

DELIVERING AMERICA'S ENERGY SECURITY

**REMARKS BY
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**MARATHON DISTINGUISHED
SPEAKER SERIES
LSU – BATON ROUGE, LOUISIANA
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- **THANK YOU, DR. ANDERSON, FOR THAT KIND INTRODUCTION, AND GOOD AFTERNOON LADIES AND GENTLEMEN.**
- **I WANT TO THANK DR. JENKINS, MEMBERS OF THE LSU BOARD OF SUPERVISORS AND FACULTY, OTHER DISTINGUISHED GUESTS, AND ALL OF YOU HERE TODAY FOR JOINING ME AND MY MARATHON COLLEAGUES ON THIS SPECIAL OCCASION.**
- **EARLIER THIS MORNING, I HAD THE PRIVILEGE OF ANNOUNCING GRANTS WE HAVE MADE TO THE COLLEGE OF BASIC SCIENCES AND COLLEGE OF ENGINEERING TOTALING \$2.5 MILLION.**
- **THE NEWS RELEASE THAT WAS ISSUED PROVIDES GREATER DETAIL ON THE GRANTS AND COPIES WILL BE AVAILABLE WHEN YOU LEAVE.**
- **BUT BROADLY SPEAKING, THESE CONTRIBUTIONS TO THE FOREVER LSU CAMPAIGN WILL HELP ADVANCE THE OUTSTANDING WORK BEING UNDERTAKEN BY THE UNIVERSITY TO EXPAND AND ENHANCE KEY PROGRAMS THAT WILL PREPARE OUR FUTURE LEADERS IN DISCIPLINES THAT ARE CRITICAL TO THE WELLBEING OF OUR COUNTRY AND THE WORLD.**
- **I WOULD LIKE TO HIGHLIGHT ONE COMPONENT OF THE GRANTS WE'VE ANNOUNCED, AND THAT IS THE ESTABLISHMENT OF THE MARATHON DISTINGUISHED SPEAKER SERIES.**
- **THE SERIES IS DESIGNED TO BE AN INTEGRAL PART OF THE EDUCATIONAL PROGRAMS IN GEOLOGY AND GEOPHYSICS WITH STUDENTS AND FACULTY HAVING ACCESS TO THE LATEST IDEAS AND FORCES THAT ARE SHAPING GLOBAL SCIENCE, TECHNOLOGY AND BUSINESS ISSUES.**
- **NEEDLESS TO SAY, AS AN LSU CLASS OF 1972 ALUM, I WAS PLEASED TO ANNOUNCE OUR GRANTS TO THE UNIVERSITY, BUT I AM ESPECIALLY HONORED AND HUMBLLED TO BE THE FIRST SPEAKER IN THE MARATHON DISTINGUISHED SPEAKER SERIES.**
- **I'LL LET YOU BE THE JUDGE AS TO WHETHER OR NOT MY REMARKS ARE DISTINGUISHED, BUT I DO WANT TO SHARE MY PERSPECTIVE ON WHAT I BELIEVE IS ONE OF THE MOST SERIOUS AND DEFINING ISSUES OF OUR TIME. AND THAT ISSUE IS DELIVERING AMERICA'S ENERGY SECURITY.**

- **WE ARE IN THE MIDST OF A POLITICAL PROCESS TO ELECT OUR NATION'S NEW LEADERS, AND YET, THIS MOST CRITICAL ISSUE OF ENERGY SECURITY IS SIMPLY NOT BEING ADDRESSED IN A RATIONAL, FACT-BASED MANNER. INSTEAD, THE FEW COMMENTS MADE ABOUT ENERGY ARE MORE OFTEN THAN NOT CHARACTERIZED BY SOUND BITES THAT CALL FOR ENERGY INDEPENDENCE OR THAT VILIFY THE OIL AND GAS INDUSTRY WITH ACCUSATIONS OF PROFITEERING AND PLEDGES TO PENALIZE THE INDUSTRY THROUGH INCREASED TAXES AND OTHER ONEROUS GOVERNMENT ACTIONS.**
- **CLEARLY, THE TIME FOR JOINING TOGETHER AND STEPPING BEYOND NARROWLY FOCUSED POLITICAL IDEOLOGIES TO TACKLE OUR ENERGY SECURITY ISSUES HAS NEVER BEEN MORE URGENT. SO I WANT TO SPEND OUR TIME TODAY OUTLINING SOME OF THE ACTIONS I BELIEVE WE NEED TO TAKE TO EFFECTIVELY ADDRESS OUR ENERGY CHALLENGES.**
