ACR 30 - Logistics Potential
Joint presentation

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Jan 25, 2010

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Section 1 - ACR 30 – Definition of Logistics

Logistics is the steps in the supply chains that take products from the mines, fields, orchards, dairies, ranches and forest to and from the various steps in the process and ultimately delivers them to the retailer, commercial distributor or in some case the end user or consumer.

The types of operations that fit under the hat of Logistics include:

A company owned warehouse whether connected to a manufacturing plant or not, which stores goods produced in one or more locations waiting to fill customer demand for the product or products. Some may be located at or near the factory that produced the product and others may be located closer to where the customer demand exists.

A warehousing operation may be a private company which handles multiple products typically for multiple companies and typically. These operation sometimes are arranged to provide products used in a certain industry. In other cases, they may handle products from a selected group of suppliers.

A trucking company terminal may be a logistics operation. In some cases, the trucks will be primarily from one company and the function is to move the product from one truck to another as part of getting to the goods and products to the ultimate destination. In other cases the trucking terminal main function with be transfer the inbound freight from customers to the appropriate long haul trailer or provider and gather shipment from customers. At the same time, they transfer the good coming in from distant locations and load them for local delivery to the customer. In some cases a terminal operation may gather freight from many trucking firms and consolidate for local deliveries into typical some urban areas.

A rail yard or rail processing facility is a logistics operation. In most cases, the rail yards are owned and operated by the railroads, but there are some commercial rail handling facilities such as the Pan Western operation in North Las Vegas. In some cases, these facilities only act a rail switching operations while other interface to trucking and other shipment options, such as the Ports.

An ocean port facility is a logistics operation. While we have none of those at this time, the California port in San Diego, Long Beach, Los Angeles, San Francisco, Oakland/Alameda, Stockton and Sacramento all affect Nevada to varying degrees. A significant portion of our "through freight" is a result of the Ports. A significant opportunity exists for Nevada because of these Ports.

An airport which deals with airfreight and air transport is a logistic facility. Few communities have a freight exclusive airport operations, such has what is be discussed for Ivanpah in southern Nevada. There are quite a few General Aviation airports around the country, which also handle airfreight issues to some degree.

A retailer, distributor or franchise owned distribution center is a logistics center where goods from many companies arrive by rail or truck for transfer often to company owned trucks to deliver goods and products to the individual operations for sale to retail or industrial customers. This might include everything from a Wal-Mart Distribution center

to an Ace Hardware distribution center or even the support center for a fast food operation or a grocery chain.

A logistic operation might be a facility, which handles catalog or internet sale processing where the call center part of the operation may or may not be co-located with the place where the product ships to customers. Amazon is a good example of this.

A logistics center might be any step along the freight path for UPS, USPS, DHL and FedEx who move freight from one customer to another.

A logistic operation might be a facility, which assembles multiple goods going to the same location or same customer by any of several methods of transfer including air, rail, ship and truck transportation. The same type of operation may break down inbound shipments for delivery or change mode of transport to a customer.

Most logistic operations have several common features. A few may have a most of these factors while others have only a few:

Usually large buildings and often located in industrial areas

Usually are located in industrial areas. In the case or Airport and Rail operation, they are often the focus of the operation.

Often co-locate with major transportation operations and along major travel routes,

Operations may be any configuration of ownership – multi-national companies, foreign companies, private or public US corporations, public or private individuals.

The key for Nevada is to provide good reasons for any of these operations to locate to Nevada which will be a challenge given the spectrum of possibilities. At Ivanpah, we have the potential to have the only location where it might be possible to have direct airplane to rail car transfers for very high-end large products. Some may remember when Porsche flew cars into Reno for their west coast distribution. It is not impossible that a high-end brand from Asia would fly products into Ivanpah for trans-loads to train or truck depending upon destination. To my knowledge, no other place in the world can do this type of operation today.

Our task in Nevada is to create an environment that welcomes all these diverse types of operations and provides good reason for them to locate here. We will not get them all, but we suggest we can get more than our current share.

Section 2 – ACR30 - Opportunities and Obstacles to the Trucking Industry in Nevada

Having a cost efficient and reliable means to transport goods is a keystone in expanding Nevada's logistics and distribution industries. Some of these suggestions are relatively simple to implement, while others would require a vote of the people.

