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Dorothy Robyn is a public policy expert who has spent 35 years teaching, analyzing, implementing and working to reform government economic and regulatory policy. She currently writes and consults on policy issues related to transportation and infrastructure, energy and telecommunications. From 2009-2014, Dr. Robyn served in the Obama Administration, first as a Deputy Under Secretary in the Department of Defense with management responsibility for military bases worldwide and related energy, environmental and safety issues, and as head of GSA's Public Buildings Service following a much-publicized scandal at GSA. She spent eight years on President Clinton's White House economic team, where she handled transportation, aviation and aerospace, among other issues. In between the Clinton and Obama Administrations (and following a year at Brookings), Dr. Robyn was a principal with The Brattle Group, an economic consultancy; she created an aviation policy practice, with clients that ranged from U.S. air carriers to the European Commission to the Bush White House. Earlier in her career, Dr. Robyn spent four years on the faculty of Harvard's Kennedy School of Government, where she taught courses in public management and business-government policy. A product of Berkeley's Goldman School of Public Policy, Dr. Robyn is the author of a book on deregulation of the U.S. trucking industry and two monographs on spectrum policy.

EDUCATION

BA from Southern Illinois University MPP and PhD in Public Policy from the University of California, Berkeley

RECENT PROFESSIONAL EXPERIENCE

Independent Policy Analyst, 2014 to Date

Write and consult on transportation, telecommunications and energy policy for private clients, think tanks and pro bono advisory boards.

- Co-authored a self-funded analysis of the economic benefits of satellite-based surveillance of aircraft (space-based ADS-B) and made recommendations on how the FAA should think about its costs and benefits. Report issued in January 2017.
- Co-authored a Pew-funded study on how to ensure that U.S. military bases have secure power during lengthy grid outages. Released in January 2017, the report analyzes advanced microgrids as alternative to building-tied backup diesel generators.
- Participated in a Task Force on Federal Energy Management convened by Secretary of Energy Ernest Moniz. Wrote four of ten analytic sections of the Task Force report, which was released in September 2016.
- Chaired an Infrastructure Task Force convened by DC Mayor Muriel Bowser to advise her on funding and provision of transportation and other capital improvements. The Task Force report, submitted in January 2016, has not been made public.
- Co-authored a study for Qualcomm of the FCC's proposal to devote guard band spectrum

- to unlicensed devices in the 600 MHz two-sided spectrum auction.
- Recent publications include a monograph on spectrum policy for the Aspen Institute; a paper commissioned by Brookings that draws lessons from federal property management for federal spectrum policy; congressional testimony and Brookings blogposts on the debate over corporatization of the U.S. air traffic control system; and opinion pieces on federal budget rules ("scoring") as an impediment to investment in federal infrastructure.
- Frequent speaker at forums on FAA reform; federal infrastructure investment and public-private partnerships; and spectrum policy. Radio interviews on FAA reform.

U.S. General Services Administration, 2012-2014

Commissioner, Public Buildings Service

Responsibilities: Recruited to lead the Public Buildings Service in the aftermath of a scandal. The real estate arm of the (civilian) federal government, PBS manages 380 million square feet of government-owned and -leased space; its responsibilities include asset management, design and construction, leasing, building operations and property disposal. As Commissioner, oversaw an annual budget of \$10 billion and a staff of 6,000 people in 11 regional offices.

Accomplishments:

- Steadied the ship in agency still reeling from negative press and the ouster of senior leaders.
- Worked with Administrator to reverse a three-year budget trend that had seen congressional appropriators divert \$4+ billion from GSA's Public Buildings Fund to non-GSA activities.
- Led re-look at PBS structure and staffing to improve efficiency and customer responsiveness.
- Raised profile of and resources for PBS's superb energy program, and reoriented its Green Proving Ground, which beta tests energy technologies for the built environment.
- Oversaw high-visibility projects such as the lease of the Old Post Office to the Trump Organization; the proposed exchange of J. Edgar Hoover Building for a new FBI headquarters; and the exchange of property in Kendall Square (Cambridge, MA) for a new facility for DOT's Volpe Center.