- **AS I NOTED A MOMENT AGO, THE NOTION OF ENERGY INDEPENDENCE IS VERY POPULAR THESE DAYS.**
- **MY VIEW, HOWEVER, IS THAT ENERGY INDEPENDENCE IS NEITHER POSSIBLE NOR IS IT DESIRABLE. IN FACT, CALLING FOR ENERGY INDEPENDENCE CREATES UNCERTAINTY AMONG OUR INTERNATIONAL TRADING PARTNERS AND HINDERS INVESTMENT IN NEW INTERNATIONAL ENERGY SUPPLIES.**
- **THE REAL KEY FOR US IS ENERGY SECURITY, WHICH I DEFINE AS HAVING AN ADEQUATE, RELIABLE AND SUSTAINABLE SUPPLY OF ENERGY TO MEET THE NEEDS AND ASPIRATIONS OF PRIVATE CITIZENS, COMMERCIAL ENTERPRISES AND PUBLIC SECTOR FUNCTIONS.**
- **TRUE ENERGY SECURITY ALSO MEANS THAT WE NEED TO ENSURE:**
- **ENVIRONMENTAL PROTECTION AND SUSTAINABILITY AND**
- **THAT THE COST OF OUR ENERGY IS SIMILAR TO THAT OF OTHER NATIONS SO WE CAN MAINTAIN OUR ECONOMIC COMPETITIVENESS.**
- **LET ME BEGIN WITH A GLOBAL OVERVIEW OF ENERGY SUPPLY AND DEMAND.**

- **THERE'S ONE INDISPUTABLE FACT THAT IMPACTS NOT ONLY OUR NATION BUT THE WORLD AS A WHOLE: QUITE SIMPLY IT IS THAT GLOBAL DEMAND FOR ENERGY WILL CONTINUE TO INCREASE DRAMATICALLY, DRIVEN IN LARGE PART BY WORLD POPULATION GROWTH FROM 6.5 BILLION PEOPLE TODAY TO 8 BILLION BY 2030 AND THE STRONG DESIRE OF DEVELOPING COUNTRIES TO ACHIEVE ECONOMIC PROSPERITY SIMILAR TO OUR OWN.**
- **SECURE, AFFORDABLE, ACCESSIBLE AND AMPLE SUPPLIES OF ENERGY ARE ABSOLUTELY ESSENTIAL TO BOTH ECONOMIC GROWTH AND A REASONABLE STANDARD OF LIVING. SO IT'S ONLY NATURAL TO EXPECT THAT THE DEVELOPING COUNTRIES, WITH BOTH THEIR GROWING ECONOMIES AND POPULATIONS, ARE GOING TO DRIVE INCREASED ENERGY DEMAND.**
- **THE WORLD'S TWO MOST POPULOUS COUNTRIES, CHINA AND INDIA, ARE THE BEST EXAMPLES OF THIS AND WE'VE ALL SEEN IN RECENT TIMES HOW AGGRESSIVE BOTH OF THESE COUNTRIES HAVE BECOME IN SEEKING TO INCREASE AND DIVERSIFY THEIR FUTURE ENERGY SUPPLIES.**
- **LET'S PUT SOME NUMBERS AROUND THIS.**
- **THE INTERNATIONAL ENERGY AGENCY PROJECTS THAT GLOBAL ENERGY DEMAND WILL INCREASE OVER 50 PERCENT BETWEEN NOW AND 2030. ABOUT 70 PERCENT OF THE INCREASE IS GOING TO BE IN DEVELOPING COUNTRIES, AND THESE COUNTRIES, AS YOU WOULD EXPECT, RELY PRIMARILY ON LOWER COST FOSSIL FUELS.**
- **THIS PROJECTED 50 PERCENT GROWTH ISN'T UNCONSTRAINED. IT ACTUALLY ASSUMES SIGNIFICANT EFFICIENCY IMPROVEMENTS AND A REDUCTION IN ENERGY INTENSITY. WITHOUT THESE ASSUMED EFFICIENCY GAINS, DEMAND WOULD ALMOST DOUBLE BY 2030.**
- **SO TO MEET THIS DEMAND GROWTH RELIABLY IS GOING TO REQUIRE SUBSTANTIAL INCREASES IN THE SUPPLIES OF ALL FORMS OF ENERGY.**
