#### MINUTES

ASSEMBLY COMMITTEE ON TAXATION MARCH 17, 1977 9:30 a.m.

Members Present: Chairman May

Mr. Schofield Mr. Craddock Mr. Drever Mr. Harmon Mr. Horn Mr. Jacobsen Mr. Mann

Mr. Murphy

Guests Present: David W. Baker

Charlie Bell, Whittlesea Co.

Jim Bell, Whittlesea Blue Cab Company

Larry E. Bell, Whittlesea

Clyde Crutchfield, W. W. Vending Co. Joan Crutchfield, W. W. Vending Co. George E. Gleed, Western Cigar Co.

Oleta Gragson Oran Gragson

Mrs. Oran (Bonnie) Gragson

Chic Hecht J. W. Jamison

Tom Kruse, Department of Taxation

J. D. Luttrell, Motor Carrier Division,

Department of Motor Vehicles Joe Midmore, Tobacco Tax Council

Ernest Newton, Nevada Taxpayers Association

Marilyn Paoli, Department of Taxation Gene Phelps, Nevada Highway Department Roy Puccinelli, Southworth Tobacco

C. Rasmussen

Charles L. Ruthe

W. P. Scott, Motor Carrier Division, Depart-

ment of Motor Vehicles

John J. Sheehan, Department of Taxation Bruce Smith, Department of Taxation

W. D. Streeper, American-Strevell Steven Stucker, North Las Vegas

R. G. Taylor

Lou Vasconcelos, Glaser Bros.

Donal S. Walls, Whittlesea Blue Cab Company

Ken Willsy, Safeway Stores

Chairman May called the meeting to order at 9:45 a.m.

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#### ASSEMBLY BILL 347

Donal Walls was the first speaker submitting <u>Exhibit A</u> to the Committee as his principal remarks.

Mr. Horn submitted several questions to the witness, and explained that he wanted to know the reason for the statement that had been made that if a tax is imposed upon natural gas as a motor vehicle fuel, then all users of compressed natural gas (CNG) must stop using it. Mr. Horn asked what figures the witness had that would force him to make such a statement.

Mr. Walls stated that at the present time the Whittlesea Blue Cab Company's cost per mile with dual fuel systems is about 4.9¢ per mile. The other taxi operations using only gasoline as a fuel do not exceed 4.7¢ per mile. Mr. Walls said that he was unable to answer Mr. Horn's questions concerning the comparable cost per gallon of natural gas with gasoline.

Mr. Dreyer questioned the statement that the witness made that NRS 366.190 poses a tax of 6¢ per gallon, but is silent with respect to gases. Chairman May explained to the Committee that the Department of Motor Vehicles uses 100 cubic feet of natural gas as equal to one gallon of gasoline.

Mr. Walls explained that a large part of the cab fleet that his company operates is presently using the natural gas system. At the same time, these vehicles may use gasoline. He explained that in the case of a breakdown in the natural gas system, the cab may still run on gasoline. He said that the company had believed that a tax would not apply on the gas because they had construed gallons to be a liquid measure.

Walter Scott spoke next saying he was a neutral speaker. He quoted the definition of a special fuel as written in A.B. 347. He further read the definition of motor vehicle fuel from NRS 365. He said that what the Motor Carrier Division was concerned with was the deletion in A.B. 347 of "and gases." He said that there were three main types of gases: propane, butane, and CNG. He said that their main concern was with CNG. Mr. Scott passed out two articles concerning the subject being discussed, one from the North American Gasoline Tax Conference held in July 1970 (Exhibit B), and the other from the Commercial Car Journal, January 1977 (Exhibit C).

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Mr. Scott said that there are 94,000 commercial motor carriers licensed in the State. Five are on butane, 141 on propane, and 187 on natural gas. Of the 187, 186 are the two cab companies which have been discussed.

Mr. Scott related that it was not discovered that the cab companies were using natural gas as a motor vehicle fuel until an article in the June 4, 1975, Nevada State Journal came out concerning an explosion during fill-up of one of these vehicles. A subsequent audit of the two cab companies produced over \$100,000 in taxes, penalties, and interest. Presently, the two companies pay approximately \$14,000 in quarterly taxes, all of the taxes being paid under protest.

Mr. Scott said that if the word get out that an individual does not have to pay taxes on natural gas, a lot of people may switch.

Gene Phelps spoke in opposition of the bill. He said that the Highway Department opposes the bill because of the loss of revenue to the Department. He said that it costs just as much for a CNG-powered vehicle to run on the highways as it costs any for any other vehicle. He said that there was a report released by the Federal Accounting Department of the United States Attorney General's Office that highways are wearing out 50% faster than they are being repaired.

This concluded the testimony on A.B. 347, and Chairman May called a recess at 10:25 a.m.

The meeting was again called to order by Chairman May at 10:42 a.m.

#### ASSEMBLY BILL 363

Chairman May said that he had received requests from the majority of the witnesses on this bill that it be rescheduled. He said that this bill or a similar bill will be considered in the future, and a week's notice would be given before a hearing.

#### ASSEMBLY BILL 347

Mr. Mann moved for a Do Pass recommendation on A.B. 347; Mr. Harmon seconded.

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Mr. Craddock said that he felt that A.B. 347 would be in direct contradiction of what the Committee did with A.B. 100. He asked what would be done if the bill concerned Indians.

Mr. Dreyer stated that he did not feel that there had been enough testimony concerning this bill. He said that there are a lot of figures that have not come up. He said he would like to know the actual cost factor excluding the loss of tax revenue. He said that he noticed that the Motor Carrier Division would have never collected the taxes if they had not noticed the article in the Nevada State Journal.

Mr. Mann stated that there had been previous indications in a past meeting of the Committee's desire to help people. He said that environment is a worthy cause, and further asked for the Committee's support of the bill.

Mr. Horn stated that he did not feel that we should alter the statutes so that we can still have a tax structure, and that was why this bill bothered him.

Roll call on the motion to give  $\underline{A.B. 347}$  a Do Pass recommendation:

Ayes - 6.

Nays - Craddock, Dreyer, Jacobsen - 3.

Those opposed to the motion indicated that there would be a minority committee report filed with a Do Not Pass recommendation.

Chairman May presented to the Committee B.D.R. 50-1121 for a Committee introduction. Mr. Schofield moved for a Committee introduction of the B.D.R.; Mr. Murphy seconded. The motion was given unanimous approval by the Committee.

Chairman May adjourned the meeting at 10:52 a.m.

Respectfully submitted,

arl Ruthstrom J.

Carl R. Ruthstrom, Jr.

Secretary

#### BDR 32-538

#### SPECIAL FUEL TAX

- Whittlesea Blue Cab Company supports this legislation. We believe the legislature should approve the bill for three principal reasons:
  - (1) It will clear up an apparent ambiguity in the Special Fuel Tax Act, NRS 366
  - (2) It will encourage the use of clean fuel in densely populated areas
  - (3) It will encourage a practice which should guarantee <u>some</u> transportation in urban areas, even in the event of another gasoline crisis.