Department of Defense, 2009-2012

Deputy Under Secretary, Installations and Environment

Responsibilities: As DoD's real property officer, provided budgetary, policy and management oversight of U.S. military bases worldwide, which cover 29 million acres and include 500,000 buildings and structures valued at \$850 billion; oversaw the military construction budget, the base realignment and closure (BRAC) process, privatization of family housing, and facility energy. As DoD's senior environmental, safety and occupational health official, had responsibility for department-wide environmental R&D programs, the integration of environmental needs into the weapons acquisition process, fire protection and explosives safety, and environmental conservation and clean-up at active and closing bases.

Accomplishments:

- Oversaw a \$20 billion annual military construction budget in support of operational requirements and recapitalization of hospitals, schools and other critical infrastructure.
- Led DoD's facility energy strategy, to reduce DoD's \$4 billion-a-year facility energy bill and improve the energy security of bases dependent on the commercial grid.
- Secured five-year funding for DoD's Facility Energy Test Bed, which uses military buildings and land to demonstrate next-generation energy technologies.
- Created a "Siting Clearinghouse" to facilitate the development of renewable energy projects sited near military installations while protecting military radar and other sensitive military assets.
- Secured funding to accelerate development and use of technologies that can distinguish "bombs from beercans" in the cleanup of unexploded ordnance, a \$17 billion DoD liability.
- Persuaded OMB to suspend a policy that would have terminated DoD's highly successful program to privatize military housing.
- Oversaw the last two years of implementation of BRAC 2005 and served as the Department's lead in 2012 in requesting additional BRAC rounds.

The Brattle Group, Washington, DC, 2002-2009 Principal (2004-2009) Senior Consultant (2002-2004)

Responsibilities: Created a new practice focused on aviation policy. Teamed with colleagues at *Brattle* to conduct studies in transportation and telecommunications for government and industry clients and for independent think tanks.

Accomplishments:

- Did ground-breaking study of the benefits of liberalization of international aviation markets for the European Union that helped pave the way for a U.S.-EU Open Skies Agreement.
- Worked with the Bush White House to continue an effort begun in the Clinton Administration aimed at structural reform ("corporatization") of the air traffic control system.
- Wrote report for Brookings' prestigious Hamilton Project on reform of the air traffic control system.
- On behalf of the Center for International Policy, analyzed the impact on the U.S. economy of lifting the travel ban to Cuba in a 2002 study that was highlighted in *The Atlantic*.
- For the Government of South Africa, analyzed the merits of alternative international aviation policies—principally, adoption of Open Skies versus protection of South African Airways.
- For ASTAR Air Cargo (formerly DHL Airways), was expert witness in hearing before DOT that dealt with competition in the express parcel delivery market.
- Estimated auction value of 60 MHz of TV band spectrum, at request of a congressional committee, facilitating agreement on legislation to authorize the digital TV transition.

The Brookings Institution, 2001-2002 Guest Scholar

Wrote papers on transportation policy reform and taught classes in Brookings' executive education

program for federal managers. Advised the chair of the Air Traffic Services Subcommittee, which was created to serve as a board of directors for the FAA's Air Traffic Organization. Served as a resource for reporters and congressional staff on a range of aviation issues following 9/11 (e.g., the provision of loan guarantees for airlines and the appropriate governance structure for the Transportation Security Administration).

National Economic Council, Executive Office of the President, 1993-2001 Special Assistant to the President for Economic Policy

Responsibilities: As a senior staff member of the White House National Economic Council, handled policy development and policy coordination on high priority issues related to transportation, aerospace and defense, international telecommunications, science and technology and competition policy. Staffed the President's National Economic Adviser and advised other senior White House officials; managed interagency processes to reach consensus on policy proposals or policy conflicts; worked closely with industry and labor to develop, champion and implement policy.