- **LET'S TAKE A LOOK AT CURRENT AND FUTURE DEMAND BY THE VARIOUS ENERGY SOURCES.**

- **TODAY FOSSIL FUELS COMPRISE 80 PERCENT OF GLOBAL ENERGY USAGE: OIL AND GAS ARE 55 PERCENT; COAL IS 25 PERCENT; AND ALL OTHER FORMS OF ENERGY COMPRISE THE REMAINING 20 PERCENT.**
- **AS YOU WOULD EXPECT, THERE WILL NEED TO BE MORE DRAMATIC GROWTH IN NON-FOSSIL FUEL ENERGY SOURCES THAN HAS BEEN SEEN HISTORICALLY. SOURCES SUCH AS NUCLEAR POWER, RENEWABLE FUELS, BIOFUELS, HYDRO, GEOTHERMAL, WIND AND SOLAR ENERGY ... THESE ARE ALL IMPORTANT PARTS OF THE EQUATION.**
- **YET, THE FASTEST GROWING MAJOR ENERGY SOURCES ARE GOING TO BE COAL AND NATURAL GAS DRIVEN BY RISING DEMAND FOR ELECTRICITY. DEMAND FOR COAL, WHICH HAS RISEN 35 PERCENT BETWEEN 2000 AND 2006, IS BEING LARGELY DRIVEN BY GROWTH IN THE DEVELOPING COUNTRIES, PARTICULARLY IN ASIA-PACIFIC. CHINA, FOR EXAMPLE STARTS UP TWO NEW COAL-FIRED 500 MEGAWATT POWER PLANTS EVERY WEEK TO TEN DAYS.**
- **THE BOTTOM LINE IS BY 2030, DESPITE ALL THE RHETORIC TO THE CONTRARY, THE INTERNATIONAL ENERGY AGENCY PROJECTS THAT FOSSIL FUELS WILL STILL COMPRISE ABOUT 80 PERCENT OF THE WORLD'S ENERGY USAGE.**
- **SO, AGAINST THIS BACKDROP, WITHIN THIS CONTEXT, THE QUESTION IS: HOW CAN THE U.S. AND THE WORLD AS A WHOLE SECURE ACCESS TO SUFFICIENT QUANTITIES OF RELIABLE, AFFORDABLE ENERGY AND DO SO, VERY IMPORTANTLY, WHILE SAFEGUARDING THE ENVIRONMENT?**
- **IF OUR NATION IS TO ACHIEVE ENERGY SECURITY, AND VERY IMPORTANTLY, AS I'VE SAID BEFORE, MAINTAIN ECONOMIC COMPETITIVENESS AND NOT LET OUR STANDARD OF LIVING SLIP, WE CAN NO LONGER TOLERATE THE MISLEADING AND OFTEN INACCURATE RHETORIC AND QUICK FIXES. WE NEED A WELL-REASONED, FACT-BASED COMPREHENSIVE ENERGY STRATEGY THAT IS FULLY INTEGRATED AND CONSISTENT WITH BOTH A CLIMATE CHANGE PLAN AND U.S. FOREIGN POLICY.**
- **WHAT I WANT TO DO TODAY IS BRIEFLY OUTLINE WHAT I BELIEVE THE THREE MAJOR COMPONENTS OF THIS STRATEGY SHOULD BE ALONG WITH SOME EXAMPLES OF WHAT MY INDUSTRY AND MY COMPANY ARE DOING.**

- **FIRST, THE CHEAPEST AND FASTEST FORM OF NEW ENERGY IS ENERGY EFFICIENCY AND CONSERVATION. REASONABLE PROGRESS HAS BEEN MADE IN THE PAST. IN FACT, IF YOU LOOK BACK, THE U.S. ECONOMY HAS DOUBLED SINCE THE 1970S, WHILE OUR ENERGY USE HAS ONLY INCREASED ABOUT 25 PERCENT. BUT MUCH MORE CAN BE DONE. TO GIVE A SENSE OF THE POTENTIAL IMPACT, A SIX PERCENT REDUCTION IN ENERGY USE – IF IT WERE ALL PETROLEUM-BASED – WOULD REDUCE U.S. CRUDE OIL IMPORTS BY A THIRD.**
- **I THINK EFFORTS TO INCREASE ENERGY EFFICIENCY SHOULD FOCUS ON A FEW KEY AREAS:**
