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ADDRESS TO THE CONGRESS/SCIENCE FORUM
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE
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THERE IS ANOTHER RESOURCE AS IRREPLACEABLE AS OIL THAT THE U.S. HAS WASTED BADLY SINCE THE ARAB OIL EMBARGO. THE RESOURCE IS TIME. ANSWERS TO THE ENERGY CRISIS COST MUCH MORE IN 1980 THAN THEY WOULD HAVE COST IN 1973.

ECONOMISTS AND SCIENTISTS CAN LOOK BACK ON THE LAST **SEVEN** YEARS LOST AS A TIME OF IRRATIONAL RISK-TAKING BY PUBLIC LEADERS. OUR EASYGOING ENERGY POLICY HAS WEAKENED US ECONOMICALLY, SOCIALLY AND STRATEGICALLY. ANY SHORT-TERM BENEFITS OF CONTINUING OUR WASTEFUL WAYS ARE DWARFED BY THE LARGE, LONG-TERM COSTS WE ALL WILL PAY. THIS NATION MADE A SERIES OF DECISIONS -- MORE LIKE NON-DECISIONS -- THAT DISREGARDED ECONOMIC INEVITABILITIES. THE CARDS WERE ON THE TABLE WAY BACK THEN, AND WASHINGTON WILLINGLY CHOSE TO PLAY THE DUMMY.

WHY IT HAPPENED THIS WAY IS EXPLAINED NOT BY NATURAL SCIENCE, OR BY THE "DISMAL SCIENCE" OF ECONOMICS. IT IS EXPLAINED BY THE UNNATURAL SCIENCE . . . POLITICAL SCIENCE. PUBLIC OFFICIALS ADDED UP THE BENEFITS OF SERIOUS REACTIONS TO ENERGY SHORTAGES VS. THE ESTIMATED POLITICAL RISK OF EACH INITIATIVE. THEY DECIDED THAT AN ENERGY OFFENSIVE WOULD OFFEND TOO MANY PEOPLE.

I HAVE ALWAYS FELT THAT OFFICE-HOLDERS UNDERESTIMATE THE PUBLIC'S WILLINGNESS TO SUPPORT STRONG, COMPREHENSIVE ACTION ON ENERGY. I HAVE VOTED FOR TOUGH MEASURES--INCLUDING EVERY PROPOSED GAS TAX INCREASE--AND I'VE FOUND THAT MY CONSTITUENTS REACT POSITIVELY. BUT THE PERCEPTION HAS BEEN THAT THE PUBLIC WOULD NOT ACCEPT SACRIFICES. AND SO THE LAST YEARS OF WASTED TIME AND ENERGY REFLECT A POLITICAL RISK/BENEFIT ANALYSIS RATHER THAN AN ECONOMIC ONE.

THIS AFTERNOON MY TOPIC IS ECONOMIC ANALYSIS AS IT IS USED, UNUSED, AND ABUSED IN POLICY-MAKING ON ENERGY AND THE ENVIRONMENT. I WILL DISCUSS THE DIRECTION OF OUR ENERGY DEVELOPMENT EFFORTS, IN LIGHT OF RISKS AND BENEFITS. THEN I'LL DISCUSS THE DIFFICULTIES OF QUANTIFYING ALL THE FACTORS IN SETTING ENVIRONMENTAL AND ENERGY POLICY. AND I WILL LOOK AT FEDERAL REGULATION OF CAR GAS MILEAGE TO CONSERVE ENERGY.

DIRECTION OF ENERGY DEVELOPMENT EFFORTS

THIS HAS BEEN CALLED THE "OVERSIGHT CONGRESS." ONE OF THE THINGS ITS MEMBERS SEEMED CONTENT TO OVERSEE AND OVERLOOK WAS THE STEADY DEEPENING OF OUR ENERGY DEPENDENCE. BUDGET-BALANCING HAS BEEN THE BIG ISSUE, AS DOMESTIC ENERGY SUPPLY VS. DEMAND SLIPPED FURTHER OUT OF BALANCE. THEN THE SHAH FELL AND THE SAUDIS BACKED AWAY FROM THE UNITED STATES. WE HAD GAS LINES AGAIN, WHICH FUELED PUBLIC ANGER. FINALLY, THIS THIN-SKINNED CONGRESS BROKE OUT IN A RASH OF NEW PROPOSALS.

