

**Testimony of Gregory A. Dolan
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Before the House Subcommittee on Energy and Power

Hearing on “The American Energy Initiative: A Focus on Alternative Fuels and Vehicles, Both the Challenges and the Opportunities”

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Testimony Synopsis:

- Sustained high gasoline prices and the negative impacts of oil dependency are hurting our nation’s economic recovery and the pockets of American families.
- Our current initiatives with alternatives have not produced the substantive impact that is needed to overcome the negative impacts.
- America once was a leader in technological innovation, and developed the first methanol fueled vehicles and fueling stations in the world. Other nations – including China, Israel, Brazil, and the European Union – have learned from America’s innovation and are quickly ramping up their use of alcohol fuels.
- Methanol can be produced from anything that is, or ever was, a plant. This means natural gas and coal, as well as renewables like biomass, forest thinnings, industrial and municipal waste, bio-methane, and even CO₂ itself can be used as a feedstock.
- Alcohol flex-fuel vehicles – which can run on any combination of gasoline, ethanol, and methanol, as well as other liquid fuels – cost around \$150 more than standard vehicles to produce.
- Based on today’s prices, consumers could save \$0.40 a gallon or more, saving \$750 or more in each household by using methanol fuel.
- Introduction of methanol into the U.S. fuel pool will create real competition for gasoline, and help reduce costs for every consumer, regardless of whether they drive an FFV or not.
- Methanol can serve as a bridge to greater adoption of advanced 2nd generation biofuels, and those 2nd generation fuels are already available around the globe today, and are being produced at commercial scales. A methanol FFV is also capable of running on almost any liquid fuel.
- There are no technical hurdles to the widespread adoption of methanol vehicles.
- The Open Fuel Standard Act of 2011 is legislation that can increase adoption of alternative fuel vehicles and create competition at the pump, at no cost to the taxpayer.

MR. CHAIRMAN, SUBCOMMITTEE MEMBERS, THANK YOU FOR INVITING ME TO TESTIFY ON BEHALF OF THE METHANOL INSTITUTE. MY NAME IS GREGORY DOLAN, AND I AM THE ACTING CEO FOR THE GLOBAL TRADE ASSOCIATION THAT REPRESENTS METHANOL PRODUCERS, DISTRIBUTORS AND RELATED TECHNOLOGY COMPANIES AROUND THE WORLD.

THE UNITED STATES IS CURRENTLY RELIVING AN ALL-TOO-FAMILIAR EXPERIENCE WITH SUSTAINED HIGH GASOLINE PRICES CAUSING US TO SEEK ALTERNATIVES TO SATISFY OUR GROWING ENERGY NEEDS. ENERGY DRIVES COMMERCE, AND CAN FUEL OUR ECONOMIC RECOVERY, BUT THE CURRENT PRICE SITUATION IS PUTTING AN UNBEARABLE BURDEN ON AMERICAN FAMILIES AND BUSINESSES.

I AM HERE TODAY TO TALK ABOUT THE GLOBAL EXPERIENCE WITH METHANOL FUELS, AND OFFER SOME INSIGHT INTO HOW THE U.S. CAN ONCE AGAIN REGAIN ITS POSITION AS A LEADER IN TRANSPORTATION INNOVATION.

IN THE LATE 1970'S, WHEN HIGH GASOLINE PRICES DRIVEN BY INSTABILITY IN THE MIDDLE EAST LED TO LONG LINES AT GAS STATIONS, OUR COUNTRY BEGAN TO EXPLORE NEW ALTERNATIVES IN EARNEST. AT THAT TIME IN CALIFORNIA, THE STATE GOVERNMENT LOOKED AT THE RANGE OF ALTERNATIVE FUELS THAT COULD REDUCE THE ECONOMIC BURDEN OF OIL AND ALSO PROVIDE ENVIRONMENTAL BENEFITS FOR CONSUMERS. CALIFORNIA DETERMINED THAT METHANOL OFFERED THE BEST RANGE OF BENEFITS. THEY LAUNCHED THE NATION'S FIRST LARGE-SCALE ALTERNATIVE FUEL DEMONSTRATION PROGRAM PLACING NEARLY 18,000 METHANOL FUELED VEHICLES ONTO THEIR ROADS AND ESTABLISHING A NETWORK OF ONE HUNDRED METHANOL FUELING STATIONS. AMERICA WAS LEADING THE WAY IN TRANSPORTATION INNOVATION WITH THE METHANOL EXPERIMENT.