- **THE FIRST IS TO IMPROVE VEHICLE FUEL ECONOMY. THE ENERGY SECURITY BILL RECENTLY SIGNED INTO LAW MAKES IMPROVEMENTS AND SETS TIMETABLES IN THIS IMPORTANT AREA, BUT MORE CAN BE DONE THROUGH MORE RAPID DEPLOYMENT OF ENGINE AND MATERIALS TECHNOLOGIES.**
- **WE ALSO HAVE TO REDUCE ENERGY CONSUMPTION IN THE RESIDENTIAL AND COMMERCIAL SECTORS THROUGH MORE AGGRESSIVE BUILDING CODES AND APPLIANCE STANDARDS. THE NEW LEGISLATION CONTAINS SOME ENHANCED STANDARDS AND IMPROVEMENTS IN THIS AREA AS WELL.**
- **AND LASTLY, WE NEED TO INCREASE THE EFFICIENCY OF OUR INDUSTRIAL SECTOR.**
- **TO THE LATTER POINT, MY INDUSTRY IS TAKING ACTION:**
- **FIVE YEARS AGO, AMERICA’S OIL AND GAS COMPANIES MADE A PLEDGE TO THE GOVERNMENT THAT WE’D IMPROVE ENERGY EFFICIENCY IN OUR REFINERIES BY TEN PERCENT OVER TEN YEARS. AND I’M PLEASED TO REPORT THAT THE INDUSTRY IS MAKING SOLID PROGRESS TOWARD THAT GOAL OF IMPROVED EFFICIENCY.**
- **FOR OUR PART, AT MARATHON WE ESTIMATE THAT OVER THE LAST FIVE YEARS OUR REFINERIES HAVE IMPROVED ENERGY EFFICIENCY BY ALMOST 4½%, AND WE ARE ON TRACK TO ACHIEVE THE TEN PERCENT GOAL OVER THE NEXT FIVE YEARS.**
- **IN RECOGNITION OF WHAT WE’VE DONE, THE ENVIRONMENTAL PROTECTION AGENCY GAVE ITS ENERGY STAR AWARD FOR ENERGY EFFICIENCY TO MARATHON’S REFINERIES IN TEXAS, OHIO, MINNESOTA AND LOUISIANA.**

- **THE SECOND KEY COMPONENT OF AN ENERGY SECURITY STRATEGY, IN MY OPINION, IS DIVERSITY OF SUPPLY.**
- **DIVERSITY COMES IN TWO FORMS: GEOGRAPHIC DIVERSITY IN TERMS OF WHERE WE SOURCE OUR OIL AND GAS FROM, AND THE SECOND PART IS DIVERSITY IN TERMS OF THE FORMS OF ENERGY THAT WE USE.**
- **A COUPLE OF POINTS AS TO OIL AND NATURAL GAS:**
- **FIRST, AS I INDICATED BEFORE, OIL AND GAS WILL REMAIN THE DOMINANT SOURCES OF ENERGY FOR A VERY LONG PERIOD OF TIME DUE IN LARGE PART TO SIGNIFICANT COST AND INFRASTRUCTURE ADVANTAGES.**
- **SECOND, DESPITE WHAT PEAK OIL THEORISTS MAY SAY, THERE IS MORE THAN AMPLE OIL AND GAS RESOURCE IN THE WORLD TO MEET THIS DEMAND.**
- **HOWEVER, ACCESS TO THESE CRITICAL RESOURCES BY U.S. COMPANIES IS BECOMING INCREASINGLY DIFFICULT AND COSTLY DUE TO AN INTENSE WAVE OF NATIONALISM BY THOSE COUNTRIES WHO HOLD THE BULK OF THE WORLD'S RESOURCE, AND FRANKLY BY RESTRICTIVE POLICIES ON FEDERAL LAND ACCESS BY OUR OWN GOVERNMENT.**
- **IT MAY SURPRISE YOU BUT THE LARGEST U.S. OIL AND GAS COMPANIES, OFTEN REFERRED TO IN A NEGATIVE FASHION AS BIG OIL, ARE REALLY QUITE SMALL WHEN COMPARED TO OUR GLOBAL COMPETITORS, ESPECIALLY THE NATIONAL OIL COMPANIES (NOCs).**
- **IN FACT, U.S. OIL COMPANIES IN TOTAL ONLY HOLD ABOUT SIX TO EIGHT PERCENT OF THE WORLD'S PROVEN OIL AND GAS RESERVES. THAT'S NOT BIG OIL.**