RENEWED GAS LINES AND ENERGY ANXIETY HAVE RAISED INTEREST IN SYNTHETIC FUELS, OR "SYNFUELS." THESE ARE LIQUID AND GASEOUS FUELS FROM COAL, OIL SHALE, TAR SANDS, AND BIOMASS (AND FROM UNCONVENTIONAL NATURAL GAS). PRESIDENT CARTER HAS JUST PROPOSED A NEW ENERGY SECURITY CORPORATION TO INVEST \$88 BILLION IN SYNFUELS DURING THE 1980s. "SYNFUEL FEVER" HAS BROKEN OUT ALL OVER THE CONGRESS.

- LAST MONTH THE HOUSE PASSED A BILL COMMITTING THE GOVERNMENT TO BUY HALF A MILLION BARRELS OF SYNTHETIC FUELS A DAY BY 1985, AND 2 MILLION BARRELS A DAY BY 1990. A SUBSTITUTE IS PENDING IN THE HOUSE THAT WOULD MORE THAN DOUBLE THESE GOALS.
- THE SENATE ENERGY COMMITTEE IS MARKING UP A BILL THAT AUTHORIZES NEARLY \$5 BILLION TO BUILD 15 SYNTHETIC FUEL DEMONSTRATION PLANTS.

THE SYNFUELS EUPHORIA HAS A LOT GOING FOR IT. IT SEEMS TO PROMISE FUELS LIKE OUR OLD FAVORITES--OIL AND NATURAL GAS--FROM NEW TECHNOLOGIES. AND SO IT PROMISES A NEW, SCIENTIFIC MEANS TO KEEP OUR OLD WAYS.

I SUPPORT RAPID R & D OF SYNTHETIC FUELS. I FAVOR FEDERAL SUPPORT FOR ALL ALTERNATIVE ENERGY TECHNOLOGIES. BUT I AM CAREFULLY EXAMINING THE PROMISE AND CONSEQUENT PRIORITY OF SYNFUELS RELATIVE TO OTHER ENERGY SOURCES--ESPECIALLY CONSERVATION, AND SOLAR ENERGY. WE MUST SEEK THE BEST MIX OF ALTERNATIVE TECHNOLOGIES, AND BE CERTAIN NOT TO SLOUGH OFF ENVIRONMENTAL RISKS.

SYNTHETIC FUELS ARE A POTENTIAL DANGER TO THE ENVIRONMENT FOR MANY REASONS:

- AIR POLLUTION. THERE IS GENERAL AGREEMENT AMONG SCIENTISTS, BUSINESS LEADERS AND REGULATORS THAT SYN-FUEL PLANTS AS ENVISIONED AT PRESENT CAN'T MEET CURRENT AIR POLLUTION STANDARDS. WHEN EXTRACTED, CONVERTED AND USED, THESE FUELS WOULD POLLUTE THE AIR WITH LARGE AMOUNTS OF PARTICULATES, SULFUR DIOXIDES, NITROUS OXIDES, HYDROCARBONS AND OTHER POLLUTANTS.
- THE GREENHOUSE EFFECT. THE BURNING OF HYDROCARBONS IS CAUSING INCREASED LEVELS OF CARBON DIOXIDE IN THE UPPER ATMOSPHERE. THIS MAY CAUSE DRAMATIC CHANGES IN THE CLIMATE. USE OF SYN-FUELS CREATES MORE CARBON DIOXIDE THAN DOES DIRECT BURNING OF FOSSIL FUELS FOR ENERGY. *(closing Quincy Market + Faneuil Hall to it)*
- WATER POLLUTION AND SUPPLY. SYNTHETIC FUELS DEMAND A VAST AMOUNT OF WATER, MUCH OF WHICH IS ALREADY COMMITTED TO FARMING AND OTHER USES. THE OIL SHALE TECHNOLOGY IS PARTICULARLY SUBJECT TO WATER POLLUTION.
- SOLID WASTE. ALL PLANTS WOULD CREATE LARGE AMOUNTS OF SOLID WASTES, CONTAINING MANY TOXIC SUBSTANCES AND CARCINOGENS.
- OTHER COSTS. THESE INCLUDE THE DISRUPTION OF LAND FROM STRIP MINING, AND THE SOCIAL PROBLEMS OF ENERGY BOOMTOWNS.