#### (1) Ambiguity in Special Fuel Tax Act

N. R. S. 366.060 includes liquids and gases in its definition of special fuels. N. R. S. 366.190 imposes a tax on liquids, 6 cents per gallon, but is silent

with respect to gases.

- We use natural gas by taking it from the utility gas lines at about 5 p.s.i. and compressing it to about 3,000 p.s.i.; at which pressure it is transferred to our vehicles. It is never in a liquid state.
- Since a tax rate is specified for liquids only, we made no provision for such an element in our cost analysis of the CNG system. That no tax applied was not an unreasonable conclusion; it is noteworthy that federal taxation of special fuels excludes gases.
- It is now being suggested by the Motor Carrier Division that the tax provided on liquids should be applied to gases by relating the energy potential in a quantity of natural gas to a gallon of gasoline. There are no regulations on the subject, and gasoline is not, of course, a substance taxable under the act.
- We believe the proposed amendment would clarify the law. It would <u>not</u> result in loss of revenue to the state, since if the tax <u>is</u> imposed it raises the fuel cost to the point that all users of CNG must cease to use it.

#### (2) Encouraging use of clean fuel

As noted earlier, the levy on special fuel tax on compressed natural gas users will by virtue of cost increases force them to abandon the use of this fuel in motor vehicles. Natural gas is a much cleaner burning fuel than gasoline, and exhaust emissions are therefore reduced. It is noteworthy that two Las Vegas fleets operate approximately 10,000,000 miles annually in that metropolitan area on CNG; a return to gasoline would increase exhaust emissions. The last year or two has seen occasions when air polution in Nevada's two principal metropolitan areas has been all too visable and anything which reduces this should be encouraged.

#### (3) Continued service

There is another reason for encouraging the dual-fuel concept. Three years ago the OPEC embargo resulted in gasoline being rationed to taxicabs in Nevada; reduction in service was necessary. This can happen again, and continuity in service must be assured. Generally, taxicabs are the only form of urban transportation available on-call, in every part of town, 24 hours per day. The dual-fuel capability of the taxis will ensure continued service.

#### EXHIBIT B

The following are excerpts from the transcript of proceedings of the Morth Merican Gasovine Tax Conference, Residue Region held July 13-15, at Glacier Fark Lodge, East Glacier, Montana:

#### "Report of the Executive Secretary 1969-70

#### "Air Pollution and Motor Fuel:

"The drive to reduce or eliminate air pollutants from automobile exhausts has taken many forms -- experiments with new types of engines including steam engines and gas turbines and with pollution control devices as well as with new fuels.

"In some instances, the use of the government's tax powers is proposed as a means of accelerating the adoption of programs designed to curb air pollution. One example is the recent announcement that the administration would seek legislation imposing a tax of \$4.25 per pound on lead additives in motor fuels, effective July 1, 1970. It is estimated that this tax would add about 2.3¢ to the price of a gallon of gasoline. A similar proposal died earlier in the year. The Chairman of the Council on Environmental Quality said that the imposition of this tax would bring about a reduction and eventually the elimination of air pollution from vehicle exhausts. Currently, it is reported, about 95% of all gasolines contain lead.

"Proposals pending in the California legislature would use the tax power in several ways to facilitate the adoption of curbs on air pollution from motor vehicles. These bills would: exempt or provide a lower motor fuel tax rate on natural gas used as fuel in a motor vehicle; exempt or provide a lower motor fuel tax rate on LPG used as a motor vehicle fuel; exempt or provide a lower motor fuel tax rate on low emission fuels; exempt pollution reduction devices from sales tax; exempt from sales tax those automobiles powered by OPG or natural gas and using approved systems; exempt from license fees automobiles powered by LPG or natural gas with approved systems; provide for a variable rate of sales tax on motor vehicles based on type of emission; provide for partial refund of motor fuel tax on "pool cars" and exempt pollution free automobiles from sales tax, fuel taxes, registration fee, license fee and bridge tolls. The proposals for some sort of preferential tax rate om natural gas appear to have a chance of acceptance. A number of governmental units, particularly in California, have indicated that they would equip their vehicles to burn natural gas. Several utilities in the southern California area are changing over to the dual system. Recently, the United States General Services Administration announced that 1,000 Federal vehicles will also be converted to dual natural gas use. This decision was made on the basis of GSA tests conducted in the Los Angeles Area.

"The California Board of Equalization has recently issued an interpretation of the measure of the motor fuel tax as applied to natural gas as follows:

'Natural gas whether compressed or liquefied in pressure containers and used as fuel for the propulsion of a motor vehicle upon the highway constitutes 'fuel' as defined in section 8604 of the use fuel tax law and is taxable at the 6¢ per gallon rate applicable to liquefied petroleum gas under section 8651.5 of the Revenue and Taxation Code. Eighty-three cubic feet of natural gas shall be deemed the equivalent of one United States gallon of 231 cubic inches without adjustment for temperature correction.'

"In New Jersey, a bill to reduce the tax on liquefied petroleum gas and liquefied natural gas, used as a motor vehicle fuel, from 7¢ to 3½¢ a gallon has been passed by both houses of the legislature. Another example of state interest in this problem is the proposal that the Kansas Legislative Council study the feasibility of utilizing alcohol produced from wheat as a gasoline additive to replace tetraethyl lead.

"A report by the panel on automotive fuels and air pollution of the Technical Advisory Board, United States Department of Commerce has recommended that the Federal government be given the authority to require low leaded or unleaded fuels and also urged the consideration of various types of financial incentives (taxes and subsidies) to achieve the broadest use of unleaded fuel.

This brief survey of recent action and discussion suggests that the subject will be a live one in the forthcoming state legislative sessions in 1971."

A speech by Mr. R. I. Corbail, who is currently responsible for the air pollution surveillance for the Responsible Mr. Corbeil is Project Manager Free High System.

System of the has worked closely with representatives of the California Board of Equalization in connection with the effect of road tax on natural gas.

## "THE USE OF NATURAL GAS FOR MOTOR VEHICLE FUEL AND ITS POSSIBLE EFFECT ON ROAD TAXES

"Thank you very much, further, for this opportunity to discuss with you the Pacific Lighting System's activities to investigate the use of natural gas as a motor vehicle fuel for the purposes of reducing the emissions of air contaminants. Believe me when I tell you that air pollution abatement is the name of our game. Everything that we have done in our activities has been aimed at reducing the emissions from the exhaust.

"As a result of our activities, we have developed a dual fuel system, which is truly unique in its simplicity. All that is involved in the conversion of a vehicle is simply remove the air filter from the top of the carburetor, replace it with a gas/air mixer. A solenoid valve is located in the gasoline line and that gives us our dual fuel capability -- that is to use either gasoline or natural gas as fuel.

Tankage is placed in or on the vehicle, and I say "in or on" because in the instance of a sedan, for example, we will locate the tankage on that shelf, up over the differential, a safe and frequently unused space in a sedan. In the case of a dump truck, we will locate the bottles up underneath, alongside the frame -- we have some two-ton trucks that are in daily operation with the same sort of an application. At Disneyland, for example, on their boasts we've located the bottles up underneath the seats, totally out of the way. We connect the tankage to a regulator assembly located in the engine compartment and this in turn is connected to the gas/air mixer through a vapor hose.

