

**REMARKS OF ANDREW B. STEINBERG**  
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**AND INTERNATIONAL AFFAIRS**  
**U.S. DEPARTMENT OF TRANSPORTATION**

**BEFORE THE ICAO COLLOQUIUM ON AVIATION EMISSIONS**  
**MONTREAL, CANADA**  
**MAY 16, 2007**

ON BEHALF OF THE UNITED STATES, I APPRECIATE THE OPPORTUNITY TO SHARE SOME THOUGHTS ON THE WAY FORWARD IN ADDRESSING THE IMPACT OF AVIATION'S GREENHOUSE GAS EMISSIONS. I'D ALSO LIKE TO THANK ICAO FOR ORGANIZING THIS VERY IMPORTANT CONFERENCE. LET ME BEGIN BY MAKING A FEW GENERAL OBSERVATIONS.

THIS CONFERENCE HAS SHOWN THAT WHILE THE PROBLEM OF GREENHOUSE GAS EMISSIONS IS VERY REAL AND THEREFORE MUST BE ADDRESSED IN A SYSTEMATIC AND SCIENTIFICALLY SOUND WAY, AVIATION EMISSIONS ARE **NOT** IN FACT GROWING OUT OF CONTROL. AVIATION STILL REPRESENTS A RELATIVELY SMALL 2-3% OF ALL GREENHOUSE GAS EMISSIONS. AND THE GOOD NEWS IS THAT WHEN COMPARED TO 2000, AS OF LAST YEAR, THE WORLD'S SINGLE LARGEST AND MOST ADVANCED AVIATION MARKET – THE UNITED STATES -- WAS MOVING SOME 12% MORE PASSENGERS (OR 78 MILLION PEOPLE) AND 22% MORE FREIGHT (OR 5.4 BILLION REVENUE TON MILES) WHILE

PRODUCING ***FIVE PERCENT LESS*** (OR 10.5 MILLION FEWER) TONS OF CARBON GASES.

MOREOVER, THE AVIATION INDUSTRY HAS MADE AND CONTINUES TO MAKE SIGNIFICANT STRIDES IN FUEL EFFICIENCY. TODAY'S NEW AIRCRAFT COMPARE FAVORABLY WITH A COMPACT CAR FOR FUEL EFFICIENCY. AND WITH FUEL REPRESENTING ALMOST 30% OF COSTS FOR MOST AIRLINES IN THE U.S., THE PRICE OF FUEL HAS ALREADY CREATED A HUGE MARKET-BASED INCENTIVE TO REDUCE CONSUMPTION -- AND HENCE EMISSIONS -- WITHOUT DRACONIAN GOVERNMENTAL ACTION.

THE WORLD AVIATION COMMUNITY ALREADY AGREES ON THE IMPORTANCE OF SHRINKING AVIATION'S ENVIRONMENTAL FOOTPRINT, WHILE MAINTAINING GROWTH IN PASSENGER AND CARGO TRAFFIC. INDEED, IN 2004, ICAO ADOPTED GOALS AIMED AT LIMITING OR REDUCING THE IMPACTS FROM NOISE, LOCAL AIR QUALITY, AND GREENHOUSE GAS EMISSIONS. NOT SURPRISINGLY, THERE MAY BE REASONABLE DISAGREEMENT AMONG ICAO STATES AS TO PRIORITIES AS WELL AS THE EFFICACY OF PARTICULAR MEASURES. THAT IS WHY IT IS SO VITAL TO WORK TO **HARMONIZE** OUR APPROACHES THROUGH ICAO BASED ON NOTIONS OF GOOD SCIENCE, RECIPROCITY AND CONSENT.

SO, HOW DO WE MOVE FORWARD IN TACKLING THE PROBLEM OF AVIATION GREENHOUSE GAS EMISSIONS? THE UNITED STATES BELIEVES THERE ARE FIVE “PILLARS” THAT SHOULD UNDERPIN A COMPREHENSIVE SOLUTION.