Since 2006, Nevada has lost 21.44% of the trucks based in Nevada. Some of this is the economy; some of it is other states such as Idaho and Oklahoma are aggressively trying to attract these businesses. Below are some suggestions that would help Nevada attract trucking companies back to our state and let new companies know that Nevada wants their business.

Staggered registration—LCVs

In 2007, the Nevada Legislature allowed trucks to stagger their registration. This allows the DMV to better manage their workflow, which saves money on overtime and allows motor carriers to more easily manage their cash flow.

It could be done with permits for longer combination vehicles or LCVs, which are tractors and trailers over 70 feet long. Similar efficiencies could be gained if LCV permits were staggered.

Self-Registration

Passed in 2009 self-registration will allow carriers to add and subtract tractors and trailers into their fleet without going to the DMV. Implementation of the program is about two years out.

Sales tax exemption on rolling stock

One of Nevada's greatest disadvantages in attracting large carriers into our state is the sales tax on rolling stock. All of our border states, except California have a sales tax exemption on rolling stock. This makes Nevada a much less attractive state to base a truck fleet in.

In fact, Nevada companies with facilities in other states are finding a tremendous amount of savings from purchasing trucks out of state and base plating them in a state where they have a facility with no sales tax on rolling stock. These trucks still pay their registration based the formulas in the International Registration Plan (IRP).
Compared to all other states, Nevada is the most expensive in the country to purchase and base a truck. Our registration ranking as of January 2009 is the 8th highest nationally.

Registration fees

Since registration fees are calculated on the cost of the vehicle, there is a disincentive to add devices that would contribute to the safety and fuel efficiency of the vehicle. It also penalizes late model trucks with new fuel efficient engines. A 2010 EPA compliant engine increases the cost of a truck from $8,000 to $15,000. An auxiliary power unit or

APU, which limits the need of the truck to idle costs $5,000 to $10,000. Safety technology, such as stabilization control, which prevents trucks from rolling over and collision avoidance systems, can add thousands of dollars to the price of a truck.

A flat registration fee would not discourage companies that are proactive in employing safety or green technology. A credit at registration for these devices could also provide an incentive to put safer, more fuel efficient trucks on the road, this credit could be limited to vehicles that are owned by companies with a physical presence in Nevada and to equipment that is approved by the EPA or the Federal Motor Carrier Safety Administration.

Permanent Trailer Registration

Permanent trailer registration would allow a company to register a trailer and not have to re-register it until there is a change of ownership. Trailers can be registered in any state so Nevada is losing trailer registrations to states where they can have permanent plates.

State Fees for the Registration of Commercial Semitrailers

Effective July 1, 2003 (rounded to whole dollars)

State	Annual Fee	Fee for Permanent Plate
Alabama	$ 20	$ 60
Alaska		10
Arizona		245
Arkansas	20	65
California		75
Colorado	6 plus property tax	
Connecticut	40	
Delaware	20	
Florida	31	
Georgia	12	
Hawaii	(split fee)	
Idaho	15	112
Illinois		19
Indiana		66
Iowa	10	
Kansas	35	
Kentucky	20	98
Louisiana	10	70
Maine	12	80 – 25 years
Maryland	20	
Massachusetts	250 – 5 years	
Michigan	39	300
Minnesota		55
Mississippi		65
Missouri	8 – 1 year; $23 – 3 years	53
Montana	21	
Nebraska	10.25 – 1st year, $2 thereafter	
Nevada	24	
New Hampshire	22	
New Mexico		10
New York	23	69 - 6 years
North Carolina	20	
North Dakota	20	
Ohio	25	
Oklahoma	46 – 1st year, $6 thereafter	
Oregon		10
Pennsylvania	27	135
Rhode Island	12 – 1 year; $50 – 5 years	80 – 8 years
South Carolina	20	87
South Dakota		10
Tennessee		52
Texas	15	
Utah	11	
Vermont	20	
Virginia	22	50
Washington	34	
West Virginia		51
Wisconsin	15	
Wyoming	6 plus property tax	

Section 3 - ACR30 Study - Linking Energy and Logistics

Part of the mission of the ACR 30 study is to look at the Logistics sector in the Nevada and California economy to see what possibilities exist for Nevada. Clearly the California economy is huge in comparison to ours and typically the warehousing industry want to be located as close to the markets as possible – under normal conditions.