"The primary advantage of using natural gas as a motor vehicle fuel is air pollution abatement. We could stand here and quote numbers for you; I'm sure you're not particularly interested in them, but it will suffice in saving that of all the vehicles that we have converted meet the 1975 standards, both Federal and California.

"There are other advantages of using natural gas as a motor vehicle fuel. That is to reduce operating and maintenance cost. Oil changes are reduced to once a year. Spark plugs last 50,000 miles -- natural gas is a very clean fuel. Some of the operating advantages include no vapor locking, quick starting in cold weather -- I say that with tongue in cheek because we're only a few miles away from Cut Bank, frequently the coldest spot in the nation, and the coldest we have operated our vehicles has been at 10° above zero. That's about the coldest we could find in California. At this temperature the vehicles performed very well and we have no reason to think that they would not perform equally well at temperatures lower than that.

"There are some disadvantages in using natural gas as a motor vehicle fuel. First off, necessarily, with the currently designed vehicles, you must take up some usable space on the vehicle. Another disadvantage is we have chosen to accept a slight power loss. Now, this is not necessary. Natural gas has an octane rating, depending upon its chemical composition, of between 120 and 130 performance rating. This says we can mill the heads, change the valve timing and produce ourselves a little hot rod, but in making these modifications, Gentlemen, you make sacrifices in the emissions of air pollutants. And I have to repeat -- the name of our game is air pollution abatement. We have chosen to accept a slight power loss. You say, "How much of a power loss?" Many people who have driven our vehicles have not noticed it. give you a couple of for instances: I notice one gentleman here from Nevada -- for example, one of my people was driving a 1966 Ford Ranchero with a 174 cu. in. engine, a relatively small engine, to Denver, and going through Nevada he wanted to see how fast he could go on gasoline vs. natural gas. He traveled 90 mph. on gasoline; 85 mph. on natural gas. That's the kind of sacrifice we have accepted.

"Also, in Denver we had another vehicle on display, a 1970 Chevrolet El Camino with a 350 cu. in. engine -- Colorado Public Service representatives were concerned about this power loss. From a standing start up a 4% grade with 3 people in the vehicle, for a measured mile, it took one second longer on natural gas than on gasoline. These are the kinds of power losses you are talking about, Gentlemen, and we feel very strongly that this is a very small sacrifice to make for air pollution abatement.

"On safety, our system has been viewed and reviewed and viewed again by those individuals from the Federal, California state, and local agencies that have responsibility in these areas. Also, insurance underwriters have viewed our system and these experts judged our system to be as safe or safer than the more common motor vehicle fuels. This is not by accident. We have been very careful in the design of the system, in the collection of components and in the testing of these components. But more important than that, natural gas is a safe fuel. We guarantee it'll burn, but it has some chemical characteristics which are desirable. First off, it's lighter than air. You have a leak, it will rise and dissipate. Also, it has high ignition temperatures, ranging again depending upon the chemical composition between 1100°F. to over 1300°F. This would compare with premium grade gasolines and LPG's at about 800 -900°F., and poorer grade gasolines down to about 400°cr 500°F.

"For these and other reasons, people, like Disneyland, for example, have voted to go 100% natural gas fuel in their operations. Not only in Anaheim, California, but in Disneyworld, which will be located in Orlando, Florida.

"There are two methods of storing natural gas on a vehicle. One is the liquefied state and the other is in the compressed state. Now, the advantage of liquefied natural gas, of course, is that by reducing the temperature to nominally a minus 260°, you get a mechanical advantage of something over 600 to 1. Consequently, you can concentrate a great deal of energy into a relatively small vessel, but by the same token, this vessel must be a cryogenic vessel. This then creates problems with boil-off. In using liquefied natural gas, from your standpoint we would visualize a collection of taxes much in the same way as you collect taxes for LFG. And this brings us to compressed natural gas, and Gentlemen, here is a bucket of worms, you'd better believe.

"When we started our project, I phoned the local office of the Board of Equalization and informed some gentleman of what we were doing. There was silence on the other end of the line. Finally, he said, "Friend, just go away. GO AWAY, PLEASE." Well, honestly, we couldn't and he didn't expect us to. As a result of that first contact we were directed to Bob Nunes and the other California Board of Equalization people. Gentlemen, the problem is simply this -- we started our project in a garage. We simply connected a small compressor to the gas house line and compressed the natural gas into the tankage on the vehicle. You gentlemen who are commissioned with the responsibility of collecting, detecting, enforcing the fuel use taxes, you have a real problem. We did it; Mr. Wilson could do it; another person could do it. We in California

in a very large part have natural gas piped into our garages. You can't tell the difference between a converted or conventional vehicle from the exterior. They all look like any other vehicle -- except we put signs on the converted vehicles. We like to be the "clean guy," you know!

"But, Gentlemen, it is truly a problem. Not only do you have a problem with natural gas; you have a problem with other fuels. We came through some woods yesterday, which causes me to ask what would be wrong with using wood chips to fuel a boiler on a steam car. How are you going to control it? There are many other fuels, even the problem of an electric. There are tremendous enforcement problems.

"Currently we are discouraging the use of natural gas in private vehicles in California, for a couple of reasons. At this stage of the game we don't want to cause Bob Nunes any more problems than he already has. Plus, I come back and I say, "Air Pollution Abatement is the name of the game." We are concentrating our efforts on the conversion of fleet type vehicles. This type vehicle, while they total a rather small per cent of all of the vehicles, they consume a disproportionate share of the gasoline, and it is safe to extrapolate that they produce a disproportionate share of the air contaminants to the atmosphere. Our position is that by attacking a smaller number of vehicles, we can make a larger impact on the total air pollution problem. Also, from the tax standpoint, it is more simple to keep track of the usage.

"An example of the type of fueling system that you might have for a fleet type operation is simply connecting a compressor to the gas line; attached to it is a manifold, in turn from the manifold you have hose drops. Vehicles return to a specified parking location, the driver raises the hood, reaches up, grabs the hose, plugs it in, goes and takes a shower. The compressor comes on, fuels the whole fleet of vehicles at the same time. The compressor shuts off automatically. The next morning the driver disconnects the hose, puts the hood down and drives away. We have vehicles which have operated for over two years on 100% natural gas using this fueling method. We also have a "quick loading" method whereby a vehicle is refueled from either a large compressor or a bank of bottles. It is simply a matter of transferring high pressure gas from these bottles into the vehicle. My vehicle, my company vehicle, happens to be a 1970 Dodge. I have a driving range in that vehicle of over 120 miles, depending upon whether I use the air conditioner or not. We refuel that vehicle in about 2 or 3 minutes.

"But again, from a tax enforcement standpoint, it is easier in a fleet type operation. As I mentioned earlier, we are paying taxes in California, 6¢ per 83 cu. ft. Why 83 cu. ft.? There are 83 cu. ft. in a gallon of liquefied natural gas when you have vaporized it to 14.73 psi and 60°F. Since we are using for the large part at the moment compressed natural gas, we measure in terms of hundreds of cubic feet and this extrapolates up to about 7.20 cents per hundred cubic foot. We are not paying Federal taxes.

