

MINUTES

HOUSE ENVIRONMENT, ENERGY & TECHNOLOGY COMMITTEE

DATE: Monday, February 12, 2018

TIME: 1:30 P.M.

PLACE: Room EW41

MEMBERS: Chairman Raybould, Vice Chairman Thompson, Representatives Hartgen, Vander Woude, Anderson, Anderst, Mendive, Chaney, Nate, Cheatham, Horman, Malek, Moon, Scott, Ehardt, Smith, Jordan (Gannon), Rubel

**ABSENT/
EXCUSED:** Representative(s) Malek

GUESTS: Doug Nicholls; Stan Warner, Warner Hydrogen; Jeff Byrne, Department of Environmental Quality (DEQ); Lisa Carlson, Office of the Attorney General, DEQ.

Chairman Raybould called the meeting to order at 1:31 p.m.

MOTION: **Rep. Horman** made a motion to approve the minutes of February 6, 2018. **Motion carried by voice vote.**

Stan Warner, Warner Hydrogen (WH), stated that he has been a hydrogen researcher for a decade. He introduced **Doug Nicholls**, who is retired from Sandia Laboratories. Mr. Warner stated WH's goal has been to increase the operating efficiency and lower the pollution of diesel engines by the production of Brown's gas. Their short term goal is producing and dispensing hydrogen for fuel at \$10/kg which would be equivalent to \$4 a gallon for gasoline and in the long term at \$7.50/kg, equivalent to \$3 gallon for gasoline. To assist in reaching their goals, WH seeks the determination of the Legislature that they qualify as an "Eligible Mitigation Action" to receive Volkswagen Diesel Settlement (VDS) funds. Eligible mitigation actions include purchasing diesel engines that have particulate matter (PM) filters fostered by the California Air Resources Board (CARB), but they only filter down to 10 micron (m) size. Unfortunately, PM smaller than 2.5m causes many cancers. When one of these PM filters is installed on a diesel engine, it causes a lot of back pressure which creates more oxides of nitrogen (NOx), generates more heat, and reduces vehicle mileage approximately ten percent. A certified test lab in Southern California tested and reported in 2001 that WH's Brown's gas is finished burning before it sends it out of the engine, has an 84% reduction in particulate matter and a significant reduction in NOx, which causes the engine to run cooler. The Alkali Steel Plate Electrolyzer (ASPE) used in the testing was inefficient and could not be used on board a diesel. WH worked twelve years and now has a patent pending ASPE that is about one-third of the cost of the PM filter and is efficient enough to produce sufficient Brown's gas to cause the effects of significant pollution reduction, (2.5m) and increased engine performance while using a small enough amount of electricity that the vehicle alternator would not be overloaded. In 2014, the University of California Davis, Center of Transportation Studies, organized and funded a "proof of concept" efficiency testing of the WH ASPE technology and found it well suited for on board production. Direct injection diesel engines WH has tested evidence their technology significantly reduces PM and increases mileage from 25 to 30%. H2 for fuel and Browns' gas for diesel engines will change the transportation energy paradigm. At the present time, WH is unable to get compliance testing done of their product by the Environmental Protection Agency (EPA) or CARB which prevents them from introducing their technology into diesel engine commerce. WH is asking the Legislature to either earmark part of the VDS to the DEQ or the University of

Idaho to investigate their technology and current government mandated PM and NOx reducing technologies to determine the best suited to prevent diesel pollution.

In response to committee questions, **Mr. Nicholls** replied that the engine timing does not need to be changed, WH is mixing normal diesel fuel and injecting a small amount of Brown's gas and has two tanks on a vehicle, one for diesel and one for Brown's gas. Mr. Nicholls discussed the diesel to Brown's gas ratios. Mr. Warner is in the process of obtaining patent protection.

John Chatburn, Administrator, Governor's Office of Energy and Mineral Resources (OEMR), was called upon to provide information to the committee regarding the VDS in Idaho. Mr. Chatburn informed the committee that part of the VDS is a trust that goes to the states. The settlement agreement lays out how the money can be used in a number of categories, but he is not aware of any that can be used for research. DEQ is designated by the governor as the trust settlement lead, and they have a beneficiary management plan in place. He provided brief information on the plan and funding. Mr. Chatburn stated he was not on the agenda and planning to speak today, so he does not have a copy of the settlement agreement to answer committee questions.

Mr. Warner informed the committee that WH is not looking to do any more research. WH's problem is that CARB funded the PM filter and advised Mr. Warner that the 2.5m PM is unattainable. He needs a letter from CARB or from the Environmental Protection Agency certifying his ASPE. WH was informed by the EPA that under the new administration, they no longer issue protocol letters. Mr. Warner asks that Idaho issue such a protocol letter following the federal guidelines.

In response to committee questioning, **Mr. Warner** said that he would like for the committee to have DEQ review their technology. If they had public financing tomorrow, the assumption is they cannot take their technology to market and have it installed on vehicles because it is not certified, and that is why they need Idaho's help. When asked by the committee how much funding they were seeking, Mr. Warner replied \$1 million or a half million, and they would be happy to partner with Idaho or University of Idaho.

Rep. Scott opined that the committee could draft a resolution to support and encourage DEQ to look into WH's request. **Reps. Ehardt** and **Hartgen** concurred but would like a clear idea of what is feasible from DEQ.

Mr. Chatburn and **Jeff Byrne**, DEQ were called upon to address the committee concerns and answer their questions regarding whether OEMR and DEQ would be willing to come back to give a presentation at the committee's pleasure on the VDS. Mr. Chatburn replied that everything presented today is accurate as it applies to California, but Idaho does not have the same statutes in place. Mr. Byrne stated that Idaho cannot certify their product and that there are specific reasons why California and the federal government can. Mr. Byrne advised that he would consult with the Director of DEQ about presenting to the committee, and Mr. Chatburn stated that OEMR would be responsive to the committee's request for more information.

ADJOURN:

There being no further business to come before the committee, the meeting adjourned at 2:37 p.m.

Representative Raybould
Chair

Lorrie Byerly
Secretary