METHANOL IS THE MOST BASIC FORM OF ALCOHOL, IS NATURALLY OCCURRING, AND IS EVER-PRESENT IN OUR ENVIRONMENT. COMMERCIALY, METHANOL CAN BE MADE FROM ANYTHING THAT

IS, OR EVER WAS, A PLANT – MEANING IT IS MADE FROM COAL AND NATURAL GAS, BUT IT IS ALSO MADE FROM FOREST THINNINGS, BIOMASS, INDUSTRIAL AND MUNICIPAL SOLID WASTE, AND EVEN CO₂ ITSELF. WE HAVE MEMBERS AROUND THE GLOBE THAT ARE ACTIVELY PRODUCING THESE 2ND GENERATION BIOFUELS, AT COMMERCIAL SCALE. WORLDWIDE METHANOL DEMAND EXCEEDS 15 BILLION GALLONS PER YEAR, WHILE GENERATING \$35 BILLION IN ECONOMIC ACTIVITY AND 100,000 JOBS.

CALIFORNIA DID NOT ONLY CHOOSE METHANOL FOR THE WIDE AVAILABILITY OF DIFFERENT FEEDSTOCKS TO PRODUCE IT, THEY ALSO SELECTED METHANOL FOR ITS LOW-COST AND EXCELLENT PERFORMANCE. WITH ITS HIGH OCTANE RATING AND EFFICIENT BURNING PERFORMANCE, METHANOL IS MOST OFTEN ASSOCIATED WITH MOTOR RACING IN THE UNITED STATES. THE LOW COST OF METHANOL IS TRULY THE IMPRESSIVE FEATURE THOUGH. FOR THE PAST FIVE YEARS, THE WHOLESALE COST OF METHANOL HAS RANGED FROM \$1.05 TO \$1.15 PER GALLON. IF YOU WERE TO SELL METHANOL FUEL AS M-85 AT THE PUMP TODAY, INCLUDING ALL DISTRIBUTION, TAXES AND RETAIL MARK UP, THE 15% GASOLINE – AND ACCOUNTING FOR THE DIFFERENCE IN ENERGY DENSITY - CONSUMERS WOULD PAY \$3.00 A GALLON WITHOUT ANY INCENTIVES; ALMOST \$0.40 CHEAPER THAN THE NATIONAL AVERAGE OF \$3.38. THAT IS OVER \$750 IN SAVINGS FOR THE AVERAGE HOUSEHOLD EVERY YEAR – ALMOST 8% OF A MINIMUM WAGE EARNERS ANNUAL INCOME, A GROUP THAT IS HIT HARDEST BY FLUCTUATIONS IN ENERGY PRICES.

CALIFORNIA'S EXPERIMENT CONTINUED FOR A NUMBER OF YEARS, BUT ULTIMATELY MORE POWERFUL INTERESTS ASSERTED THEMSELVES IN THE TRANSPORTATION MARKET AND PRICES FOR GASOLINE WERE BROUGHT BACK DOWN TOWARDS HISTORIC NORMS, AND CONSUMERS AND GOVERNMENTS QUICKLY FORGOT ABOUT THE STINGING PAINS OF HIGH PRICES AND CONTINUED BUSINESS AS USUAL. THE QUESTION THAT IS ON EVERYONE'S MIND AS WE GATHER TODAY IS

ULTIMATELY, HOW DO WE IMPLEMENT MEANINGFUL LONG-TERM CHANGE THAT WILL HAVE A SUBSTANTIVE IMPACT ON OUR DEPENDENCE ON FOREIGN OIL, HELP REDUCE COSTS AT THE PUMP, AND BE A BRIDGE TO THE NEXT GENERATION OF ENERGY INNOVATION?