Why Nevada?

California is still a huge economy. It is difficult to get into or out of California without going through Nevada. We are the gateway to the golden state. We have the potential to use our location to significantly expand our control of the commerce in and out of that state if we have a coordinated plan with the state and local governments working to develop our potential as a logistics center.

California has been an expensive place for logistics operations to do business for years, but companies tolerated the expense because of the size of the market and its proximity to millions of customers. Actions in the last few years may have changed the equation that has kept the Logistic sector in California PROVIDING Nevada our invitation to those businesses to be a win for the companies as well as Nevada. There are jobs, diversification and commercial construction issues that are clear, but energy must be part of the equation for this to effort to makes sense for Nevada.

The California Logistics businesses are at least willing to consider leaving their state because of two main reasons – cost and regulations. The cost factor includes land cost, taxes and business operating cost. We are a better deal in all three areas. The regulatory side is the bigger issue pushing California companies to at least consider leaving, IF they have a viable alternative. California AB32 rules is an environmental law attempting to make California the greenest place in the world. The new regulatory cost on the manufacturing sector is estimated to be at least $146 billion over a decade. The impact trucking industry is estimated to be at least $6 to 10 billion annually. We have not found any projected data on the warehousing and logistics sector specifically, but it is the link between manufacturers and their customers. If we present a competitive operating cost and equal or lower capital investment, then we can be a player.

For Nevada to lure the logistic sector to spend millions building new operating bases in Nevada, we need reason for them to invest in Nevada. The logistics sector consists of warehousing, some manufacturing, trucking terminals, rail terminal, airports and increasingly internet based storage and distribution operations as mentioned in the Definition section. Most of those operations require space and large buildings. All Nevada potential locations tend to be either hotter or colder than the existing locations in California. We are not a low energy cost state today, so energy will be a significant factor in anyone looking at moving to Nevada. The logical question becomes how do we create reasons for companies to come here and turn the energy issue from a negative into a positive. At least some of us think it can be done and the rewards are well worth the effort.

Green Buildings

Currently using many of the "green building techniques" is hampered by building codes that still do not adequately address the newer and green ideas. In my personal case, I was the owner/builder of a new house in the 2005-2007 period using ICF construction. ICF is Insulated Concrete Form construction. My exterior walls are Styrofoam block sort of like giant "Legos" which are strapped together and filled with concrete and steel. The local building department required me to engage an engineering firm to conduct a "special inspection and concrete testing" costing an extra $5k. Otherwise, this better and more energy efficient building technique costs about the same as normal stick built construction.

The national and international building codes on many of the newer green building products are years behind. LEAD has only partially filled the gap. If we want energy efficient buildings, then Nevada must become a leader in endorsing the new ideas and not imposed unnecessary and costly delays, which impede builders and owners. There is little hope the national and international building codes catch up anytime soon. The code allows for a local jurisdiction to have additional requirement and I strongly suggest Nevada needs a working panel of inspectors and builders to provide Nevada with a current "statewide" set of codes for the newer and usually better materials. If Nevada contractors become the leaders in new materials, products and process, we can dramatically shorten our construction recession. I don't believe legislative action is needed to start this effort, but legislative action could encourage it and drive the local jurisdictions to sign on to the collective statewide effort. Many of the newer materials involve changes to existing practices and procedures common in the building trades. If we become the leaders in using and perfecting the use of the new material during this period of slower building our contractor will the national leaders as our sector comes back from the recession. Our community colleges, unions, trade groups, and training companies could become key in teaching the new skills and techniques. This recession and the green energy interest provide Nevada a great opportunity to move to become a leader in innovative materials and techniques.

I suggest we not only need to make the process easy, but we should at least CONSIDER lowering the building permit fees and cost for those who use the better and greener approaches. The advantages to the state of lower energy demands for a green project for the building's life is in the best interest of the owners, the utility and the government at all levels. We suggest energy efficient buildings will have a much longer productive life and have higher market value, much lower if not zero carbon emissions and permanently lower operating cost. Because these buildings tend to be large with huge roof areas they could and should have some type of energy production technology incorporated into the most if not all of these projects based upon what is appropriate for the location. For a multiple acre buildings in southern Nevada, reducing the heat load on the roof by using the space to collect and use the heat or directly generate power with PV or solar thermal panels could move the state toward our potential as the renewable energy leader and make most of the new warehouse buildings net energy producers rather than energy consumers. For Nevada to benefit from these new jobs, new green energy sources and significant potential of controlling a large portion of the western state distribution of many good and product, we need to encourage doing these things in all new large roof building construction projects. Any number we suggest drives decisions, but most projects over 5 acres under roof (a little more than 200,000 sq ft) should be encouraged to include energy efficient construction techniques and energy production

technology. In a quick phone check with various local building permit operations, we seem to be inconsistent on how we set fees for green and renewables projects.