Nowhere in the Federal statutes that we can find nor that representatives of the Federal government can find is natural gas covered as a motor vehicle fuel. Rest assured, there will be taxes, but for the time being there aren't.

"During the current session of the California State Legislature, again, as it was mentioned earlier, there have been imnumerable bills dropped into the hopper. By the way, there is ælso some activity at the Federal level; there are several bills that have been dropped into the hopper in Congress. However, these have to do primarily with creating an economic incentive for the Federal government's purchase of motor vehicles and the purchase of equipment. The general attitude by the elected officials in California is to create an economic incentive to encourage the use of a clean motor vehicle fuel, and consequently, clean vehicles. The comment was made earlier that that's a lousy way to go, perhaps from your standpoint as tax experts, but from our standpoint, this happens to be one fuel that can be used now. I believe the majority of you will agree with me that from a Legislative standpoint, this is the year for motherhood and sin, you'd better believe it. Anything on the side of motherhood, you can get through the Legislature, at least in California.

"Of all the bills that are currently being considered in California, there are a few which are most advanced and which I believe would be of the greatest interest to this group. The first is Assembly Bill No. 1. This bill has been adopted in the State Assembly and has been referred to the State Senate for consideration. The feature of the bill is a sales and use tax exemption for purchases of new automobiles powered by natural gas systems that have low smoog producing capacities. The next are Assembly Bills 9 and 321. These two bills have been adopted again by the Assembly and represent a composite of approximately 8 bills dealing with the subject of gas tax incentives for conversion to clean fuel systems. These bills exempt natural gas and other fuels from the use fuel tax and sales tax, if the fuel is used through a system approved by the State Air Resources Board. These exemptions will remain in effect through December 31, 1975. There are indications that other states other than California are starting to give serious consideration to tax incentives to promote the use of clean fuels. The most recent that I've heard about is the State of New Jersey. This state is contemplating a reduction, as I recall, from  $7 \not\in$  down to  $2 \not\sim 1 \not\sim$ . We have received some inquiries from the State of Ohio, for example, as to what sort of an approach they might take.

"It's a growing problem, Gentlemen, and I'm certainly pleased with the comments that were made this morning, particularly to hear that you're aware of them and that you will be taking some action. At this point, I am reminded of the inscription that appears over the door of the National Archives in Washington, D.C., and that reads, "The Past Is Prologue." It was defined to me by a cabby one day as, "You ain't seen nuttin' yet." And I think this will be my closing remark, Gentlemen -- you are going to be confronted with many, many problems -- not only with matural gas, but with the other fuels. With that, I will invite questions.

#### (QUESTION AND ANSWER PERIOD FOLLOWS.)

"QUESTION: What is the total price per gallon, including tax, in California -- compared to gasoline?

"MR. CORBEIL: What is the total price per gallon?

"QUESTION: Yes, what is it costing you per gallon? How does it compare with gasoline?

"MR. CORBEIL: For instance, we in California pay 7¢ State and 4¢ Federal, so let's take 11¢ out of whatever you pay for gasoline. Now the highest rate for firm gas per 100 cubic foot, and by the way, let me say here -- mileagewise, compare a 100 cu. ft. per gal. of gasoline just rule of thumb -- It's not entirely accurate, for this reason: that is in a Disneyland type of operation, you have an exceedingly high idle time, or in West Los Angeles, or even in our own type of service work where it's a stop-and-go sort of an activity. We actually get more miles per hundred cu. ft. than you get out of a gallon of gasoline, but again, for discussion purposes here, let's compare it to one. The highest rate for natural gas is 8¢ per hundred cu. ft. The average would be about 6¢ a hundred cu. ft., but we must add to that the compression fees, fixed charges on your compressors and whatever. You're talking in terms of about 4¢, so your charges are going to be about 10¢ to 12¢ a hundred cu. ft. Now, as I said before, back out 11¢ out of whatever you pay for gasoline, and there is your comparison, because at this stage of the game I don't think it's fair to compare with the taxes in.

"Just to add a little further to that -- our own operations, which we feel are typical, when you toss in operating and maintenance, and this includes periodic maintenance; this includes the labor factor on the fueling, because the type of fueling system we have used reduces labor costs, we find a reduction of about 17% on an annual basis per vehicle.

"QUESTION: Do you have a number for how many vehicles in California are currently on natural gas, or including propane or LPG?

"MR. CORBEIL: No, sir. We are strictly talking about natural gas, and the two methods of storage are LNG, liquefied natural gas; and CNG, compressed natural gas.

"QUESTION: What is the cost of the conversion unit?

"MR. CORBEIL: Excuse me, I want to answer the question first. Totally throughout the United States, we are approaching 2,000 vehicles utilizing our natural gas system. Of these in California there would probably be over 1,000.

"QUESTION: Is there somebody else in California that has a similar --

"MR. CORBEIL: There is another company that is just starting out, and I'd love to tell a little story about this time -- perhaps you've heard it. It's about the three men of the cloth who were out fishing in this lake, equally pious, of course, and of three

different denominations. The first one stood up and said, "Well, my bait's getting a little stale, I'll run to shore and get some more bait." So he jumps out of the boat, and he runs along on the top of the water and he gets some more bait, and he comes running back across the top of the water, and sat down. Then the next one said, "You know, I think my hooks are a little too big. I need some more hooks." So he too jumped out of the boat and ran across the top of the water, got his new hooks and ran back and sat down. third one, impressed by all of this, but not to be outdone, stood up and said, "Well, I'm thirsty, I'm going to go and get a drink of water." So he jumped over the side of the boat, and blub-blub-blub -- he came back up rather embarrassed, crawled into the boat, and nobody said anything. The more he thought about it, the more it became a challenge to him. "By Jove, the Good Lord took care of them, He should take care of me." So he stood up and he said, "I'm hungry, I'm going ashore to get some food." He jumped over the side, and blub-blub-blub -- he came back up, crawls into the boat, and the first one turns to the second one and says, "Don't you think we ought to tell him where the rocks are?"

"Believe me, Gentlemen, in this project there have been some dunkings as well as some rocks, and anyone else that gets into the business at this point, all I can say is, "Rots of Ruck." I like competition, I really do. I also understand Victor Equipment Co. of Houston, Texas, is starting to put some components together. Those are the only two that I have heard of at this time.

"The cost at this point in time, to convert vehicles one at a time is \$300.00, plus tankage, plus labor; and this is part of the reason for the economic incentive as viewed by elected officials, to give the participant an opportunity to recoup his investments.

"QUESTION: Do you know anything about PG&E's?

"MR. CORBEIL: PG&E is using 40 of our kits. We have worked very closely with PG&E. They are taking full credit, and I say, "God love them for it," we don't sell gas up there. We only sell in southern California. Arizona Public Service has several kits, Con-Ed of New York just yesterday ordered something like 25; New Jersey, Washington D.C., Illinois, Nevada. If I haven't mentioned your state, ask, because I'm sure that the gas utilities there or someone else there is trying out at least one or two vehicles.

"QUESTION: About what is the size of the tank you have on your vehicle?