IF WE PLAN TO KEEP AND IMPROVE THE CURRENT QUALITY OF OUR ENVIRONMENT, WE MUST ACCOUNT FOR THESE ENVIRONMENTAL COSTS AS CAREFULLY AS POSSIBLE. THE PROMOTERS OF SYNFUELS ARE DISCOUNTING THESE COSTS. WE MUST LOOK AT ALL THE UNDERVALUED AND IGNORED EXTERNALITIES BEFORE WE CAN KNOW THE TRUE COST OF EACH SYNTHETIC FUEL. ENVIRONMENTAL RISKS RIGHT NOW ARE BEING UNDERVALUED, BUT NO ONE KNOWS BY HOW MUCH.

COSTING ENVIRONMENTAL QUALITY.

THERE ARE MANY REASONS WHY WE CHRONICALLY UNDERESTIMATE THE ENVIRONMENTAL RISKS OF EACH TECHNOLOGICAL ADVANCE. BAD CONSEQUENCES SOMETIMES CANNOT BE ANTICIPATED. THEY CAN TAKE DECADES TO DEVELOP. THEIR COSTS TEND TO BE EXTERNAL, SPREAD FAR BEYOND THE TECHNOLOGY'S DIRECT CUSTOMERS. MOREOVER, COST-BENEFIT ANALYSIS HAS INHERENT LIMITS. THE ACTUAL VALUE OF GOOD HEALTH, BREATHING, OR LIFE ITSELF IS DISTORTED WHEN CHANGED INTO DOLLARS AND CENTS.

FEDERAL REGULATIONS TO REDUCE AIR POLLUTION ARE JUST ONE INTERVENTION UNDER ATTACK BY THE FORCE OF OPINION THAT THERE IS TOO MUCH GOVERNMENT REGULATION. BUT ANALYSES OF FEDERAL REGULATION FAIL TO MAKE A COMPLETE ACCOUNTING OF THE COSTS OF NOT REGULATING, WHICH OFTEN ARE PAID BY THE GOVERNMENT. FEDERAL REGULATIONS ALSO CAN SAVE INDUSTRY HUGE AMOUNTS OF MONEY IN PRODUCT LIABILITY SUITS, WORKMEN'S COMPENSATION, CLEANUP COSTS AND LEGAL SUITS. THESE ARE NOT ACCOUNTED FOR ACCURATELY.

ONE EXAMPLE IS LIFE SCIENCE Co.'s KEPONE. A \$200,000 INVESTMENT IN POLLUTION CONTROL WOULD HAVE SAVE LIFE SCIENCE Co. \$12 MILLION IN JUDGMENTS AGAINST IT FOR POLLUTION OF THE JAMES RIVER IN HOPEWELL, VIRGINIA. IT WOULD ALSO HAVE SAVED THE ESTIMATED \$8 BILLION REQUIRED TO CLEAN UP THE JAMES RIVER AFTER THE KEPONE POLLUTION. EFFECTIVE REGULATION FOR SAFETY WOULD HAVE PROTECTED 70 PERSONS FROM BRAIN AND KIDNEY DAMAGE, AND STERILITY.

ANOTHER CASE IS HOOKER CHEMICAL'S DUMPING OF TOXIC CHEMICALS AT LOVE CANAL NEAR NIAGARA FALLS. HIGH RATES OF MISCARRIAGE, BIRTH DEFECTS, LIVER CANCER, HYPERACTIVITY AND OTHER DISEASES IN THE AREA ARE BEING BLAMED ON CONTACT WITH THESE LEAKED CHEMICALS. THE COST OF NOT REGULATING THIS OPERATION WILL BE IN THE BILLIONS.