FIRST, WE MUST **IMPROVE OUR SCIENTIFIC UNDERSTANDING** OF THE IMPACTS OF AVIATION EMISSIONS. WHILE CO<sub>2</sub>'S IMPACTS ARE UNDERSTOOD, THE LEVELS OF UNDERSTANDING OF THE IMPACTS OF OTHER EMISSIONS -- ESPECIALLY FROM AIRCRAFT AT HIGHER ALTITUDES -- RANGE FROM FAIR TO POOR. YOU HEARD EARLIER IN THIS CONFERENCE ABOUT BOTH WHAT WE UNDERSTAND AND WHAT WE DON'T. TOO MUCH IS AT STAKE HERE GIVEN THE IMPORTANCE OF CIVIL AVIATION TO OUR ECONOMIES TO MAKE DECISIONS HASTILY WITHOUT DATA -- WE MUST ENSURE THAT WE IDENTIFY ACTUAL PROBLEMS, CORRECTLY MEASURE THEIR IMPACT, AND DESIGN APPROPRIATE MEASURES TO MITIGATE THEIR EFFECTS.

SECOND, WE MUST **ACCELERATE IMPLEMENTATION OF OPERATIONAL IMPROVEMENTS IN AIR TRAFFIC MANAGEMENT** FROM GATE TO GATE TO REDUCE FUEL BURN (AND EMISSIONS). THE FACT IS, THE BASIC METHODOLOGY FOR CONTROLLING AIR TRAFFIC HAS NOT CHANGED IN FIFTY YEARS, IS NOW OUTMODED, AND IS INCREASINGLY INEFFICIENT. IN THE UNITED STATES WE ALREADY KNOW THAT OUR SYSTEM WILL BE GRIDLOCKED IF WE DON'T FUNDAMENTALLY ALTER ATC. DELAYS AND EXCESS GREENHOUSE GAS EMISSIONS ARE SYMPTOMATIC OF THE SAME ILLNESS. THUS IMPROVING

THE ENERGY EFFICIENCY OF THE AVIATION SECTOR HAS THE DUAL BENEFIT OF IMPROVING BOTH ENVIRONMENTAL AND FINANCIAL PERFORMANCE OF THE AVIATION SECTOR. THIS CAN YIELD IMMEDIATE BENEFITS. FOR EXAMPLE, THE U.S. HAS SAVED MILLION TONS OF CARBON EMISSIONS OVER THE PAST COUPLE OF YEARS JUST BY PUTTING REDUCED VERTICAL SEPARATION MINIMUM (RVSM) IN US AIRSPACE. WE ARE STEPPING UP IMPLEMENTATION OF PERFORMANCE-BASED NAVIGATION TECHNIQUES -- RNAV/RNP AND OTHER PROCEDURES -- TO FURTHER IMPROVE THE OVERALL EFFICIENCY OF THE SYSTEM.

THIRD, WE MUST **HASTEN THE DEVELOPMENT OF PROMISING ENVIRONMENTAL IMPROVEMENTS IN AIRCRAFT TECHNOLOGY**. THE VAST MAJORITY OF ENVIRONMENTAL GAINS IN AVIATION OVER THE LAST THREE DECADES CAME FROM ENHANCEMENTS IN ENGINES AND AIRFRAME TECHNOLOGY. WE CURRENTLY HAVE LEGISLATION BEFORE OUR CONGRESS THAT WOULD CREATE A RESEARCH CONSORTIUM FOCUSED ON ACCELERATING THE MATURING OF LOWER ENERGY, EMISSIONS AND NOISE TECHNOLOGY FOR AIRCRAFT.

FOURTH, IT IS IMPERATIVE TO **EXPLORE THE POTENTIAL OF ALTERNATIVE FUELS IN AVIATION** WHICH CAN IMPROVE EMISSIONS PERFORMANCE AT BOTH THE LOCAL AND GLOBAL LEVEL. ALTERNATIVE FUELS WILL NOT ONLY ENHANCE ENVIRONMENTAL PERFORMANCE BUT ALSO ENERGY SECURITY. FURTHER, TO THEY OPEN UP ALTERNATIVE ENGINE COMBUSTION DESIGNS THAT IN TURN CAN REDUCE AVIATION'S ENVIRONMENTAL FOOT PRINT OVER

TIME. THE U.S. HAS INSTITUTED THE COMMERCIAL AVIATION ALTERNATIVE FUEL INITIATIVE (CAAFI). WORKING WITH A CROSS SECTION OF AIRLINES, MANUFACTURERS, AIRPORTS, PETROLEUM FIRMS, AND OTHER FEDERAL AGENCIES-- AS WELL AS INTERNATIONAL PARTICIPANTS -- WE WILL PRODUCE A ROAD-MAP FOR EXPLORING ALTERNATIVE FUELS FOR COMMERCIAL AVIATION.