"MR. CORBEIL: I have 9 scuba bottles; they are 24 inches long, 7 inches in diameter. They are manifolded together right up on that shelf over the differential. They fit beautifully. They are taking up about 25% of the usable space in the trunk. A few years ago, the first time I took a vehicle home and showed it to my wife, she saw those bottles back there and said, "You're not going to do anything like that in our car." And I asked, "Why?" She said, "Because you're using up our space." I asked her to do one thing for me, to keep track of the number of times she used

our trunk. The biggest load in the 2-year period we have had have been my golf clubs and bags of groceries. Stop and think about it, Gentlemen, how many times do you use the capacity in your trunk? What a ridiculous way to design a vehicle, look at all that wasted space. That's what she thinks now, and I'm not sure that I disagree with her.

"There are activities by the automobile manufacturers that might be of some interest to you -- Ford Motor Car Co., General Motors, American Motors, Chrysler -- all of them have our equipment and are running tests. We got a comment out of Ford Motor Co. the other day that I thought was rather interesting. They said, "You know, we have duplicated your results;" as though we were a bunch of liars. But very seriously, what their plans are, I don't know. I don't even think they know at this stage of the game.

"QUESTION: Is there a sufficient supply of natural gas to fuel 105 million automobiles?

MR. CORBEIL: Well, first off, I think it is purely ridiculous to assume that natural gas will ever fuel 105 million vehicles. We feel very strongly that there is a place for natural gas as a vehicle fuel. We never in a million years -- never in a million years do we feel that we could displace all of the gasoline. to the supply of natural gas, and thank you for asking the question, because there has been a great deal said recently about the supply of natural gas, and by the way, I would like to qualify my expertise in speaking on this point -- I have had gas procurement responsibilities for the Pacific Lighting System. First off, currently in our industry we do have a short range gas supply crisis. The crisis has been brought upon us and the producers by the area field price which has been set by the Federal Power Commission. It is not high enough to attract new capital to go in and develop known gas reserves. Consequently, for the moment there is a shortage in some areas, particularly along the east coast. This is not to say that the natural gas is not there. It is there. I refer to a recent Department of Interior report which quotes known reserves in the ball park of about 4,000 trillion cubic feet. For comparison purposes, in the United States last year we consumed about 20 trillion cubic feet. Out of these 4,000 trillion cubic feet, 2,000 trillion are economically producible. Now, in addition to that, with the added ocean transport of LNG, which is not a pie in the sky, it is an every day reality -- there is the CAMEL Project coming out of Algeria into Thanes River in London, and also on over into France. There is a new project in Alaska going into Japan. As a result of this new technology, we now have available to us the gas reserves of the world. In addition to that, we in our industry have developed the technology to produce synthetic gas from coal. I'm not going to tell you gentlemen what the reserves of coal are. As far as natural gas is concerned, we can actually operate our wehicles on this synthetic gas. We have made emissions tests and have found it to be as good as natural gas, so as far as the supply of natural gas is concerned, we are not concerned, but we do have this shortrange problem, particularly on the east coast. We're in pretty good shape on the west coast, really. We're still satisfying something

like 86+% of the power plants' fuel requirements in southern California.

"QUESTION: You briefly mentioned in your speech the safety feature -- I'd like to hear another comment or two on -- say an accident in a vehicle equipped with these tanks, on a rupture. Do you compare them with your gasoline tank ruptures? Is the safety factor still comparable in an explosion type of accident?

"MR. CORBEIL: Better. Let me just describe this for you. is precisely why the authorities have ruled this sytem to be as safe or safer -- first off, I wish that I would have an opportunity to meet with you again in about 2 months. The Federal government is starting some crash tests of our vehicles -- their own vehicles, with our equipment. The State of California is conducting some tests along the same lines. First off, let us speak to the tankage that we are using. All of the tankage is produced to the ICC specifications, now DOT. They are industrial type tanks -- for reference, the oxygen bottles in an oxygen-accetylene sort of activity build for industrial application -- I've never seen one ruptured. I've seen valves knocked off, but I've never seen a tank rupture. We strap those tanks in sufficiently to take collision loading. locate those tanks on the vehicle, as I told you, in the case of the sedans, upon the shelf in the trunk. This affords the greatest protection. We vapor seal in all cases the passenger compartment from the storage area. As far as the equipment is concerned, we go forward with tubing which is comparable to brake tubing. It is hydrostatically tested for SAE specifications at 20,000 pounds. have tested it at 10,000 pounds. We've never been able to rupture any of it. We locate this tubing on the vehicle; we strap it down every two feet on the inside of the frame, going into the engine compartment. If you get a rupture, you come back to the characteristic of the fuel. It leaks and it will rise. As far as knocking out a valve is concerned, we have run some tests on this. We have strapped the bottles down, we have knocked off the valves to see what would happen, and due to the strapping, they don't move. They make a lousy missile, honestly. In any missile, if you never let it get started, it's not going anywhere.

"QUESTION: Is it your thought that the distribution of natural gas is specifically made through the utility companies?

"MR. CORBEIL: Well, certainly your utilities have the franchise of distributing natural gas to the consumer. Now, what the consumer does with it beyond that point is his concern. We have a responsibility to make sure that it is used in a safe manner. The local authorities all have the same responsibility; by that, I mean the safety departments, the fire departments, the building codes. Beyond that point, we wouldn't have any qualms at this point in time -- and again, seeing our friend from the Standard Oil Company of California -- listening to one of his executives one day, in response to our explanation of our project, he said, "Hell, what's wrong with that? What's going to prevent us from putting in a compressor into each and every one of our service stations and selling gasoline and compressed natural gas?" He went on to say, "Your

lines go right in front of each and every one of our service stations."

And I say unto him, "Bravo, that's exactly what we need." The growth of this thing is going to be like the chicken and the egg, if you will. You can't have a vehicle without the fueling station, and you can't have a fueling station without the vehicle. So that they have to go together.

"QUESTION: Some of the legislation you mentioned was in the Senate was passed; and what would the kits you mention -- would the fuel for the cylinders be limited to your installations right now?

"MR. CORBEIL: You can get a compressor anywhere.

"QUESTION: No, I want to drive in some place and get my vehicle fueled.

"MR. CORBEIL: You mean come to us and we sell you compressed natural gas? No, sir, we don't do that. We give compressed natural gas to the local political entities. We have this authority, but at this stage of the game we cannot sell compressed natural gas. We do not have a rate schedule to do so. Those individuals who are private and are operating units, have their own compression facilities.

"QUESTION: Well, my point was, what is to be served by the type of legislation that you prescribed that would service and sell to a person?

"MR. CORBEIL: The incentive would be to a fleet type operator, rather than to passenger cars, because here he again can put in his own fueling system. Now, the individual who wanted to go out and put in his own compressor, certainly, he can do it, but at this stage of the game, as we interpret the legislators, this is not their thinking. Their thinking, again, is of fleet type operations.