GIVEN THE LIMITS OF COST/BENEFIT ANALYSIS IN SUCH ISSUES, WASHINGTON MUST CONTINUE TO SEEK REASONABLE STANDARDS TO PROTECT PUBLIC HEALTH. FOR EXAMPLE, THE CLEAN AIR ACT AMENDMENTS OF 1977 PURPOSELY DID NOT REQUIRE ELABORATE ECONOMIC JUSTIFICATIONS. PUBLIC HEALTH WAS THE EXPLICIT, OVERRIDING FACTOR IN SETTING AIR QUALITY STANDARDS.

BUT THE BETTER THAT ECONOMISTS CAN EVALUATE THE EXTERNAL, ENVIRONMENTAL RISKS IN ALTERNATIVE TECHNOLOGIES, THE MORE THEY MUST TURN TOWARD CONSERVATION AND SOLAR FOR OUR ENERGY FUTURE. CONSERVATION IS AN ENERGY SOURCE. IT IN PARTICULAR SUFFERS IN THE POLITICAL MARKETPLACE BECAUSE IT SOUNDS RINKY-DINKY. MAJOR

CONSERVATION EFFORTS WOULD BE AS IF THE ENTIRE NATION TOOK UP KNITTING. IT SOUNDS QUIANT. ^{"change lifestyles"} ^{"Basket-weavers"}

THERE ARE AT LEAST THREE OTHER REASONS WHY THE BENEFITS OF "CONSERVATION ENERGY" ARE UNDERUTILIZED:

- IT IS DIFFUSE, THE SUM OF MILLIONS OF ADJUSTMENTS IN HOW WE DO THINGS. A SYNTHETIC FUEL IS SOMETHING -- A SUBSTANCE OFFICIALS CAN PUT ON DISPLAY. CONSERVATION ISN'T AS DRAMATIC.
- ALSO, CONSERVATION EXPLICITLY MEANS CHANGES IN THE WAY WE DO THINGS. BUT IT HAS BEEN DRAGGED DOWN BY AN EXAGGERATED ASSOCIATION WITH CALLS FOR SACRIFICE IN THE ENERGY CRISIS. TO THE CONTRARY, THE GREATEST ENERGY CONSERVATION POTENTIAL LIES IN INCREASED ENERGY PRODUCTIVITY -- GETTING MORE FROM THE ENERGY WE USE THROUGH MORE EFFICIENT AND DURABLE DEVICES.
- AND THERE IS VIRTUALLY NO CONSERVATION INDUSTRY -- INSULATION IS THE PRINCIPAL EXCEPTION. THE CONSERVATION FIELD IS VIRTUALLY POWERLESS TO COMPETE WITH THE PETROLEUM INDUSTRY IN MOLDING OPINION AND SHAPING DATA FAVORABLE TO ITSELF.

MANY CAREFUL STUDIES HAVE DEMONSTRATED THAT USING EXISTING ENERGY MORE EFFICIENTLY IS A MAJOR ALTERNATIVE SOURCE OF ADDITIONAL ENERGY. THE MOST RECENT IS THE REPORT OF THE ENERGY PROJECT AT THE HARVARD BUSINESS SCHOOL. IT STATES: CONSERVATION MAY WELL BE THE CHEAPEST, SAFEST, MOST PRODUCTIVE ENERGY ALTERNATIVE READILY AVAILABLE IN LARGE AMOUNTS.

STRONG POLITICAL LEADERSHIP IS VITAL TO GET PROPER VALUE FOR ENERGY CONSERVATION. WE MUST OVERCOME ONE VERY STRONG MISCONCEPTION -- THAT ENERGY USE CORRELATES POSITIVELY WITH GROSS NATIONAL PRODUCT. THE EXPERIENCE OF INDUSTRY THROUGHOUT EUROPE DISPROVES THIS. A SHIFT TO GREATER ENERGY EFFICIENCY ACTUALLY CAN STIMULATE INNOVATION, EMPLOYMENT AND ECONOMIC GROWTH.