FINALLY, THE UNITED STATES DOES NOT REJECT THE IDEA OF **MARKET-BASED MEASURES TO ASSIST IN MANAGING AVIATION ENVIRONMENTAL IMPACTS.** FOR EXAMPLE, THE US HAS HAD A FUEL CHARGE IN PLACE ON ITS AIRLINE'S DOMESTIC OPERATIONS FOR DECADES. INDEED, CONCEPTS LIKE EMISSIONS TRADING WERE ORIGINALLY DEVELOPED IN THE U.S. BUT IT IS ABSOLUTELY CRITICAL THAT SUCH MEASURES BE BASED ON SOUND SCIENCE, BE COST-BENEFICIAL, AND BE DRIVEN BY CONSENSUS FORMED AT THE ONLY GLOBAL ORGANIZATION THAT EXISTS TO SOLVE THIS PROBLEM -- THE INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO). ICAO THUS HAS AN INDISPENSABLE ROLE TO PLAY IN PROVIDING GUIDANCE ON THE USE OF SUCH MEASURES, INCLUDING HOW STATES SHOULD RESPECT THE SOVEREIGNTY OF ONE ANOTHER IN ADOPTING MEASURES THAT HAVE EXTRATERRITORIAL EFFECT. WE STRONGLY BELIEVE THAT SUCH GUIDANCE MUST ENSURE MUTUAL CONSENT OF STATES TO MARKET-BASED MEASURES THAT HAVE SUCH EFFECT

AT THE LAST ASSEMBLY, ALL OF US AGREED THAT ICAO SHOULD DEVELOP GUIDANCE ON THE USE OF EMISSIONS TRADING FOR INTERNATIONAL AVIATION.

WE ALSO ALL AGREED THAT STATES SHOULD “REFRAIN FROM IMPOSING UNILATERAL ENVIRONMENTAL MEASURES”. THUS, YOU CAN UNDERSTAND OUR DISAPPOINTMENT WHEN, CONTRARY TO THAT AGREEMENT, THE EUROPEAN UNION PUT FORWARD LEGISLATION THAT WOULD FORCE INTERNATIONAL AIRLINES INTO A EUROPEAN EMISSION TRADING SYSTEM THAT WAS DEVELOPED WITHOUT THE CONSENT OF THEIR GOVERNMENTS OR THEIR INPUT. LIKE MOST MEMBERS OF THE ICAO COUNCIL, WE REGARD THIS APPROACH AS CONTRARY TO THE CHICAGO CONVENTION, BILATERAL AIR SERVICES AGREEMENTS, AND NATIONAL SOVEREIGNTY.

THE CONTROVERSY SURROUNDING THE EU PROPOSAL IS HELPFUL, HOWEVER, IN SHOWING THAT WHAT DIVIDES US IS NEITHER THE SCIENCE, NOR THE RECOGNITION THAT A PROBLEM EXISTS AND MUST BE ADDRESSED. WE ALL AGREED AS MUCH AT THE LAST ASSEMBLY. NOR IS THERE DIVISION ABOUT THE NEED TO ADDRESS AIR TRAFFIC INEFFICIENCIES, PROMOTE BETTER TECHNOLOGY, OR EXPLORE ALTERNATIVE FUELS. MANY OF THE COUNTRIES IN THIS ROOM ARE ALREADY WORKING ON INITIATIVES IN THESE AREAS TO ADDRESS AVIATION EMISSIONS. NOR, AS I SAY, IS THIS A DISAGREEMENT OVER THE CONCEPT OF MARKET-BASED MEASURES.