- **THE NATIONAL OIL COMPANIES AND THEIR HOST GOVERNMENTS CONTROL ABOUT 80 PERCENT OF THE WORLD'S PROVEN OIL AND GAS RESERVES AND THESE ARE INCREASINGLY GLOBAL COMPANIES WHO ARE FINANCIALLY STRONG, WHO HAVE ACCESS TO WORLD CLASS TECHNOLOGY, AND THEY HAVE THE FULL BACKING AND SUPPORT OF THEIR RESPECTIVE GOVERNMENTS. AS THESE NATIONAL OIL COMPANIES HAVE GROWN MORE INDEPENDENT, MORE NATIONALISTIC -- ONE NEED ONLY LOOK AT VENEZUELA TO GET AN EXAMPLE -- IT IS INCREASINGLY DIFFICULT FOR U.S. COMPANIES TO ACCESS THE OIL AND GAS RESOURCE OPPORTUNITIES THAT WE NEED TO DEVELOP, PRODUCE AND BRING TO AMERICAN CONSUMERS.**

- **SO IT'S CRITICAL FOR WASHINGTON, AND I BELIEVE THE AMERICAN PEOPLE IN GENERAL, TO RECOGNIZE THAT OUR NATION IS IN A TOUGH GLOBAL COMPETITION FOR NEW SUPPLIES OF OIL AND GAS AND THAT THE U.S. OIL AND GAS COMPANIES ARE INDEED OUR BEST ALLY IN THIS BATTLE. IT SIMPLY MAKES NO SENSE TO FURTHER HINDER OUR ABILITY TO COMPETE BY UNFAIR TAXATION, REGULATION, OR UNREASONABLY RESTRICTING ACCESS TO CERTAIN U.S. OIL AND GAS BASINS THAT HOLD THE POTENTIAL TO SUPPLY OUR NATION WITH CRITICAL ENERGY FOR DECADES TO COME.**
- **OURS IS AN INDUSTRY THAT HAS MADE GREAT STRIDES IN TECHNOLOGY OVER THE PAST 20 YEARS AND THESE ADVANCES, COUPLED WITH THE EXCELLENT TRACK RECORD OF EXPERIENCE WE'VE GOT, CLEARLY DEMONSTRATE OUR ABILITY TO PRODUCE OIL AND GAS AND PROTECT THE ENVIRONMENT AT THE SAME TIME.**
- **ANOTHER AREA OF GREAT RESOURCE POTENTIAL FOR THE FUTURE LIES IN THE HEAVY OIL SANDS OF CANADA.**
- **IN THE ATHABASCA REGION OF NORTHERN ALBERTA, THERE IS AN ESTIMATED 175 BILLION BARRELS OF RECOVERABLE CRUDE BITUMEN – OR HEAVY OIL – WHICH AMOUNTS TO THREE-QUARTERS OF NORTH AMERICAN PETROLEUM RESERVES.**
- **IT IS IN THIS REGION THAT MARATHON HAS RECENTLY INVESTED ALMOST \$7 BILLION TO ACQUIRE AN INTEREST IN THE ATHABASCA OIL SANDS PROJECT TO SURFACE MINE THE BITUMEN, AND ULTIMATELY LINK THIS WORLD-CLASS OIL RESOURCE WITH OUR U.S. REFINERIES. IN FACT, WE ARE MOVING FORWARD WITH A PROJECTED \$1.9 BILLION HEAVY OIL UPGRADING PROJECT AT OUR DETROIT REFINERY, WHICH WILL BECOME A DESTINATION FOR REFINING SOME OF THE CANADIAN BITUMEN.**
- **PUTTING TOGETHER LONG-TERM AND ENVIRONMENTALLY RESPONSIBLE SOLUTIONS TO ECONOMICALLY PRODUCE THE MULTI-BILLION BARREL, LONG-LIFE RESERVES OF THE CANADIAN OIL SANDS IS ANOTHER KEY EXAMPLE OF HOW WE WILL HELP MEET AMERICAN ENERGY DEMAND.**
- **THE OTHER ASPECT OF DIVERSITY I TALKED ABOUT IS REALLY ENCOURAGING DEVELOPMENT OF ALTERNATIVE AND RENEWABLE SOURCES OF ENERGY.**

- AMERICA'S OIL AND NATURAL GAS COMPANIES HAVE MADE MAJOR INVESTMENTS IN ALTERNATIVE FORMS OF ENERGY. OVER THE LAST FIVE YEARS IN JUST THE U.S. AND CANADA, WE'VE POURED \$12 BILLION INTO RENEWABLE, ALTERNATIVE AND ADVANCED NON-HYDROCARBON TECHNOLOGIES.