THE CASE OF AUTOMOBILE EFFICIENCY

CONSIDER THE AUTOMOBILE. OVER THE PAST TWO DECADES, DETROIT HAS SHOWN ITSELF TO BE THE DINOSAUR OF OUR LAISSEZ-FAIRE ECONOMY. THE INDUSTRY'S INDIFFERENCE TO THE HEALTH AND SECURITY OF AMERICANS HAS GUARANTEED FEDERAL INTERVENTION -- AND MAJOR ADVANCES IN CAR TECHNOLOGY. OVER THE YEARS AUTOMAKERS PUT ITS OWN CHANGING STYLES AND EASY MONEY AHEAD OF SAFER TECHNOLOGY.

- WITHOUT WASHINGTON, THE DANGER OF DEATH INSIDE AN AUTO WOULD HAVE STAYED NEEDLESSLY HIGH. *Seatbelts*
- WITHOUT WASHINGTON, THE HEALTH HAZARDS FROM AUTO EMISSIONS WOULD BE LARGER, BUT LESS NOTICED. *Unions took care of Demos; exec took care of Reps.*
- AND WITHOUT WASHINGTON, THE INDUSTRY WOULD HAVE BEEN EVEN MORE POORLY PREPARED TO HANDLE THIS

YEAR'S DEMAND FOR FUEL-EFFICIENT CARS.

Detroit execs look out of window, see foreign execs in dot.

FEDERAL STANDARDS FINALLY HAVE JOLTED THE INDUSTRY INTO A DRIVE FOR FUEL EFFICIENCY. AT THIS TIME, DOMESTIC DEMAND FOR ECONOMICAL CARS IS GROWING. SIX YEARS AFTER

(would use 2 figure here)

THE ARAB OIL EMBARGO, THE NEED TO CONSERVE FUEL IS GREAT. AND SO IT HAS SADDENED ME AND OUTRAGED ME TO SEE THE AUTO GIANTS CONTINUE TO TOY WITH THEIR MANDATE, AND TO PLAY WITH DELAY.

DETROIT'S RECENT, RELENTLESS CAMPAIGN TO SLOW THE ANNUAL PACE OF AUTO MILEAGE IMPROVEMENTS AS REQUIRED BY LAW HAS FAILED. FORMER TRANSPORTATION SECRETARY BROCK ADAMS ^{laugh} WAS RIGHT TO STAND FAST ON THIS, AND HE DESERVES OUR APPRECIATION. THE AUTOMAKERS' LOSING BID TO LOAF TOWARD AUTO EFFICIENCY REVEALS THAT THEY ARE OUT OF STEP WITH THIS NATION'S NEEDS.

FOR TWO YEARS NOW, THE AUTO INDUSTRY HAS BEEN ON NOTICE AS TO MILEAGE MINIMUMS FOR THE MODEL YEARS 1980 THROUGH 1985. THE LEVELS ARE 20 MILES PER GALLON FOR 1980, 22 M.P.G. FOR 1981, 24 M.P.G. FOR 1982, 26 M.P.G. FOR 1983, 27 M.P.G. FOR 1984 AND 27.5 M.P.G. FOR 1985. LATE LAST YEAR FORD AND GM BEGAN LOBBYING HARD FOR A SLOWER INCREASE OF 1.5 MILES PER GALLON EACH YEAR.

*Hearings: Moody mobile. Came in overalls -
Drives like lawnmower.*

THE ORIGINAL STANDARDS ARE CLEARLY COST-EFFECTIVE BASED ON FUEL SAVINGS RELATIVE TO PRICE INCREASE OF CARS. GAS PRICE HIKES SINCE THE TRANSPORTATION DEPARTMENT'S DECISION WAS ANNOUNCED IN JUNE HAVE STRENGTHENED THE CASE FOR TOUGH STANDARDS. DETROIT'S PROPOSED DILUTION OF STANDARDS WOULD HAVE CAUSED AN ESTIMATED 7.7 BILLION EXTRA GALLONS OF GAS TO BE BURNED.