"QUESTION: I think in the near future -- you do not consider cryogenic tanks? You use mostly compressed --

"MR. CORBEIL: Yes, Gentlemen, there are two very good reasons. First, up until very recently cryogenic tanks have been God-awful expensive. It has been my objective -- I have no reason for this, it's just a kind of an out-of-the-sky sort of thing, but if we could get a 20 gallon tank for \$200.00, it would be feasible. We now have available to us a cryogenic tank, depending upon the number of purchases, that ranges between \$200.00 and \$250.00. second reason, and certainly the most important reason, is that liquefied natural gas is unodorized. It has been my position -and not everyone is our industry has agreed with me on this -- it has been my position, and my management supports me; I will not be a party to placing unodorized hydrocarbon in the hands of the layman. Now, I'm very proud to announce, and this is the first time publicly, we have devised a method, a patentable method, for odorizing liquefied natural gas. We are just now applying for a patent. It is our intent to make this method available to the industry at no charge. The reason we are seeking a patent is simply to protect ourselves, because if we don't patent it, somebody else will

and then come back and charge us for using it. So from this point on, I think you're going to see more activity, at least in our service area, in the use of liquefied natural gas as a motor fuel.

"Now, I would just like to speak briefly on liquefied natural gas versus compressed natural gas. I view the two methods of storing as being compatible. Short range vehicles such as our own service vehicles that travel about 20-25 miles per day, one bottle on them, gives them a range of about 40-45 miles, or enough for a full day's fuel requirements. It would be ridiculous to put a 20 gallon tank, or rather a \$200.00 tank on the back of those units, when refueling is so simple. For continuous use type vehicles, such as taxi-cabs, long distance haulers, that sort of thing, LNG is the way to go. Just as a kind of a breaking point, it would appear that vehicles that run somewhere in the neighborhood of 80-100 miles or less should stay with CNG, and those that travel something over than should use LNG storage."



# NATURAL GAS: Tomorrow's Fuel Today

Compressed natural gas stations may be few and far between. That's today. But natural gas could very well be tomorrow's fuel for many kinds of vehicles. Inexpensive, clean-burning and longer engine life are just a few of the benefits that natural gas users are reporting. Robert Jennings' San Rafael taxi fleet is a typical case history.

By BERT GOLDRATH, Field Editor

Modified V-8 engine in Mymouth taxicab shows gas-air mixer, containing its own air filter, replacing regular production version. Components of natural gas system can be transferred to another vehicle.

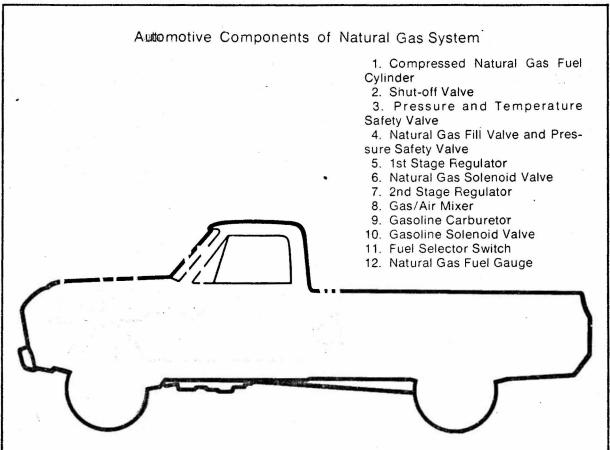
SLICED BREAD may have been a more popular invention, but the operator of a San Francisco Bay Area taxi fleet can't find enough words of praise for natural gas.

Robert Jennings has bossed a Yellow Cab fleet in the city of San Rafael just north of the Golden Gate Bridge since 1962, running 22 cabs that average 1,540,000 miles a year, nearly all of it on compressed natural gas.

The fleet operates 1973, 1974 and some newer model Plymouths, equipped with automatic transmissions, power steering and 318 cu-in. V8 engines converted in 1973 for natural gas by Dual Fuel Systems, Inc., a subsidiary of Pacific Lighting Co. of Los Angelles. Jennings says conversion costs per vehicle, at today's prices, would be about \$800 plus labor, including three gas cylinders housed in the wehicle's trunk. Actual con-

Contin





version time is under 14 hours per vehicle.

Conversion is done without significant modification to the original gasoline engine. For compressed natural gas, timing is advanced 10 degrees for minimal exhaust emissions. The penalty paid for the advanced timing is that the engine, when operated with gasoline, pings on regular grade fuel. So the more expensive premium gasoline must be used.

There is also another drawback. Actual operating experience shows fuel mileage with natural gas is slightly below that of gasoline. Jennings reports 11 miles-per-gallon with natural gas compared to 12.5 mpg with gasoline. But despite the drawbacks, there are still significant benefits, according to Jennings, the most important of which is fuel costs.

The cost of natural gas is now about 20-cents a gallon, including the purchase of accessory compression and pumping equipment. This is about 40-cents less per gallon than premium gasoline. Besides, natural gas is much more available and not subject to any kind of nationalistic boycott.

In changing a gasoline engine over to natural gas, a gas-air mixer replaces the production air filter, and regulator assemblies are installed to reduce gas pressure to a working level of 2500 lb. One mixer works for all engines, regardless of size.

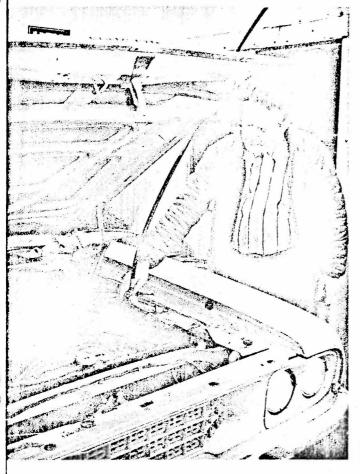
Also the conversion kit can be removed and reused on another vehicle at trade-in time. A special carburetor adapter is required along with steel plumbing instead of flex hoses to handle the \_high pressure of natural gas.

The conversion includes several safety systems. For example, the fuel gage is hydraulically operated so there is no high pressure gas in the driver's compartment; there are safety valves at both the engine and the trunk tanks; and fuel lines are rated at 10,000 lb, four times the required load.

Compressed natural gas is said to be inherently safer than gasoline. While fumes from gasoline sink and eventually puddle, natural gas dissipates harmlessly into the air. It is non-toxic, has a high ignition temperature and requires a very narrow ratio of air to natural gas before combustion can

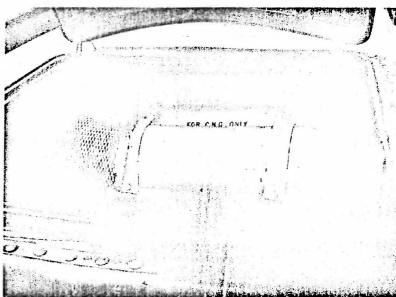
While Jennings' fleet is equipped to operate on both gasoline and compressed natural gas, the dash-mounted fuel selector system makes it impossible to select the wrong fuel or to mix fuels. No natural gas will flow unless the vehicle is either running or cranking.

California is believed to have the highest proportion of natural gas-powered vehicles in the nation. The number of cars and light trucks that have been converted runs into the thousands. And



At left, fleet operator Robert Jennings demonstrates quick-fill refueling method. Hose attaches to pressure control assembly and fill valve.

Below, San Rafael taxis each carry three 300 cubic foot tanks in the rear trunk. The cabs also have half-overload springs to handle the additional 300 pounds and deck lid mounted luggage holders.



not without good reason.