Energy Production and Incentives

PV systems with 12% efficiency are available and capable of approaching 300Kw peak output per acre of collector. Installing large systems adds considerable expense to a building project without a reasonably private sector acceptable ROI. Here are some ideas which will improve the ROI.

A renewable energy system on a commercial building which does not substantially increase the ground footprint would not be added to the value of the building permit for purposes of setting the fee for the project for system having over five acres of collector surface or a peak output of 25KW. If we want to encourage renewable energy projects and better building practices we cannot charge people more for doing what we want them to do.

Second, a renewable energy system with over 25KW peak output would not be included for property tax purposed in the value of the property improvements. The same approach here the increased investment brings higher value to the community and in many cases will increase the power generated from renewal sources great than their energy consumption. While this would be somewhat challenging to administer, the value of the property is enhanced as long as the system is working, so increasing the property tax on a system which is not working would be a reasonable approach.

Third, the sales and use tax abatements for renewable energy project would apply to commercial projects with a peak generation capacity of 25KW or greater for the capital investment. Currently Nevada law requires LEAD certification, which is probably not prudent or necessary for the warehousing type construction. If the sales and use tax abatement applied only to the green components it would still encourage greater investment in area, which have benefits to the state and the communities.

The logic behind this idea is simple for the proposed warehousing sector. The power connections to the grid already exist or will exist for commercial property, so the connection to the grid will exist. Projects, which create jobs without creating significant new power demands, have a positive effect on the community.

The Energy Production interim committee has already tasked the PUCN to look at the issue to Feed In Tariffs (FIT) to encourage renewable energy projects and production. An FIT establishes a requirement that the utility commit to a long-term contract to buy the renewable energy produced on a long-term contract (typically 20 years). The arrangement normally allows an initial high enough to recover some of the capital expense during the early years and then a lower rate of recovery. The rate and recovery will likely be different based on the technology used, so the contracts would be better for a 24-7 renewable source than say a wind or solar system. The private sector can then make a decision whether the investment makes sense to them or not. This is an essential feature to really encourage the warehousing industry to make the investment, which are in the best interest of Nevada becoming a renewables leader in the western US. We suggest we will at some point likely have Feed In Tariffs (FIT) and starting with

larger projects provides times for the utilities, government regulators and the new renewable generators to truly develop a viable FIT system.

One of the perceived drawbacks to logistics operations in the past has been the limited number of jobs created for the space consumed and that is still an issue. However, it is our firm belief that warehousing type construction in other than city locations has great value to the state. First, a logistic industry not only provides jobs and the more automated operations provide higher paying jobs, but it is a direct connection to higher paying jobs such as truck drivers. The drivers may live anywhere, but if we grow into a logistics hub, our tax structure and new lower cost of housing will tend to encourage many to move to Nevada.

While it would be a challenge and very difficult to audit, we suggest we should consider allowing an average driver wage and assume one driver per vehicle to be added for purposes of calculating the impact wage. There are perhaps 10% of the vehicles which either have two drivers or a driver's helper, but it is reasonable from an audit viewpoint to disregard those and assume a standard one driver per vehicle. The facility should be able to add the driver wage impact at a fixed percentage of say perhaps 25% of the actual number of truck deliveries times the average driver wage. An operation with a couple trucks per day would show little impact, but an operation with hundreds of trucks per day could show a significant. There will be a few operation where including this calculation will likely allow some highly automated operations to qualify for the longer term property tax and maybe even the capital equipment sales and use tax abatements.