*Detroit had taken the best minds
on do-dads.*

OUR DEEPENING DEPENDENCE ON FOREIGN OIL THREATENS US AS SERIOUSLY AS ANY DANGEROUSLY ENGINEERED, CARCINOGENIC CAR. VEHICLES THAT GUZZLE GAS ARE HAZARDOUS TO OUR HEALTH AS A NATION. THEY ARE WEAPONS THAT WEAKEN OUR RESOURCES OF SURVIVAL. WASTING FUEL IS THE WORST KIND OF DEFICIT SPENDING, BECAUSE IT BORROWS FROM OUR FUTURE AND OUR CHILDREN'S FUTURE TO OVERPAY FOR THE PRESENT.

WE MUST DRIVE IT INTO THE HEADS OF THE AUTO COMPANIES THAT THEIR NARROW VISION ^(DOES NOT) ~~DESERVES~~ OUR NATION.

WITHOUT WASHINGTON'S INTERVENTION, THE AUTOMOBILE INDUSTRY WAS RUSHING TO ITS OWN DEMISE BY WASTING IRREPLACEABLE FOSSIL FUEL AT A RECKLESS RATE. THE AVERAGE MILEAGE FOR ALL CARS WAS JUST UNDER 14 MILES PER GALLON IN 1967. MILEAGE THEN DROPPED UNTIL THE OIL EMBARGO. *lighter* IN 1977, IT WAS BACK AT THE SAME LEVEL -- JUST UNDER 14 M.P.G. THE EXECUTIVES WHO LAUNCHED THESE INEFFICIENT FOUR-WHEELERS HASTENED THE DAY WHEN THE WORLD WILL RUN OUT OF PETROLEUM.

asked experts at hearings: what kind of car did you drive?

WASHINGTON HAS HELPED AUTOMAKERS DESPITE THEMSELVES. IT HAS PRODDED THEM INTO EFFECTIVE COMPETITION WITH FOREIGN MANUFACTURERS FOR THE WORLD MARKET. FEDERAL REQUIREMENTS HAVE DRAGGED THE AMERICAN AUTO INDUSTRY INTO AN ESCALATING COMPETITION FOR INTERNATIONAL MARKETS. DETROIT'S TECHNOLOGICAL AND FINANCIAL RESOURCES MAKE IT LIKELY THAT THE DOMINANT "WORLD CAR" -- ECONOMICAL, VERSATILE, TOUGH, AND WITHOUT BUILT-IN OBSOLESCENCE -- WILL BE MADE IN THE U.S.A.

"non-germans" amendment, (Detroit Congressmen) objected

FEDERAL REGULATION OF AUTOMOBILE FUEL EFFICIENCY WILL SAVE AMERICAN CONSUMERS MORE THAN IT COSTS. BUT EVEN IF THE FIGURES WERE AMBIGUOUS, THE IMPERATIVE FOR STRONG STANDARDS WOULD REMAIN. OIL IS PUMPED THROUGH A FIXED, FOREIGN MARKET; WHAT SETS THE PRICE IS NOT AN INVISIBLE HAND. DETROIT HAS WASTED TIME WITH RHETORIC ABOUT THE FREE MARKET, AND PASSIVE DEPENDENCE ON BUREAUCRATS AND CONSUMERS TO DEMAND WHAT THE EVIDENCE MAKES INEVITABLE. INACTION AND INACCURATE ASSUMPTIONS HAVE BEEN GUIDING PRINCIPLES.

IN SOME INSTANCES, OUR NATIONAL NEED TO SAVE ENERGY WILL INVOLVE SACRIFICES. BUT THE ENERGY CRISIS WILL EXACT SACRIFICES FROM US NO MATTER WHAT. IT IS UP TO US TO DECIDE AMONG THE VARIOUS CHOICES. AND IN SO CHOOSING WE MUST REMEMBER THAT OUR COUNTRY'S SECURITY FROM POTENTIAL ADVERSARIES -- WHICH IS AFFECTED BY ENERGY SHORTAGES -- IS SOMETHING WE CANNOT RISK.