- IN FACT, IF YOU ADD UP ALL THE VARIOUS TYPES OF EMERGING ENERGY TECHNOLOGIES, OVER THE LAST FIVE YEARS OUR INDUSTRY HAS INVESTED ALMOST \$100 BILLION. AND THAT NUMBER IS MORE THAN TWO-AND-A-HALF TIMES AS MUCH AS THE AMOUNT BY THE FEDERAL GOVERNMENT AND ALL OTHER U.S. COMPANIES – COMBINED.
- WE KNOW THAT ENERGY DIVERSITY SHOWS PROMISE ON MANY FRONTS.
- OUR INDUSTRY HAS INVESTED HEAVILY TO MEET AND EXCEED FEDERAL REQUIREMENTS FOR ETHANOL-BLENDED GASOLINE. IN 2007, AS AN INDUSTRY, WE USED 6.8 BILLION GALLONS OF ETHANOL – 45 PERCENT MORE THAN WHAT WAS LEGALLY MANDATED.
- MARATHON WAS ONE OF THE FIRST COMPANIES TO SEE THE POTENTIAL OF ETHANOL. MARATHON IS, WE BELIEVE, THE LARGEST BLENDER OF ETHANOL IN THE MIDWEST AND ONE OF THE FIRST U.S. OIL COMPANIES TO INITIATE ITS OWN ETHANOL PRODUCTION OPERATIONS.
- WE'RE ALSO INVESTING IN BOTH TRANSPORTATION AND STORAGE ASSETS IN ALL OF OUR TERMINALS, SUCH THAT BY THE MIDDLE OF THIS YEAR, WE WILL HAVE THE CAPABILITY TO BLEND TO AN E-10 LEVEL, OR 90 PERCENT GASOLINE AND TEN PERCENT ETHANOL, ACROSS OUR ENTIRE NETWORK FROM THE TIP OF FLORIDA TO THE NORTHERN MOST REACHES OF MINNESOTA.
- AS YOU CAN SEE, MARATHON, AND THE INDUSTRY AS A WHOLE, HAVE MOVED QUICKLY TO INCREASE THE VOLUMES OF ETHANOL IN U.S. GASOLINE SUPPLIES WELL BEYOND WHAT WAS REQUIRED.
- BUT I HAVE TO TELL YOU THAT WE'RE VERY CONCERNED ABOUT THE VERY AGGRESSIVE AND PRESCRIPTIVE NEW RENEWABLE FUEL REQUIREMENTS CONTAINED IN THE ENERGY LEGISLATION JUST SIGNED INTO LAW IN DECEMBER OF LAST YEAR.