Besides the obvious saving at the fuel pump, the California legislature has adopted laws that give natural gas users a tax break California residents have a choice of keeping a record of the amount of compressed natural gas they use and paying an annual tax on the vehicle, or buying a sticker for \$35 per vehicle.

Environmental concerns, which traditionally run higher in California than in any other state in the nation, are the key reason for bestowing tax benefits on natural gas users.

Jennings says the use of gasoline is becoming more expensive, and there are an increasing number of restrictions accompanying its use, at least in Califonia.

Jennings has had to install a fume recovery system for the gasoline delivered to his storage tanks, and he must install within one year a similar system for the gasoline he pumps.

"Air pollution is becoming more of a problem than fuel costs and shortages," he said.

Right now, compressed natural gas meets or exceeds governmental emission standards as applied to carbon monoxide, hydrocarbons and oxides of nitrogen. There is no lead in natural gas and soot is virtually non-existent. Jennings said there is no acid buildup in his engines and natural gas burns

better and cleaner than propane.

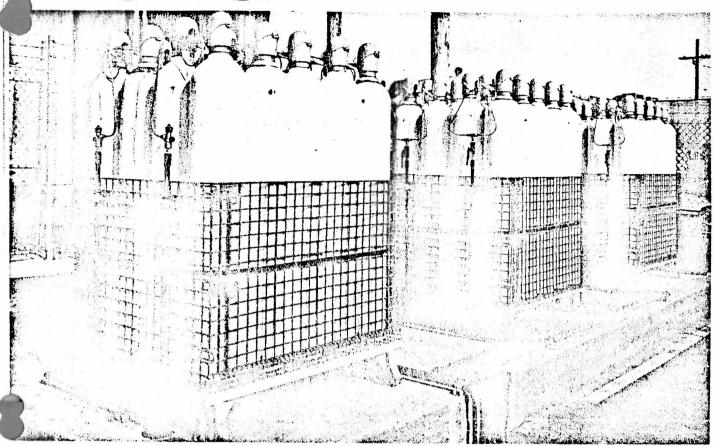
Jennings said when one of his taxicabs was checked out by the California Highway Patrol, technicians were unable to find enough pollutants to obtain a reliable reading.

Jennings also believes engines run on natural gas alone may have as much as twice the life expectancy of gasoline-fueled counterparts.

"We were changing spark plugs at 15,000 miles. Now we change them at 30,000 miles and regap between 10,000 to 20,000 miles. We are now changing oil at 15,000 miles instead of the old 5000-mile level. There has been no oil dilution and no problem with impurities. And we have not experienced any valve or valve guide problems.

Dual Fuel Systems says it can do for others what it has done for Jemings. Among the claims made by the Los Angeles-based company are the following:

- a closed system that allows no fuel evaporation.
- an immediately-responsive system with no waiting for vaporization, no vapor lock
  - · all-weather ignition and reliable idling.
- stutter-free acceleration, even from a cold start.
  - an octane equivalency rating of 130, com-Continued



Jennings stores his compressed natural gas in these 20 gallon caged cylinders. He always has a minimum supply of 400 gallons on hand. His only complaint about natural gas is that it is not generally available except in metropolitan areas.

pared to 100 for high-test gasoline.

At present, each San Rafael Yellow cab is equipped with three, three-gallon tanks or 900 cu ft of natural gas which is sufficient to allow the vehicle to operate between 100 and 140 miles, depending on conditions. They are also equipped with a 21-gal gasoline tank. In the event the driver runs out of natural gas, he simply switches a dashboard selector knob to gasoline.

Jennings says he has retained both fuel systems in his taxi fleet because of the shortage of natural gas fueling stations in the San Rafael area. In larger metropolitan æreas like Los Angeles, an available source is not a problem.

As a typical fuel savings, Jennings cites an 80mile round trip to San Francisco International Airport. Running on gasoline, the cab consumed seven gallons at 60 cents for a total of \$4.20. On natural gas, the vehicle required eight gallons, but at just 20 cents for a total fuel cost of \$1.60.

Jennings keeps 400 gallons of compressed natural gas stored on company premises in banks of 20-gal cylinders within an outdoor fenced enclosure. A compressor for quick-filling is part of the installation package and Jennings says it doesn't take any longer to refuel a vehicle with natural gas than with regular gasoline.

'I don't see why natural gas shouldn't be com-

mercially practical right now for any fleet of 10 or more vehicles. Especially in areas where the fuel is easier to come by.

'I've driven natural gas powered vehicles with heavy loads, up steep grades and at high speed. Any of the small or medium V8 gasoline engines would be ideal for conversion. They'll take anything you ask them to do.

'One of the biggest drawbacks is range," he admitted. "But," Jennings added, "I see a technological breakthrough which will let us fuel with liquid rather than compressed natural gas. That will increase the range enormously. The fuel will be in a cryogenic state so we should be able to use some of the extreme cold for 'free' airconditioning.

So there you have it: claims of substantially reduced emissions, significant lower fuel costs, reasonable price tag for installation, safety, reduced vehicle maintenance and added engine life.

All that's left is for the fleetman to decide when he wants to start cooking on the front burnerwith natural gas . . . naturally.

For a free single copy of this article, write on company letterhead to: Editor, Commercial Car Journal, Chilton Way, Radnor, Pa. 19089

## INDEX OF MEASURES IN ASSEMBLY COMMITTEE ON TAXATION March 17, 1977

Bill or Resolution	Date Referred To	Introducer's		Date Scheduled	Committee	-		Girantus
Number	Committee	Name	Summary	Hearing	<u>Action</u>	Action	Action	Signature
A.B. 53	1/19/77	Howard	Authorizes deduction of property taxes from taxable mine proceeds.	2/3/77	Ind. Post.			247
A.B. 99	1/20/77	Committee on Taxation	Deletes requirement for Multistate Tax Compact advisory committee to hold annual meetings.	1/27/77 2/10/77	Do Pass	Passed 2/14/77	Passed 3/9/77	
A.B. 100	1/20/77	Committee on Taxation	Places cigarette taxes directly upon ultimate consumer.	2/22/77 3/1/77	Amend; Do Pass as Amended	Passed 3/10/77		
A.B. 101	1/20/77	Committee on Taxation	Creates Department of Taxation Bond Trust Fund and raises bond limits for motor vehicle fuel dealers.	1/27/77 2/10/77	Amend; Do Pass as Amended	Passed 2/17/77		
A.B. 102	1/20/77	Committee on Taxation	Creates intergovernmental trust fund and aviation fuels tax revolv- ing account.	2/3/77	Do Pass; Rerefer to Ways/Means Do Pass	Passed 2/8/77		
A.B. 103	1/20/77	Committee on Taxation	Requires sales and use tax collections to be deposited to account of State Treasurer.	1/27/77	Do Pass	Passed 1/31/77	Passed 2/8/77	2/11/77
A.B. 104	1/20/77	Committee on Taxation	Changes prescribed boat lights; requires counties to pay Fish and Game Department for boat registration and tax services.	2/8/77	Amend; Do Pass as Amended	Passed 2/21/77	Passed 3/15/77	
A.B. 161	1/26/77	Committee on Taxation	Clarifies administrative powers of Department of Taxation.	2/10/77	Do Pass	Passed 2/14/77	Passed 3/16/77	