Summary

In summary, we can do some things which will makes the logistic operations feel wanted and they currently do not have that same feeling in our neighbor to the west. We can do so in ways that create new jobs and increases our renewable power generation. In many if not most cases, we can create the jobs and lower or CO2 emissions. We suggest all these can be done and should be done. We can gain another significant economic sector that might partially offset the declines in Gaming and Tourism. The cost in incentives to encourage projects with significant long term paybacks to Nevada are minor compared to the potential paybacks. We understand it is a very sensitive issue to even mention the idea of reducing the revenue to government at any level during the current economic situation. If it is the public policy of Nevada supported by both parties to move Nevada towards becoming a center for renewables in the west, then we think this piece is critical and the give back are minor compare to the benefits. Most of these renewable projects would be on Private land and require little if any additional groundcover. Most would improve the long and short-term value of the buildings. Many would tend to counter our existing problem with high utility rates. We are not sure we can attract a substantial portion of the logistics operations without these incentives.

Section 4 - ACR 30 - The Manufacturing Connection

Some of the warehouse type logistics facilities in Nevada have a logistics component to their operation. Some started as a manufacturing operation and then added space and products typically made in other company owned factories to become also a regional distribution center. Some started as a distribution center or import center and found a need to add some level of value added manufactured content to the warehoused inventory. In other cases, a manufacturing operation moves to a location because of the logistics operations already in the location. The logistics operations may be customers, suppliers or just their presence provides easy and ready access to multiple viable shipping and receiving options.

RTI has already benefitted from some companies locating there because they are Wal-Mart suppliers and use the advantage to be close to their customer. Years ago, Sparks had some companies which located there because of the SS Kresge (Kmart) distribution center located there for many years. The same has not proven to be true to our knowledge for the Amazon operation in Fernley or the JC Penney operation at Stead. It may be that we are unaware of an existing impact in the case of Penney's because it has been there for years. If we move forward with an active approach to attract major logistics operations, we should attempt to understand these types of connections.

For smaller manufacturing companies, locating in one leased section of a large warehouse type structure may have lower rents, plentiful parking and actually better security. The drawback to operating in these locations can be a lack of power available in some cases, but that usually can be solved. If we find a way to encourage renewable energy generation designed in to future facilities then that problem may vanish in many locations. As an example of what could happen, consider this. We have a company making a waste heat generation unit. It can generate power from any source of hot fluid in excess of 200 degrees F and it can be located on the customer's side of the power meter. If a manufacturing plant was pulling the hot fluid from roof mount solar thermal systems, the cost of the power to run the plant could be free or close for most of the year. For some manufacturing plants, power cost is a major consideration on where to locate. If we do the logistics incentives the right way we could take what has been a challenge to get companies to consider relocating here into a huge plus.

Manufacturing jobs generally pay more than logistics operation direct jobs, but for the higher functioning distribution centers with extensive automation, the difference is shrinking. In many cases, distribution jobs become a good training ground for people to enter the manufacturing sector companies. Whether we acknowledge our current K-12 problems or not, many distribution operation jobs will accept our somewhat under educated population. The gaming and tourism industry has been the employer for many of our residents who have lower education levels and limited skills. Partially because of the current recession and partially because of the expansion of gaming into so many new venues, but our gaming employment seems likely to be flat or lower for years. It will take a huge logistics sector to absorb even a portion of the gaming and tourism jobs losses. Jobs in the logistics sector tend to be fairly stable and in most cases have a growth path for those who take advantage of the opportunities.

You may not like the average wage in the logistic sector, but remember the associated transportation position raise the average wage considerably. If we were not located next

to California and if we had the average educational attainment of Utah, this might not make sense. Our school performance has been poor enough for long enough that we have decades worth of a potential logistics workforce. Logistic jobs are good jobs, but perhaps not great jobs. While we all love to have tens of thousands of "High Tech Jobs", the truth is we are not ready and we need Jobs for perhaps a decade or more to fully recover.

We believe the value added manufacturing jobs will come with an increased logistic sector. If this pushes us toward becoming a large green user faster because much of this can be done without incurring the federal approval process, then we may attract greener manufacturing than if we are mired in the federal lands process.