OTHER COUNTRIES ARE ANSWERING THAT QUESTION BY TAKING ON THE METHANOL EXPERIMENT AND IMPLEMENTING IT ON A MUCH LARGER SCALE. IN CHINA FOR EXAMPLE, A COUNTRY THAT DOES NOT HAVE EXTENSIVE LIQUID FUEL HOLDINGS, METHANOL MAKES UP ABOUT 8% OF THEIR TRANSPORTATION FUEL POOL – AND THEY USE DOMESTIC FEEDSTOCKS TO MEET THAT DEMAND. THE CHINESE HAVE BUSES, TAXIS, FLEETS, AND PASSENGER VEHICLES ON THE ROAD THAT ARE RUNNING ON M15, M85 AND EVEN M100 FUEL. CHINA’S POWERFUL NATIONAL DEVELOPMENT AND REFORM COMMISSION CONSIDERS COAL-BASED METHANOL TO BE A STRATEGIC TRANSPORTATION FUEL. BETWEEN 2005 AND 2011, CHINA INCREASED ITS METHANOL PRODUCTION CAPACITY FROM 1.5 BILLION GALLONS A YEAR TO 15.5 BILLION GALLONS.

ISRAEL IS ALSO BUILDING FROM AMERICA’S INNOVATION, AND IS CURRENTLY LAUNCHING A PILOT PROGRAM FOR METHANOL FUELED VEHICLES TO TAKE ADVANTAGE OF NEW NATURAL GAS FINDS IN THE REGION. BRAZIL HAS OFTEN EMPLOYED METHANOL TO HELP EXTEND THE POOL OF ETHANOL PRODUCED FROM SUGAR CANE. THE EUROPEAN UNION HAS IN PLACE FUEL SPECIFICATIONS THAT ALLOW FOR LOW-LEVEL METHANOL BLENDING. AND WE ARE SEEING METHANOL FUEL PROGRAMS DEVELOPING IN TRINIDAD & TOBAGO, DENMARK, ICELAND, AUSTRALIA, MALAYSIA, EVEN IN PAKISTAN AND IRAN.

THERE ARE NO TECHNICAL HURDLES TO THE USE OF METHANOL AS AN ALTERNATIVE FUEL. METHANOL – LIKE ETHANOL – IS SLIGHTLY MORE CORROSIVE THAN GASOLINE, WHICH MEANS WE NEED TO USE ALCOHOL COMPATIBLE MATERIALS IN FUEL-WETTED CAR PARTS. TODAY’S MODERN CARS EMPLOY COMPUTER TECHNOLOGY THAT RECOGNIZES THE OXYGEN CONTENT OF THE FUEL AND

ADJUSTS THE ENGINE TIMING ACCORDINGLY, AND CAN BE MODIFIED TO RECOGNIZE VARYING LEVELS OF ALCOHOL FUELS.

FLEXIBLE FUEL VEHICLES OR “FFV’S” ARE OFTEN INTERPRETED AS SOME WHOLLY NEW TECHNOLOGY, OR AN ENTIRELY DIFFERENT VEHICLE. THAT IS NOT THE CASE. TO CREATE A TRULY FLEXIBLE FUEL VEHICLE THAT CAN OPERATE ON METHANOL, ETHANOL, GASOLINE, AND MOST OTHER LIQUID FUELS, COSTS ABOUT \$150. THE AVERAGE VEHICLE OWNER WOULD RECOUP THAT COST DIFFERENCE IN ABOUT THREE MONTHS. EVERYTHING ABOUT THE VEHICLE IS THE SAME, AND THE TRANSITION WOULD BE PRACTICALLY INVISIBLE TO THE CONSUMER – EXCEPT WHEN THEY PULL UP TO THE PUMP TO FILL THEIR TANK, WHERE THEY WOULD TRULY HAVE FUEL CHOICE.

THE CURRENT FLEET OF FFV’S THAT ARE ON THE ROAD TODAY ARE WARRANTED TO RUN ON ETHANOL ONLY, AND THEY ARE FACING THE CLASSIC CHICKEN-AND-EGG CONUNDRUM. WITH A LIMITED NUMBER OF VEHICLES ON THE ROAD TODAY, GAS STATIONS ARE HESITANT TO PUT IN PUMPS. LIKEWISE, AUTOMAKERS ARE ALSO HESITANT TO PRODUCE FFV’S CLAIMING A LOW AVAILABILITY OF REFUELING STATIONS.