- **THIS LAW REQUIRES RENEWABLES TO INCREASE FROM NINE BILLION GALLONS PER YEAR IN 2008 (UP FROM JUST UNDER SEVEN BILLION GALLONS PER YEAR IN 2007) TO 36 BILLION GALLONS PER YEAR IN 2022, OF WHICH 15 BILLION GALLONS PER YEAR WILL BE FROM CORN-BASED ETHANOL AND 21 BILLION GALLONS PER YEAR WILL BE FROM ADVANCED BIOFUELS.**
- **THE CHALLENGE HERE IS THAT THE TECHNOLOGY TO MANUFACTURE THESE 21 BILLION GALLONS PER YEAR OF ADVANCED BIOFUELS IS NOT YET ESTABLISHED, NOT TO MENTION THE ASSOCIATED COMMERCIAL VIABILITY OR WHAT WILL BE REQUIRED TO MANUFACTURE AND DISTRIBUTE THESE FUELS ON THE LARGE SCALE REQUIRED BY LAW.**
- **ALL OF THIS CREATES UNCERTAINTY FOR THOSE OF US THAT ARE EXPECTED TO MEET THESE MANDATED LEVELS AND WHILE 2022 MAY SEEM A LONG WAYS OFF, 14 YEARS IS PRETTY SHORT GIVEN ALL THAT NEEDS TO BE DONE.**
- **THE POTENTIAL IS ALSO HIGH FOR UNINTENDED NEGATIVE CONSEQUENCES SUCH AS IMPACTS TO FOOD AND WATER SUPPLIES.**
- **THIS IS A GOOD EXAMPLE OF GOVERNMENT’S WELL INTENDED, BUT MISGUIDED EFFORTS TO FOCUS ON WHAT APPEARS TO BE A “SILVER BULLET” SOLUTION – RENEWABLES – TO THE EXCLUSION OF OTHER FORMS OF ENERGY.**
- **SPEAKING OF OTHER FORMS OF ENERGY, LET ME TURN TO OTHER ALTERNATIVES. I BELIEVE SOLAR AND WIND ENERGY HAVE IMPORTANT ROLES TO PLAY AND WILL GROW IN USE IN THOSE SPECIFIC LOCALES WHERE THEY ARE ABUNDANTLY AVAILABLE. IN FACT, GE, A MAJOR WIND TURBINE MANUFACTURER, EXPECTS EIGHT TO TEN PERCENT ANNUAL GROWTH IN THAT WORLDWIDE MARKET.**
- **NUCLEAR ENERGY IS NOT EXACTLY A NEW ENERGY SOURCE EITHER, BUT WE MUST USE TECHNOLOGY TO HELP OVERCOME THE CHALLENGES OF COST AND WASTE DISPOSAL, ALONG WITH PERCEIVED SAFETY ISSUES, SO THAT NUCLEAR ENERGY CAN PLAY A MUCH LARGER ROLE THAN IT CURRENTLY DOES OR IS EVEN ENVISIONED. I THINK THERE’S TREMENDOUS OPPORTUNITY TO DO MUCH MORE HERE, PARTICULARLY AS WE FOCUS ON HOW WE CAN PROVIDE ENERGY WITHOUT EMITTING CO₂.**

- **TO WRAP UP ON ALTERNATIVE ENERGY SOURCES, NONE OF THESE OPTIONS ALONE WILL MEET OUR NEEDS, BUT EACH WILL HAVE ITS OWN NICHE AND IN TOTAL, THEY ARE CAPABLE OF INCREASING THE SUPPLY AND DIVERSITY OF ENERGY SOURCES.**
- **THE THIRD KEY COMPONENT OF A U.S. ENERGY SECURITY STRATEGY IS TECHNOLOGY.**
- **TECHNOLOGY IS VITALLY IMPORTANT IN INCREASING THE SUPPLY OF ENERGY, IN MODERATING DEMAND, AND IN PROTECTING THE ENVIRONMENT.**
- **HOWEVER, IN MY VIEW, NO AREA OF INNOVATION OR TECHNOLOGY DEVELOPMENT IS HIGHER PRIORITY THAN CARBON CAPTURE AND SEQUESTRATION, OR CCS.**
- **AS I INDICATED EARLIER, FOSSIL FUELS – OIL, NATURAL GAS AND COAL – ARE GOING TO CONTINUE TO BE THE DOMINANT SOURCES OF ENERGY FOR THE U.S. AND THE WORLD FOR A LONG TIME.**
- **SO IN ORDER TO PROTECT THE ENVIRONMENT, WE MUST CAPTURE AND PERMANENTLY SEQUESTER A LARGE FRACTION OF THE CO₂ PRODUCED BY CONSUMING THESE FOSSIL FUELS.**
- **WHILE MOST OF THE TECHNOLOGIES FOR CCS ARE ESSENTIALLY AVAILABLE, MUCH REMAINS TO BE DONE IN IMPROVING THE CAPTURE STAGE, DEMONSTRATING FEASIBILITY ON A VERY LARGE SCALE, AND LOWERING THE COST.**