WHAT DIVIDES US IS A BELIEF THAT THERE CAN BE A “ONE SIZE FITS ALL” SOLUTION THAT, BY DEFINITION, IGNORES THE SOVEREIGNTY, THE DIVERSITY OF EXPERIENCES, AND THE ECONOMIC NEEDS OF ICAO’S MEMBER STATES.

NOT ONLY DOES SUCH AN APPROACH LACK LEGAL FOUNDATION, MORE IMPORTANTLY, IT GOES AGAINST THE CORE VALUE OF ICAO, WHICH IS TO DEVELOP **HARMONIZED** STANDARDS AND POLICIES THAT PROMOTE AVIATION THROUGH COLLABORATION AND CONSENT IN MANAGING INTERNATIONAL AVIATION. THE UPCOMING ASSEMBLY SHOULD RESOLVE THE ISSUE OF “GEOGRAPHIC SCOPE” ON THE DRAFT EMISSIONS TRADING GUIDANCE ON THE BASIS OF MUTUAL CONSENT. WE NEED TO ENDORSE THE USE OF EMISSIONS TRADING IN A MANNER THAT RESPECTS THE SOVEREIGNTY OF ICAO’S MEMBERS.

IN CLOSING, AS WAS CONVEYED EARLIER IN THIS COLLOQUIUM, ICAO HAS TAKEN MANY IMPORTANT STEPS TO MANAGE AVIATION’S ENVIRONMENTAL IMPACTS. I BELIEVE ALL OF US UNDERSTAND AND ARE COMMITTED TO DOING MORE. AT THE UPCOMING ASSEMBLY IN SEPTEMBER, WE MUST USE THE OPPORTUNITY TO ESTABLISH A **POSITIVE, SCIENCE AND TECHNOLOGY-BASED PROGRAM** WITH CONCRETE ACTIONS TO ADDRESS THE ENVIRONMENTAL CHALLENGES FACING AVIATION IN COST-EFFECTIVE WAYS.

A CORNERSTONE OF SUCH A PLAN SHOULD BE ICAO'S GLOBAL AIR NAVIGATION PLAN. ICAO MUST EXERT GLOBAL LEADERSHIP TO ACHIEVE QUANTIFIABLE ENVIRONMENTAL BENEFITS FROM ACCELERATED APPLICATION OF MORE EFFICIENT AIR NAVIGATION TECHNOLOGIES, PROCEDURES AND ROUTES – WORKING THROUGH ITS REGIONAL OFFICES TO ADAPT AND IMPLEMENT TO THE CIRCUMSTANCES OF PARTICULAR AREAS OF THE WORLD. ICAO SHOULD ALSO

ENCOURAGE ITS MEMBERS TO FACILITATE RESEARCH ON CRITICAL SCIENTIFIC ISSUES; FOSTER MORE ENVIRONMENTALLY EFFICIENT ENGINE AND AIRCRAFT DESIGNS AND THE DEVELOPMENT OF ALTERNATIVE FUELS; PROMOTE OTHER POLICIES AND PRACTICES- THAT PROVIDE COST-EFFECTIVE SOLUTIONS TO TACKLE THE SIGNIFICANT CHALLENGE OF REDUCING AVIATION'S ENVIRONMENTAL FOOTPRINT.

AS FAA ADMINISTRATOR BLAKEY NOTED LAST NIGHT, AVIATION IS AN ENGINE FOR THE WORLD ECONOMY. THUS, WHATEVER MEASURES WE TAKE MUST ACCOMMODATE GROWTH. WE MUST ENSURE AVIATION OFFERS THE SAME BENEFITS AND OPPORTUNITIES FOR THE WORLD'S CITIZENS IN ITS SECOND CENTURY AS IT DID IN ITS FIRST. THE U.S. IS CONFIDENT WE CAN BE SUCCESSFUL, IF WE WORK TOGETHER THROUGH COLLABORATION, PARTNERSHIP, AND CONSENT- TO BUILD AN EFFECTIVE FRAMEWORK TO ADDRESS THE MANY AND SIGNIFICANT ENVIRONMENTAL CHALLENGES AVIATION FACES.

THANK YOU.