Accomplishments:

- Oversaw President Clinton's Defense Transition Initiative: led effort to reinvent the military base reuse process to promote job creation; championed procurement reform and other efforts to facilitate military use of commercial technology and business practices.
- Coordinated Administration's strategy to promote aviation (beginning in 1997), emphasizing
 international liberalization of air services, increased domestic competition, and structural
 reform of the air traffic control system.
- Developed alternative options for air traffic control reform, following Administration's failed effort to "corporatize" the air traffic control system, culminating in the President's issuance of an executive order creating a performance-based Air Traffic Organization within the FAA.
- Coordinated the Administration role in the final phase of trucking deregulation, including elimination of the ICC and creation of the Surface Transportation Board.
- Worked closely with DOT agencies on controversial or high priority issues, such as post-NAFTA regulations on Mexican trucks; reconstruction of the San Francisco Bay Bridge following the Loma Prieta earthquake; loan guarantees from the Maritime Administration; and FAA grants to convert BRAC'd military airfields to commercial airports.
- Was White House point person on Administration effort that succeeded in keeping Motorola from destroying the Iridium satellite system following Iridium's bankruptcy in 1999.
- Ran interagency process on controversial and often complex issues, including:
 - o 1998 highway reauthorization bill
 - Key U.S.-EU trade disputes, including the EU's effort to block the Boeing-McDonnell Douglas merger and discriminatory EU aircraft noise regulation
 - Dispute between United Technologies Corporation and Boeing over whether the Ex-Im Bank should support sales of UTC engines to a Russian aircraft manufacturer
 - o Congressional legislation to block the Deutsche Telekom-VoiceStream merger
 - o Restructuring and privatization of Intelsat
 - o U.S. government position on standard for third-generation (3G) wireless technology

EARLIER PROFESSIONAL EXPERIENCE

1989-1993: Professional Staff Member, Joint Economic Committee, U.S. Congress

1987-1989: Senior Analyst, Office of Technology Assessment, U.S. Congress

1983-1987: Assistant Professor, John F. Kennedy School of Government, Harvard University

1982-1983: Postdoctoral Fellow, Department of Urban Studies and Planning, Massachusetts

Institute of Technology

1978-1979: Teaching Assistant, Goldman School of Public Policy, University of California,

Berkeley

1977: Research Analyst, The Urban Institute

1974-1976: Project Coordinator, Bureau of Social Science Research, Washington, DC

SELECTED PUBLICATIONS

BOOKS

Braking the Special Interests: Trucking Deregulation and the Politics of Policy Reform, University of Chicago Press, 1987.

MONOGRAPHS

Toward an Evolutionary Regime for Spectrum Governance: Licensing or Unrestricted Entry?, Brookings Press, 2006 (with William J. Baumol).

Making Waves: Alternative Paths to Flexible Use Spectrum, Aspen Institute, Report of the 2014 Roundtable on Spectrum Policy, July 2015. Available at: http://csreports.aspeninstitute.org/documents/Spectrum_Making_Waves.pdf.

RECENT PUBLICATIONS, REPORTS AND TESTIMONY

"Warranted Surveillance: Evaluating the Economic Case for Space-Based ADS-B," The Brattle Group, January 2017 (with Kevin Neels). Available at: http://www.brattle.com/system/publications/pdfs/000/005/402/original/Warranted Surveillance Evaluating the Economic Case For Space-Based ADS-B January.pdf?1485891924.

"Warranted Surveillance," in *Air Traffic Management*, Issue 1, 2017 (with Kevin Neels). Available at: http://www.airtrafficmanagement.net/2017/05/warranted-surveillance/.

"Warranted Surveillance: SpaceX Satellite Launch Holds Promise for Air Traffic Control," The Brookings Institution, January 17, 2017 (with Kevin Neels). Available at: https://www.brookings.edu/blog/fixgov/2017/01/17/warranted-surveillance-spacex-satellite-launch-holds-promise-for-air-traffic-control/.