CONGRESS HAS A CHANCE TO ACT, TO BREAK THE CHICKEN-AND-THE-EGG CYCLE AND TAKE A CRITICAL STEP THAT COSTS THE TAXPAYERS NOTHING, BUT CAN SERVE AS A BRIDGE FORWARD IN ENERGY INNOVATION. THAT STEP WOULD BE TO RAISE THE STANDARDS FOR NEW CARS ON THE ROAD TO ENSURE THAT THEY ARE COMPATIBLE WITH MULTIPLE TYPES OF FUEL.

WHEN CONSUMERS CAN TRULY CHOOSE BETWEEN FUEL OPTIONS IN THEIR VEHICLE, THEN THE MONOPOLY THAT OIL CURRENTLY MAINTAINS IN TRANSPORTATION CAN BE EFFECTIVELY BROKEN. THIS WILL NOT ONLY ENABLE EMERGING TECHNOLOGIES AND FUEL OPTIONS TO PERMEATE THE MARKET, BUT WILL ALSO FORCE GASOLINE TO COMPETE AT THE PUMP, DOLLAR FOR DOLLAR, AND DRASTICALLY REDUCE THE COST OF GASOLINE ITSELF AS WELL. TODAY ONLY ABOUT 3.5% OF VEHICLES ON THE ROAD

ARE ETHANOL-ONLY FFV'S. WITH A MUCH LARGER PORTION OF VEHICLES CAPABLE OF USING ALTERNATIVE FUELS, THEN FUELING STATION OWNERS WILL HAVE THE ECONOMIC INCENTIVE TO INSTALL OR UPGRADE PUMPS. THE FIRST STATIONS TO INSTALL THESE PUMPS WILL BE ABLE TO COMMAND CONSIDERABLE MARGINS FOR THE FUEL, WHILE STILL SAVING CONSUMERS MONEY.

THE UNITED STATES IS CURRENTLY EXPERIENCING A BOOM IN NATURAL GAS PRODUCTION THAT IS CREATING SUSTAINABLY LOW PRICES FOR THIS POWERFUL ENERGY SOURCE. IN BEAUMONT, TEXAS, A METHANOL PLANT THAT HAD BEEN MOTHBALLED FOR YEARS DUE TO HIGH NATURAL GAS PRICES IS NOW COMING BACK TO LIFE. LYONDELLBASELL HAS ANNOUNCED THAT IT WILL REOPEN A METHANOL PLANT NEXT YEAR IN CHANNELVIEW, TEXAS, CELANESE HAS ALSO ANNOUNCED PLANS TO RESTART A METHANOL PLANT IN CLEAR LAKE, TEXAS, AND METHANEX IS MOVING AN IDLED METHANOL PLANT IN CHILE TO LOUISIANA. LOW NATURAL GAS PRICES ARE LEADING A RESURGENCE OF THE DOMESTIC METHANOL INDUSTRY.

IN A STUDY PUBLISHED IN 2010, RESEARCHERS AT THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY CONCLUDED THAT METHANOL WAS THE 'LIQUID FUEL MOST EFFICIENTLY AND INEXPENSIVELY PRODUCED FROM NATURAL GAS,' AND THEY RECOMMENDED METHANOL AS THE MOST EFFECTIVE WAY TO INTEGRATE NATURAL GAS INTO OUR TRANSPORTATION ECONOMY.

WHILE INITIALLY CONSUMERS WILL UTILIZE NATURAL GAS-DERIVED METHANOL, RENEWABLE METHANOL IS QUICKLY RISING AS DEMAND FOR CLEANER FUELS CONTINUES AROUND THE GLOBE. IN A DEPARTMENT OF ENERGY SPONSORED PROJECT, OUR MEMBER COMPANY ENERKEM IS CONVERTING MUNICIPAL SOLID WASTE AND INDUSTRIAL WASTE INTO CLEAN BURNING METHANOL AT FACILITIES IN CANADA AND THE U.S. CHEMREC AB FROM SWEDEN IS USING BLACK LIQUOR – A BYPRODUCT OF PAPER PRODUCTION – AS A FEEDSTOCK FOR RENEWABLE METHANOL. CARBON RECYCLING INTERNATIONAL OF ICELAND IS ALSO REVOLUTIONIZING THE WAY WE THINK ABOUT ENERGY, AND IS

USING CO2 POLLUTION FROM A GEOTHERMAL POWER PLANT COMBINED WITH RENEWABLE HYDROGEN TO CREATE METHANOL FUEL WITH A NEGATIVE CARBON FOOTPRINT.