- **THERE ARE SEVERAL MAJOR CCS PROJECTS UNDERWAY AROUND THE WORLD TODAY THAT HOPEFULLY WILL POINT THE WAY FORWARD ON THIS CRITICAL TECHNOLOGY.**
- **BEFORE I CLOSE, LET ME ADDRESS THOSE WHO MAINTAIN THAT U.S. OIL AND GAS COMPANIES AREN'T DOING ENOUGH TO INCREASE SUPPLIES OF REFINED PRODUCTS AND PROTECT THE ENVIRONMENT.**
- **I WANT TO CITE TWO QUICK EXAMPLES.....**
- **EXAMPLE ONE....**

- **SINCE 2000, U.S. REFINERS HAVE INVESTED ABOUT \$20 BILLION TO ALMOST COMPLETELY ELIMINATE SULFUR FROM GASOLINE AND DIESEL. \$8 BILLION OF THAT AMOUNT WAS FOR ULTRA LOW SULFUR DIESEL, WHICH IS THE CLEANEST DIESEL FUEL SUPPLIED IN THE WORLD TODAY, AND WHICH ALLOWS DETROIT TO NOW SELL NEW GENERATION CLEAN DIESEL VEHICLES THAT ARE 25 PERCENT MORE EFFICIENT THAN THE ALTERNATIVES. I THINK IT'S ALSO IMPORTANT TO POINT OUT THAT THIS WAS \$20 BILLION OF INVESTMENT THAT HAS NO ECONOMIC RETURN. IT DIDN'T RESULT IN LOWER COSTS, IT DIDN'T RESULT IN NEW VOLUMES, IT WAS SIMPLY A STAY-IN-BUSINESS INVESTMENT.**
- **THE SECOND EXAMPLE IS SPECIFIC TO MARATHON.**
- **JUST A SHORT DRIVE FROM HERE, WE'RE INVESTING \$3.2 BILLION TO EXPAND OUR REFINERY IN GARYVILLE, WHICH JUST HAPPENS TO BE THE LAST REFINERY BUILT IN THE U.S. IN 1976. THIS PROJECT, WHEN COMPLETED IN LATE 2009, WILL EXPAND THE REFINERY BY 180,000 BARRELS PER DAY -- TAKING IT FROM 256,000 BARRELS PER DAY TO 436,000 BARRELS A DAY.**
- **WHAT THAT MEANS FOR THE MARKET IS THAT WE WILL BE PRODUCING AN ADDITIONAL 7.5 MILLION GALLONS OF CLEAN TRANSPORTATION FUELS EACH DAY TO HELP MEET OUR CUSTOMERS' GROWING NEED FOR ENERGY.**
- **SO IN CLOSING.....I SIMPLY WANT TO SAY THAT I'VE BEEN IN THE OIL AND NATURAL GAS INDUSTRY FOR OVER 36 YEARS. I'VE SEEN A LOT OF CHANGE IN THE BUSINESS. BUT AT NO TIME IN MY CAREER HAVE I EXPERIENCED A TIME OF MORE DRAMATIC AND RAPID CHANGE THAN WHAT'S HAPPENING TODAY.**
- **BUT DRAMATIC CHANGE IN MY INDUSTRY SHOULDN'T JUST BE OF INTEREST TO ME. THIS CHANGE IS TOUCHING ALL OF US BECAUSE OUR COUNTRY'S ECONOMIC PROSPERITY AND COMPETITIVENESS ARE IN LARGE PART DEPENDENT ON ACCESS TO AMPLE SUPPLIES OF AFFORDABLE, RELIABLE ENERGY.**
- **THAT BEING THE CASE, WE NEED BALANCED, INTEGRATED SOLUTIONS THAT INCLUDE SLOWING THE RATE OF GROWTH IN ENERGY DEMAND, PROVIDING INCREASED SUPPLIES OF ENERGY FROM DIVERSE SOURCES, ALL THE WHILE MINIMIZING THE IMPACT ON OUR ENVIRONMENT.**

- **TO ME AND THE MORE THAN 29,000 COLLEAGUES AT MARATHON, AND FRANKLY ALL OF OUR COLLEAGUES THROUGHOUT THE INDUSTRY, ENERGY SECURITY ISN'T A GLIB PHRASE THAT CAN BE USED IN SPEECHES OR POSTED ON OUR WEB SITE OR HUNG ON OFFICE WALLS.**
- **RATHER, ENERGY SECURITY IS WHAT OUR WORK IS ALL ABOUT AS WE PROUDLY DELIVER AFFORDABLE, RELIABLE ENERGY THAT'S VITAL TO OUR STANDARD OF LIVING AND THE ECONOMIC WELL-BEING OF OUR COUNTRY AND THE WORLD.**
- **THANK YOU ALL FOR YOU KIND ATTENTION AND "GO TIGERS!"**