"Power Begins at Home: Assured Energy for U.S. Military Bases," Noblis, January 2017 (with Jeffrey Marqusee and Craig Schultz) (funded by the Pew Charitable Trusts' Clean Energy Program). Available at: http://www.noblis.org/noblis-media?u=PowerBeginsAtHome.

Final Report of the Task Force on Federal Energy Management, Secretary of Energy Advisory Board, September 2016. Authored four of the ten analytic sections of the report (on federal energy goals; reducing the federal carbon footprint by reducing the federal real estate footprint; federal procurement of renewable energy; and use of military bases and federal buildings as test beds for precommercial energy technology). Available at: https://www.energy.gov/seab/downloads/final-report-task-force-federal-energy-management.

"Corporatize Air Traffic Control: A Democrat's Case," *Real Clear Policy*, February 9, 2016. Available

http://www.realclearpolicy.com/blog/2016/02/09/corporatize_air_traffic_control_a_democrats_case_1549.html.

"It's Time to Corporatize Air Traffic Control (the Right Way)," The Brookings Institution, September 28, 2015. Available at: http://www.brookings.edu/blogs/fixgov/posts/2015/09/28-corporatize-air-traffic-control-robyn.

"Unlicensed Operations in the 600 MHz Guard Bands: Potential Impact of Interference on the Outcome of the Incentive Auction," TPRC43: The Research Conference on Communications Information and Internet Policy, August 2015 (with Coleman Bazelon and Charles Jackson). Available

at:

http://54.88.225.159/sites/default/files/Unlicensed_Operations in the 600 MHz Guard Bands 8 1 4 15.pdf.

"Unlicensed Operations in the Lower Spectrum Bands: Why is No One Using the TV White Space and What Does that Mean for the FCC's Order on the 600 MHz Guard Bands?," TPRC43: The Research Conference on Communications Information and Internet Policy, August 2015 (with Charles Jackson and Coleman Bazelon). Available at: http://54.88.225.159/sites/default/files/TPRC_TVWS_14August15.pdf.

"Alternative Governance Mechanisms for the Air Traffic Control System: A User Cooperative Versus a Government Corporation," The Brookings Institution, April 6, 2015. Available at: http://www.brookings.edu/blogs/fixgov/posts/2015/04/06-faa-user-cooperative-government-corporation-robyn.

"Options for FAA Air Traffic Control Reform," Testimony before the House Transportation and Infrastructure Committee, Subcommittee on Aviation, March 24, 2015. Available at:

http://54.88.225.159/sites/default/files/Dorothy_Robyn_Testimony_on_Options_for_ATC_Reform_2_2March15.pdf.

"Buildings and Bandwidth: Lessons for Spectrum Policy from Federal Property Management," Economic Studies at Brookings, The Brookings Institution, September 23, 2014. Available at: http://www.brookings.edu/research/papers/2014/09/23-buildings-bandwidth-spectrum-property.

"Commentary: The Federal Government Has a Problem with Real Estate," *Washington Post*, May 4, 2014. Available at: http://www.washingtonpost.com/business/capitalbusiness/commentary-the-government-has-a-problem-with-real-estate/2014/05/02/e976ad90-cefd-11e3-b812-0c92213941f4_story.html.

"Reforming Federal Procurement Policy: The Case for Sensible Scoring," The Brookings Institution, April 29, 2014. Available at: http://www.brookings.edu/blogs/fixgov/posts/2014/04/24-federal-property-procurement-sensible-scoring-robyn.

CONGRESSIONAL TESTIMONY IN THE OBAMA ADMINISTRATION

As the Commissioner of Public Buildings, I testified before Congress about six times. The hearings focused on property management and disposal, relocation of the FBI headquarters, courthouse construction, and space utilization. As Deputy Under Secretary of Defense, I testified before Congress nearly 20 times, including at annual posture and appropriations hearings as well as special hearings on DoD energy, BRAC and other topics.