Comparative State Sales & Property Taxes on Motor Carrier Rolling Stock
As of January 2009

State	Rolling Stock:				Parts for Rolling Stock:			Total Sales Tax Paid	Rank of Total Sales Tax Paid	Property Tax Paid on Rolling Stock	Rank of Property Tax Paid on Rolling Stock
	Sales Tax Rate	Rank of Sales Tax Rates	Sales Tax Paid	Rank of Sales Tax Paid	Sales Tax Rate	Rank of Sales Tax Rates	Sales Tax Paid				
Alabama	2%	17	$450	14	4%	21	$200	$650	13	$621	11
Alaska	No tax				No Tax					Exempt	
Arizona	Exempt				Exempt					(1)	
Arkansas	6%	4	$117	17	6%	7	$300	$417	17	$312	13
California	6.25%	3	$1,406	3	6.25%	5	$313	$1,719	3	(1)	
Colorado	2.9%	15	$653	11	2.9%	28	$145	$798	12	(1)	
Connecticut	Exempt				6%	7	$300	$300	20	Exempt	
Delaware	2.75%	16	$619	13	No Tax			$619	14	Exempt	
Florida	6%	4	*$1,350*	4	6%	7	*$300*	*$1,650*	4	Exempt	
Georgia	Exempt				Exempt					$1,656	6
Hawaii	4%	10	$900	7	4%	21	$200	$1,100	7	Exempt	
Idaho	Exempt				6%	7	$300	$300	20	Exempt	
Illinois	Exempt				Exempt					Exempt	
Indiana	Exempt				Exempt					(1)	
Iowa	Exempt				5%	13	$250	$250	22	Exempt	
Kansas	Exempt				Exempt					$863	9
Kentucky	Exempt				Exempt					$1,279	8
Louisiana	Exempt				4%	21	*$200*	*$200*	26	Exempt	
Maine	Exempt				5%	13	$250	$250	22	2,640 (2)	1
Maryland	Exempt				Exempt					Exempt	
Massachusetts	5%	8	$1,125	5	5%	13	$250	$1,375	5	$2,475	2
Michigan	Exempt				Exempt					Exempt	
Minnesota	6.50%	1	*$1,463*	1	6.5%	3	*$325*	*$1,788*	1	Exempt	
Mississippi	3%	11	*$675*	8	7%	1	$350	*$1,025*	8	Exempt	
Missouri	Exempt				Exempt					$143	14
Montana	No tax				No Tax					(1)	
Nebraska	Exempt				Exempt					Exempt	
Nevada	6.50%	1	$1,463	1	6.5%	3	$325	$1,788	1	(1)	
New Hampshire	No tax				No Tax					$1,980	4
New Jersey	Exempt				Exempt					Exempt	
New Mexico	3%	11	$675	8	5%	13	$250	$925	10	Exempt	
New York	Exempt				Exempt					Exempt	

State	Rolling Stock:				Parts for Rolling Stock:			Total Sales Tax Paid	Rank of Total Sales Tax Paid	Property Tax Paid on Rolling Stock	Rank of Property Tax Paid on Rolling Stock
	Sales Tax Rate	Rank of Sales Tax Rates	Sales Tax Paid	Rank of Sales Tax Paid	Sales Tax Rate	Rank of Sales Tax Rates	Sales Tax Paid				
North Carolina	3%	11	$363	15	4.5%	19	$225	$588	15	$771	10
North Dakota	5%	8	*$1,125*	5	5%	13	$250	*$1,375*	5	Exempt	
Ohio	Exempt				Exempt					Exempt	
Oklahoma (3)	Exempt				4.5%	19	$225	$225	25	Exempt	
Oregon	No Tax				No Tax					Exempt	
Pennsylvania	Exempt				Exempt					Exempt	
Rhode Island	Exempt				7%	1	$350	$350	18	Exempt	
South Carolina	6%	4	$150	16	6%	7	$300	$450	16	$1,322	7
South Dakota	3%	11	*$675*	8	4%	21	$200	*$875*	11	Exempt	
Tennessee	Exempt				3.75%	27	$188	$188	29	$585	12
Texas	Exempt				6.25%	5	$313	$313	19	$1,750	5
Utah	Exempt				4.7%	18	$235	$235	24	(1)	
Vermont	6%	4	$645	12	6%	7	$300	$945	9	Exempt	
Virginia	Exempt				4%	21	$200	$200	26	$2,146	3
Washington	Exempt				Exempt					Exempt	
West Virginia	Exempt				Exempt					(1)	
Wisconsin	Exempt				Exempt					Exempt	
Wyoming	Exempt				4%	21	$200	$200	26	(1)	

These figures represent the sales and property taxes paid in each state for a tractor-semitrailer combination operated by a regulated for-hire interstate motor carrier. For purposes of this comparison, the vehicle is assumed to operate all of its miles in the state in which it is based. The italicized figures represent amounts that are apportioned according to mileage traveled in the state.

