policy impacts upon Idaho economy and communities.
 - Community economics – taxes, housing, regional, tourism, agriculture.
 - Idaho agricultural policy and financial conditions.
- **Research**
 - Authored over 70 book chapters, research articles, and bulletins.
 - Resource valuation
 - Recreation – snowmobile, water recreation, fishing, tourism
 - M&I and agricultural water demand
 - Agriculture and resource impacts
 - Agribusiness impacts
 - Recreation -- wine tourism, snowmobile, sport fishing
 - Resource – water and wind energy development
 - Water policy
 - Water management planning
 - Externalities in water management
 - Water markets
- **Teaching:** Econometrics, Managerial, Capital Budgeting, Ag Policy, and Regional Economics.



Philip Watson is a natural resource and regional development economist who conducts research on how regional economies interface with their environment and how to optimally manage natural resources. He also teaches courses in regional economic development and regional planning.

Dr. Watson received his Ph.D. in Natural Resource Economics from Colorado State University and has published extensively in the fields of regional economics and natural resource economics.

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