Bill or Resolution Number	Date Referred To Committee	Introducer's Name	Summary	Date Scheduled Hearing	Committee Action	Assembly Action		Governor's Signature
A.B. 174	1/27/77	Committee on Taxation	Changes latest dates for county assessors to file tax roll and segregation of roll with State Board of Equalization.	2/10/77	Do Pass	Passed 2/14/77	Passed 2/28/77	3/3/77 <b>X</b>
A.B. 175	1/27/77	Weise	Provides abatement of taxes on all real property acquired by State.	2/10/77 3/1/77	Amend; Do Pass as Amended	Passed 3/7/77		
A.B. 262	2/2/77	Kosinski	Provides an election to pay property tax levied against certain mobile homes in quarterly installments.	3/1/77 3/8/77 3/15/77	Motion to Do Pass Failed Amend; Do Pass as Amended			
A.B. 277	2/7/77	Wagner	Provides property tax allowance for structures with renewable resource heating or cooling systems.	2/15/77 2/17/77 2/21/77* 3/2/77*				
A.B. 292	2/9/77	Robinson	Provides tax exemption for certain property used to conserve or produce energy.	2/15/77 2/17/77 2/21/77* 3/2/77*				
A.B. 304	2/14/77	Robinson	Provides alternative system of property tax relief to senior citizens without regard to income and makes other extensive revisions to Senior Citizens' Property Tax Assistance Act.	3/10/77 3/15/77				

	Date						R
Bill or Resolution Number	Referred To Committee	Introducer's Name	Summary	Date Scheduled Hearing	Committee Action	Assembly Action	Senate Governor's Action Signature
A.B. 310	2/15/77	Coulter	Provides property tax exemption to elderly.	3/10/77 3/15/77			
A.B. 317	2/16/77	Demers	Permits Department of Taxation to provide for insulation of certain senior citizens' homes.	3/10/77 3/15/77	Ind. Post.		
A.B. 322	2/18/77	Coulter	Provides alternative system of property tax relief to senior citi- zens qualified by income and makes other extensive revisions to Senior Citizens' Property Tax Assistance Act.	3/10/77 3/15/77			
A.B. 347	2/24/77	Committee on Taxation	Excludes combustible gases from taxation as a special fuel.	3/17/77	Majority: Do Pass; Minority: Do Not Pass		
A.B. 348	2/24/77	Committee on Taxation	Provides standard for determining assessed value of improvements under construction and clarifies which standards may be used in assessing agricultural land.	3/8/77	Do Pass	Passed 3/10/77	
A.B. 363	2/25/77	Vergiels	Provides for imposition of county cigarette tax to finance certain recreational projects.	3/17/77			
A.B. 364	2/25/77	May	Renames and expands duties of certification advisory board in Department of Taxation and alters certification and training requirements for certain appraisers.	3/8/77	Do Pass	Passed 3/10/77	

Bill or Resolution Number	Date Referred To Committee	Introducer's Name	Summary	Date Scheduled Hearing	Committee Action	Assembly Action	Governor's Signature
A.B. 368	2/28/77	Goodman	Proposes to amend Sales and Use Tax Act of 1955 to provide for recoup- ment of taxes paid on uncollectible accounts.	3/8/77	Ind. Post.		
A.B. 395	3/1/77	Mello	Changes income limitation and allowances of Senior Citizens' Property Tax Assistance Act.	3/10/77 3/15/77			
A.J.R. 7	1/18/77	Harmon	Proposes constitutional amendment to permit property tax exemption for conservation of energy.	2/15/77 2/17/77 2/21/77* 3/2/77*			
A.J.R. 9	1/19/77	Robinson	Proposes constitutional amendment to permit property tax exemption for conservation of energy or pro- duction of energy from renewable natural resources.	2/15/77 2/17/77 2/21/77* 3/2/77*	Amend*		
A.J.R. 12	1/20/77	Committee on Taxation	Proposes to amend Nevada Constitution by authorizing Legislature to impose tax upon motorboats in lieu of property tax.	1/27/77 2/8/77 3/1/77	Amend; Do Pass as Amended	Passed 3/9/77	
A.J.R. 10/ 58th Session	1/17/77	Committee on Commerce	Proposes constitutional amendment to exempt business inventories from property taxation and allow Legis- lature to exempt any other personal property from such taxation.	2/1/77 2/8/77	Do Pass	Passed 2/10/77	

Bill or	Date Referred			Date			
Resolution Number	To Committee	Introducer's Name	Summary	Scheduled Hearing	Committee Action	Assembly Action	Senate Governor's Action Signature
A.J.R. 21/ 58th Session	1/17/77	Committee on Taxation	Proposes constitutional amendment for progressive exemption of busi- ness inventories from property taxation and legislative exemption of other personal property.	2/1/77 2/8/77			
A.C.R. 8	1/27/77	May	Directs Legislative Commission to study assessment and taxation of geothermal resources.	2/1/77	Be Adopted; Rerefer to Leg. Func.		
			1	*In Subc	ommittee		

### GUEST LIST

NAME	REPRESENTING	WISH TO	O SPEAK
(Please/print)		Yes	No
( Suc Bech	L. U. Neurola		
LAW Jameson	LV Com. Service	,	
Charle Gragon	Lan Vegas-		
Males L. Dicho	Ins lagar		
hip of asmussen	Las Vegas New		
10 & Jacphy			
W.P. Scott	Motor CARRICE DIV. DMV. CC		
J.D. Lutters!	Motor CArrier Div CC		
GENE PHELPS	NEW HWY PEPT AB347	v	
Jim BELL	WHITTLESEA BLUE CABG		
DONAL S. WALLS	WHITTLESED BLUE CAB COMPANY,	V	
LARRY E. BELL	WHITLESEA		~
MARILYN PAOLI	TAXATION		
Jog Midmore	Tobacco Tax Council	~	
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John Sheelen	4		
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Chille Y. Cent chiel	W.W-Venderiglo. ¿ETC	V	
Joan Court official	W. W. Vanding Co,		
Mrs Oran Bonnie ) Gragson	3700 apache Lane LV.		
Olet Grageon	2067 L. V. Blud. 7. 11LV		4
Steven Stucker	north Las Vegas		252

### GUEST LIST

NAME	REPRESENTING	WISH T	O SPEAK
(Please print)		Yes	No
Ernest Newton	Devado Jaxanero assoc		,
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Kyn Yfilley	Shewey Stores		
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## ASSEMBLY COMMITTEE ON TAXATION FIFTY-NINTH SESSION, 1977

#### MEETING ROLL CALL

MEETING DATE: THURSDAY, MARCH 17, 1977

	PRESENT	ABSENT	LATE	EXCUSED
Chairman May	· V			
Mr. Schofield	V			
Mr. Craddock	<b>/</b>			
Mr. Dreyer	V			
Mr. Harmon	<b>/</b>			
Mr. Horn	V			
Mr. Jacobsen	<b>/</b>			
Mr. Mann	V			
Mr. Murphy	<b>/</b>			