The combination has a manufacturer's suggested retail price of $110,000, its purchase price was $90,000 (the tractor $75,000, the trailer $15,000), has a useful life of 4 years and is in its first year of operation. It is assumed to be worth $75,000 on the retail market and $58,000 as a trade-in. It requires $5,000 worth of parts per year, including tires.

The sales taxes on the purchase of equipment, which are amortized over the useful life of the tractor and trailer, do not in each instance correspond to the tax rate, since some states cap the amount of tax due on a single transaction involving rolling stock. The extent of state sales tax exemptions for rolling stock varies greatly. Local sales taxes are not included here.

Property taxes, which tend to vary widely depending on locality, are calculated here for the capital city of each taxing state.

NOTES:

(1) These states collect a fee in-lieu of property tax through the International Registration Plan on all interstate carriers operating in the state, as a part of the registration process.

(2) Maine imposes an in-lieu fee on the equipment of all carriers entering the state, but allows no apportionment of tax to Maine-based carriers.

(3) Oklahoma caps sales tax on rolling stock @ $10.

Annual State Highway User Taxes
On A Typical 5-Axle Tractor-Semitrailer Combination
As of January 2009

State	Annual Registration & Weight Fees ($)	State Ranking by Annual Registration & Weight Fees	Diesel Fuel Tax Rate ($)	State Ranking by Diesel Fuel Tax Rate	Fuel Tax on 20,870 Gallons ($)	Third Structure Tax Rate ($/mile)	Third Structure Tax on 120,000 Miles ($)	Total Annual State Hwy User Fees ($)	Federal Fuel, Heavy Vehicle Use, and Excise Taxes	Total State and Federal Hwy User Fees	State Ranking by $ Total
Alabama	$910	41	0.19	39	$3,965	-	-	$4,875	$8,959	$13,834	43
Alaska	$351	49	0	49	$0	-	-	$351	$8,959	$9,310	50
Arizona	$3,960	2	0.27	17	$5,635	-	-	$9,595	$8,959	$18,554	11
Arkansas	$1,370	30	0.228	30	$4,758	-	-	$6,128	$8,959	$15,087	33
California	$2,775	7	0.437	2	$9,120	-	-	$11,895	$8,959	$20,854	4
Colorado	$4,468	1	0.205	35	$4,278	-	-	$8,746	$8,959	$17,705	14
Connecticut	$1,586	24	0.434	3	$9,058	-	-	$10,644	$8,959	$19,603	6
Delaware	$1,410	28	0.22	31	$4,591	-	-	$6,001	$8,959	$14,960	34
Florida	$1,048	37	0.3187	9	$6,651	-	-	$7,699	$8,959	$16,658	17
Georgia	$737	45	0.152	46	$3,172	-	-	$3,909	$8,959	$12,868	48
Hawaii	$827	43	0.1612	45	$3,364	-	-	$4,191	$8,959	$13,150	47
Idaho	$3,389	4	0.25	24	$5,218	-	-	$8,607	$8,959	$17,566	15
Illinois	$3,210	5	0.445	1	$9,287	-	-	$12,497	$8,959	$21,456	3
Indiana	$2,051	12	0.27	17	$5,635	-	-	$7,686	$8,959	$16,645	18
Iowa	$1,705	22	0.235	28	$4,904	-	-	$6,609	$8,959	$15,568	31
Kansas	$1,770	18	0.27	17	$5,635	-	-	$7,405	$8,959	$16,364	20
Kentucky	$2,006	13	0.279	15	$5,823	0.0285	$3,420	$11,249	$8,959	$20,208	5
Louisiana	$514	47	0.2	36	$4,174	-	-	$4,688	$8,959	$13,647	45
Maine	$3,462	3	0.3012	10	$6,286	-	-	$9,748	$8,959	$18,707	8
Maryland	$1,852	15	0.2425	26	$5,061	-	-	$6,913	$8,959	$15,872	28
Massachusetts	$1,450	26	0.21	34	$4,383	-	-	$5,833	$8,959	$14,792	36
Michigan	$1,660	23	0.258	22	$5,384	-	-	$7,044	$8,959	$16,003	26
Minnesota	$1,760	19	0.255	23	$5,322	-	-	$7,082	$8,959	$16,041	25
Mississippi	$2,927	6	0.184	40	$3,840	-	-	$6,767	$8,959	$15,726	30
Missouri	$1,730	20	0.17	43	$3,548	-	-	$5,278	$8,959	$14,237	38
Montana	$1,162	35	0.285	13	$5,948	-	-	$7,110	$8,959	$16,069	24
Nebraska	$1,286	32	0.264	20	$5,510	-	-	$6,796	$8,959	$15,755	29
Nevada	$2,576	8	0.2781	16	$5,804	-	-	$8,380	$8,959	$17,339	16
New Hampshire	$712	46	0.19625	38	$4,096	-	-	$4,808	$8,959	$13,767	44
New Jersey	$1,258	33	0.175	42	$3,652	-	-	$4,910	$8,959	$13,869	42