I UNDERSTAND FROM MY FATHER, WHO JUST RETURNED FROM A VISIT TO GREECE, THAT THE GOVERNMENT THERE RECENTLY ORDERED THAT CITIZENS CAN DRIVE THEIR CARS ON ALTERNATE SUNDAYS ONLY. (THE BAN IS FROM 5:00 P.M. SATURDAY TO 6:00 A.M. MONDAY.) I'M NOT ADVOCATING SUCH A LAW HERE, BUT THIS KIND OF SERIOUS RESPONSE TO SHORTAGES MAKES CONGRESS LOOK SILLY. ON THE PRESIDENT'S STAND-BY GAS RATIONING PLAN, THE HOUSE OF REPRESENTATIVES VOTED NO, AND IT WASN'T CLOSE.

lifestyle change needed

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*last political people (eg scientists)
understand need best.*

CONCLUSION

LEADERS IN WASHINGTON AND ACROSS THE COUNTRY MUST LOOK AS CAREFULLY AS POSSIBLE AT RISKS VS. BENEFITS IN POLICY-MAKING. WE MUST DO SO WITH A FULL AWARENESS THAT SOME THINGS OF GREAT VALUE CANNOT BE PRICED OBJECTIVELY. IT IS A TEST OF OUR LEADERSHIP TO DISCOUNT POTENTIAL BENEFITS AND RISKS IN POLITICAL TERMS. WE MUST MOVE AHEAD AT THE MARGIN OF WHAT IS POSSIBLE.

SOMETIMES THE COST EFFECTIVENESS OF A MEASURE WILL BE A CLOSE QUESTION, OR WILL INVOLVE VALUE JUDGMENTS THAT ARE OPEN TO RATIONAL DISAGREEMENT. OFTEN THERE WILL BE APPARENT CONFLICT BETWEEN ~~SAVING~~ ^(PRODUCTION) ENERGY AND PROTECTING THE ENVIRONMENT. BUT SOMETIMES THERE WILL BE MEASURES THAT ENCOMPASS A VARIETY OF BENEFITS AT NO REAL COST. ON THESE WE CAN MOBILIZE WIDESPREAD PUBLIC SUPPORT.

IN MASSACHUSETTS, THE BOTTLE BILL WAS SUCH A MEASURE. IT REQUIRED A DEPOSIT ON BEVERAGE BOTTLES. I SUPPORTED IT IN MASSACHUSETTS, AND I'M SUPPORTING THE CONCEPT IN CONGRESS. ITS COST IS A SMALL MATTER OF CONVENIENCE TO CONSUMERS AND GROCERS. ITS BENEFITS -- ACCORDING TO A CONSENSUS OF STUDIES -- ARE MANY. IT SAVES US MONEY, SAVES ENERGY, SAVES MINERAL RESOURCES, SAVES WATER, AVOIDS POLLUTION FROM MANUFACTURING, PREVENTS LITTER AND ACTUALLY CREATES JOBS. THE GOVERNOR VETOED IT LAST WEEK.

THE CONFLICT BETWEEN POLITICAL SCIENCE AND THE OTHER SCIENCES IS INHERENT IN PUBLIC SERVICE. BUT TO THE DEGREE WE CAN LEAVE POLITICS BEHIND ON THE VITAL ISSUES OF ENERGY AND THE ENVIRONMENT, WE SERVE THE PUBLIC BEST.

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Serious energy savings since '73 have come from
industrial sector. Eg. a cycl. investment.
Not happened in transport sector.

Amendment to Nat'l Energy Act. Requiring study if ok, on
bike paths.

Divided Reps down middle + Dems.
3 titles, of which bike was 3rd.

What would impact be on auto industry, Won a very close vote,

most Members: not a health hazard.

prob. can be done w/o. any special
stigma.