EARLIER PUBLICATIONS

"Air Support: Creating a Safer and More Reliable Air Traffic Control System," Hamilton Project, Brookings Institution, Discussion Paper 2008-11, July 2008 (with support from Kevin Neels). Available at: http://www.brookings.edu/research/papers/2008/07/air-traffic-robyn.

"An Economic Analysis of How Antitrust-Immunized Alliances Have Affected Transatlantic Competition," *Transportation Antitrust Update*, Issue No. 16, Spring 2007 (with James Reitzes).

"The Sky Must be No Limit to Global Competition," *Financial Times*, February 15, 2006 (with Alfred E. Kahn).

"Beyond Open Skies: The Economic Impact of a U.S.-EU Open Aviation Area," in *Deep Integration: How Transatlantic Markets are Leading Globalization*, edited by Daniel S. Hamilton and Joseph P. Quinlan, Johns Hopkins University Center for Transatlantic Relations and Centre for European Policy Studies, 2005 (with James Reitzes and Boaz Moselle).

"The Real Battle Over Air Traffic Control," *Aviation Week & Space Technology*, November 3, 2003 (with Robert W. Poole, Jr.).

"The Benefits of Open Skies," Airline Business, March 2003.

"The Impact on the U.S. Economy of Lifting Travel Restrictions to Cuba," *Cuba in Transition: Volume 12*, Association for the Study of the Cuban Economy, August 2002 (with co-authors).

"Ending Runway Gridlock," Blueprint: Ideas for a New Century, September/October, 2001.

"Flight Delay Repair That Won't Fly," Washington Times, August 2, 2001.

"Congress' Plan to Reduce Flight Delays is Not Airworthy," *Policy Matters*, AEI-Brookings Joint Center for Regulatory Studies, May 2001.

Second to None: Preserving America's Military Advantage Through Dual-Use Technology. National Economic Council, National Security Council, and Office of Science and Technology Policy, February 1995.

"Orchestrating Federal R&D," *Technology Review*, July 1993 (review of *Beyond Spinoff: Military and Commercial Technologies in a Changing World* by John Alic, Lewis Branscomb, Harvey Brooks, Ashton Carter and Gerald Epstein).

"Designing a Civilian DARPA," *Optics and Photonics News*, May 1990 (with John Alic).

Commercializing High-Temperature Superconductivity, Office of Technology Assessment, U.S. Congress, 1988.

"Bringing Superconductivity to Market," *Issues in Science and Technology*, Winter 1989 (with John Alic and W. Wendell Fletcher).

AFFIDAVITS AND EXPERT TESTIMONY

"Unlicensed Operations in the 600 MHz Band: Fatally Flawed Twice Over," Ex Parte Comments Submitted to the FCC on Behalf of Qualcomm, February 25, 2015 (with Coleman Bazelon and Charles Jackson). Available at: http://54.88.225.159/sites/default/files/Bazelon_Jackson_Robyn_Fatally_Flawed_Twice_Over.pdf.

"Unlicensed Use of the TV White Space: Wasteful and Harmful," Ex Parte Comments in the Matter of Unlicensed Operation in the TV Broadcast Bands, FCC, ET Docket No. 04-186, August 20, 2008, prepared with support from QUALCOMM, Inc. (with Charles L. Jackson and Coleman Bazelon).

Expert Report on behalf of Joint Applicants (American Airlines, British Airways, Iberia, Finnair and Royal Jordanian) in a Proceeding before the U.S. Department of Transportation requesting Approval of and Antitrust Immunity for Alliance Agreements (Docket No. DOT-OST-2008-0252), August 15, 2008 (with James Reitzes).

Comments on behalf of QUALCOMM, Inc. in the Matter of Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, FCC, WT Docket No. 06-150, June 20, 2008 (with Charles L. Jackson and Coleman Bazelon).

Comments on behalf of QUALCOMM, Inc. in the Matter of Unlicensed Operation in the TV Broadcast Bands, FCC, ET Docket No. 04-186, January 31, 2007; Reply Comments, March 2, 2007 (with Charles L. Jackson).