Annual State Highway User Taxes
On A Typical 5-Axle Tractor-Semitrailer Combination
As of January 2009

State	Annual Registration & Weight Fees ($)	State Ranking by Annual Registration & Weight Fees	Diesel Fuel Tax Rate ($)	State Ranking by Diesel Fuel Tax Rate	Fuel Tax on 20,870 Gallons ($)	Third Structure Tax Rate ($/mile)	Third Structure Tax on 120,000 Miles ($)	Total Annual State Hwy User Fees ($)	Federal Fuel, Heavy Vehicle Use, and Excise Taxes	Total State and Federal Hwy User Fees	State Ranking b $ Total
New Mexico	$190	50	0.22	31	$4,591	0.0438	$5,256	$10,037	$8,959	$18,996	7
New York	$991	40	0.3965	4	$8,275	0.039	$4,680	$13,946	$8,959	$22,905	2
North Carolina	$1,255	34	0.299	12	$6,240	-	-	$7,495	$8,959	$16,454	19
North Dakota	$1,018	38	0.23	29	$4,800	-	-	$5,818	$8,959	$14,777	37
Ohio	$1,372	29	0.28	14	$5,844	-	-	$7,216	$8,959	$16,175	23
Oklahoma	$993	39	0.13	48	$2,713	-	-	$3,706	$8,959	$12,665	49
Oregon	$509	48	0	49	$0	0.1316	$15,792	$16,301	$8,959	$25,260	1
Pennsylvania	$1,715	21	0.381	5	$7,951	-	-	$9,666	$8,959	$18,625	9
Rhode Island	$1,056	36	0.3	11	$6,261	-	-	$7,317	$8,959	$16,276	22
South Carolina	$820	44	0.1675	44	$3,496	-	-	$4,316	$8,959	$13,275	46
South Dakota	$1,482	25	0.24	27	$5,009	-	-	$6,491	$8,959	$15,450	32
Tennessee	$1,420	27	0.184	40	$3,840	-	-	$5,260	$8,959	$14,219	39
Texas	$857	42	0.2	36	$4,174	-	-	$5,031	$8,959	$13,990	41
Utah	$1,821	16	0.245	25	$5,113	-	-	$6,934	$8,959	$15,893	27
Vermont	$1,922	14	0.26	21	$5,426	-	-	$7,348	$8,959	$16,307	21
Virginia	$1,350	31	0.216	33	$4,508	-	-	$5,858	$8,959	$14,817	35
Washington	$1,792	17	0.375	6	$7,826	-	-	$9,618	$8,959	$18,577	10
West Virginia	$2,301	10	0.322	8	$6,720	-	-	$9,021	$8,959	$17,980	13
Wisconsin	$2,575	9	0.329	7	$6,866	-	-	$9,441	$8,959	$18,400	12
Wyoming	$2,231	11	0.14	47	$2,922	-	-	$5,153	$8,959	$14,112	40

The chart displays the highway user taxes and fees for a typical tractor-semitrailer combination at 80,000 pounds gross weight. For the sake of comparison, the taxes and fees are those that would be incurred by such a vehicle if it traveled for the full year entirely within each respective state. The registration fees in each state include charges imposed on registrants based in the state. Property, sales, and excise taxes are not included here, except to the extent that fees in lieu of property tax may be collected through the vehicle registration process. Where such fees are included, the vehicle is assumed to have cost $100,000 and to be in in the first year of operation.