YOUR COLLEAGUES, CONGRESSMEN JOHN SHIMKUS AND ELIOT ENGEL, HAVE INTRODUCED LEGISLATION THAT WOULD TAKE THE FIRST STEP IN OUR PATH AWAY FROM OIL DEPENDENCY. THEY HAVE DEVELOPED THE OPEN FUEL STANDARD ACT OF 2011 (H.R. 1687), WHICH HAS BEEN REFERRED TO THE FULL ENERGY AND COMMERCE COMMITTEE FOR CONSIDERATION. THIS LEGISLATION WOULD REQUIRE THAT AN INCREASING PERCENTAGE OF VEHICLES SOLD IN THE U.S. BE CAPABLE OF RUNNING ON ALTERNATIVE FUELS IN ADDITION TO, OR REPLACEMENT OF, GASOLINE. THIS MEANS THAT ELECTRIC VEHICLES, NATURAL GAS VEHICLES, FUEL CELLS, HYDROGEN, BIODIESEL, AND OF COURSE ALCOHOL FFV'S WOULD ALL QUALIFY UNDER THIS STANDARD.

THIS BILL IS ABOUT COMPETITION AND ECONOMICS; IT IS NOT ABOUT DICTATING WHAT ALTERNATIVES SHOULD BE MOVED FORWARD. OUR ADDICTION TO OIL PRODUCES NUMEROUS NEGATIVE CONSEQUENCES TO OUR HEALTH, OUR ECONOMY, AND OUR NATIONAL SECURITY. THE OPEN FUEL STANDARD ACT WOULD ENSURE THAT NEW VEHICLES ON THE ROAD ARE NOT DEPENDENT ON OIL-DERIVED GASOLINE AND ARE NOT AIDING THE CONTINUED MONOPOLY AND HOLD OIL HAS ON OUR ECONOMY.

INNOVATION IS WITHIN OUR REACH, AND THE ROLE OF GOVERNMENT HAS ALWAYS BEEN TO FOSTER INNOVATION AND TECHNOLOGY, NOT DIRECT IT. BY EMBRACING CHOICE AS OFFERED BY THE OPEN FUEL STANDARD ACT, CONGRESS HAS THE CHANCE TO TAKE ACTION THAT WILL HELP SERVE AS A BRIDGE TO NEW TECHNOLOGIES AND NEW SOLUTIONS. AT NO COST TO THE FEDERAL GOVERNMENT, ADOPTION OF THE OFS WOULD PROVIDE A CLEAR SIGNAL THAT THE U.S. IS SERIOUS ABOUT KICKING THE OIL HABIT.

METHANOL IS A CLEAN BURNING FUEL, THAT IS READILY AVAILABLE, AND 2ND GENERATION METHANOL IS ALREADY BEING PRODUCED AT COMMERCIAL SCALES FROM A NUMBER OF FEEDSTOCKS. METHANOL FFV'S ARE EASILY PRODUCED – IN FACT I DROVE TO WORK TODAY IN A 1998, U.S.-MADE, AND FACTORY-PRODUCED FORD TAURUS.

AMERICA – LIKE OTHER COUNTRIES – IS CURRENTLY EXPERIENCING A RENEWED INTEREST IN METHANOL AS A SUSTAINABLE ENERGY SOURCE, AND WE HOPE THAT AS YOU DEVELOP YOUR RECOMMENDATIONS FOR THE BROADER COMMITTEE THAT YOU WILL CONTINUE TO FOSTER THE INNOVATION THAT AMERICA BEGAN MORE THAN THREE DECADES AGO SO THAT WE CAN RECLAIM OUR ROLE AS THE LEADING INNOVATORS IN ALTERNATIVE TRANSPORTATION FUELS.

THANK YOU FOR YOUR TIME AND FOR INCLUDING OUR ORGANIZATION IN THESE VITAL DISCUSSIONS.