Expert Report on behalf of American Airlines in a Proceeding before the U.S. Department of Transportation regarding the Joint Application of Air Canada, the Austrian Group, British Midlands, Lufthansa, LOT, SAS, Swiss, TAP Air Portugal and United Airlines for Approval of and Antitrust Immunity for Alliance Agreements (Docket No. DOT-OST-2005-22922), August 9, 2006; Reply, August 29, 2006 (with James Reitzes).

Expert Report on behalf of American Airlines in a Proceeding before the U.S. Department of Transportation regarding the Joint Application of Alitalia, Czech Airlines, Delta Air Lines, KLM, Northwest Airlines and Societe Air France for Approval of an Antitrust Immunity for Alliance Agreements (Docket No. DOT-OST-2004-19214), June 24, 2005; Reply, July 15, 2005; Surreply, September 9, 2005 (with James Reitzes and Kevin Neels).

Expert Testimony on Behalf of ASTAR Air Cargo, Inc., in the Matter of the Citizenship of DHL Airways/ASTAR Air Cargo, before the Department of Transportation (Docket No. DOT-OST-2002-13089), August 27, 2003.

UNPUBLISHED REPORTS

"Reforming the Air Traffic Control System to Promote Efficiency and Reduce Delays," prepared for the White House Council of Economic Advisers, October 2007 (in association with GRA, Inc.). No longer available online but available from the author.

"Proposal to Spin Off the FAA's Facilities and Equipment Activities: A Preliminary Analysis of Unintended Consequences," prepared for the Department of Transportation's Office of Inspector General (DOT OIG), October 2006 (unpublished).

Letter to the Honorable Joe Barton, Chairman, Committee on Energy and Commerce, U.S. House of Representatives, estimating how much revenue the U.S. Treasury would receive if the Federal Communications Commission auctioned 60 MHz of spectrum in the 700 MHz (TV) band that the FCC has allocated for commercial use, May 18, 2005 (with William Zarakas).

"Give Price a Chance: Financing the Air Traffic Control System to Promote Efficiency," prepared for the Department of Transportation's Office of Inspector General, April 2005 (unpublished).

"How Can South Africa Derive the Greatest Benefit from its Airline Industry? An Economic and Regulatory Analysis," prepared for the Government of South Africa, February 2004 (with co-authors) (unpublished).

"Study to Assess the Potential Impact of Proposed Amendments to Council Regulation 2299/89 with regard to Computerised Reservation Systems," conducted for the European Commission, Directorate-General for Energy and Transport, October 2003 (with co-authors). Available at: http://www.brattle.com/system/publications/pdfs/000/004/661/original/Study to Assess the Potentia I Impact of Prop Amendments to Council Reg 2299-89 with Regard to Computerised Res System 2003.pdf?1378772117.

"The Economic Impact of an EU-U.S. Open Aviation Area," year-long study conducted for the European Commission, Directorate-General for Energy and Transport, December 2002 (with coauthors).

Available at:

http://www.brattle.com/system/publications/pdfs/000/004/875/original/The_Economic_Impact_of_an_EU-US Open Aviation Area Moselle et al Dec 2002.pdf?1378772136.

"The Impact on the U.S. Economy of Lifting Restrictions on Travel to Cuba," study conducted for the Center for International Policy, July 2002 (with co-authors); study received coverage in *The Atlantic*.

"The Airline Loan Guarantee Program: An Initial Assessment and Proposals to Guide the Air Transportation Stabilization Board," February 2002 (with Robert Willig and Doug Fontaine, Sebago Associates) (unpublished).

CASES

"Revving Up for Relief: Harley Davidson at the ITC," in *Cases in Microeconomics*, Jose A. Gomez-Ibanez and Joseph P. Kalt, eds., Prentice Hall, 1990.

"California Water Pricing," in Cases in Microeconomics, 1990.

"Assessing Rent Control in Los Angeles," Kennedy School Case, October 1986.

SELECTED PUBLIC AND MEDIA APPEARANCES ON AVIATION POLICY

"Flight Delays: Bad Weather or Bad Public Policy?," Plenary Speech to Annual Meeting of Institute for Operations Research and the Management Sciences, Washington, DC, October 2008.

"Air Support: Creating a Safer and More Reliable Air Traffic Control System," Luncheon Speech to the Transportation Research Forum, Washington, DC, September 24, 2008.

Panelist, "Deregulation Revisited: A Tribute to Fred Kahn," University of Colorado, Boulder, CO, September 5, 2008.

Speaker/Author, Forum on "Investing in America's Infrastructure: From Bridges to Broadband," Hamilton Project, Brookings Institution, Washington, DC, July 25, 2008 (televised on C-SPAN).

Appearance on Fox Business News, Segment on U.S.-EU Open Skies Agreement, April 1, 2008.

Plenary Panel on Congestion Pricing, FAA Annual Forecasting Conference, Washington, DC, March 10, 2008.

Panelist, "Global Alliances—The Continuing Evolution," 16th Annual Phoenix Sky Harbor International Aviation Symposium, Phoenix, AZ, May 9, 2007.

Appearance on CNBC's "Squawk Box," Segment on Foreign Investment in U.S. Airlines, July 10, 2006.

Keynote Speaker, "Computer Reservation System Liberalization: A Fair Deal?," Conference Organized by the Business Travel Coalition, Brussels, Belgium, June 29, 2005.

Speaker, "Impact of the Single Market on the Airline Industry," Center for West European Studies, University of Pittsburgh, March 22, 2005.

ABA Air & Space Law Forum, Santa Monica, CA, October 28-29, 2004: Panelist, "Airport Demand Management," and Presenter, Working Group on Foreign Ownership of U.S. Airlines.

"Measuring the Impact of a U.S.-EU Open Aviation Area: An Explanation of our Methodology," Address to Canadian Airports Council Air Policy Forum, Toronto, October 30, 2003.

"Beyond 'Open Skies': The Economic Impact of a U.S.-EU Open Aviation Area," Keynote Address to the International Aviation Womens Association, Lisbon, Portugal, October 27, 2003.

Speaker, "Open Aviation for a Global Industry: Removing the Last Barriers to Airline Competition," Competitive Enterprise Institute, August 14, 2003 (televised on C-SPAN).

Briefing to the House of Lords, European Union Committee, "Inquiry into the Future of European Aviation Relations with the U.S. and Other States," Washington, DC, March 12, 2003.

"Foreign Ownership Restrictions and National Security," Remarks to a symposium on the Civil Reserve Air Fleet (CRAF), Institute for Defense Analysis, Washington, DC, August 2, 2002.

"Reforming Aviation Infrastructure: Air Traffic Control and Airports," Address to GAO Physical Infrastructure Planning Conference, Washington, DC, June 14, 2001.

Panelist, Impact of Postal Monopolies on Competition in Express Delivery Market, Phoenix Sky Harbor International Aviation Symposium, Phoenix, AZ, May 15, 2001.

"Improving the Efficiency of Aviation Infrastructure," Luncheon Speech, International Aviation Club, July 18, 2000.

SELECTED PROFESSIONAL ACTIVITIES

Board Member, Information Technology and Innovation Foundation (as of Fall 2016).

Chair, Infrastructure Task Force, Executive Office of the Mayor, Washington, DC (August 2015-January 2016)

Member, Task Force on Federal Energy Management, Secretary of Energy Advisory Board, U.S. Department of Energy (June 2015-September 2016)

Member, Board on Energy and Environmental Systems, National Academy of Sciences (as of November 2014)

Member, Aviation Working Group, Eno Center for Transportation (as of May 2014).

Member, Advisory Board, Association of Defense Communities (June 2014-April 2017)

Member, Advisory Board, Fiduciary Infrastructure Initiative (2014)

Member, American Bar Association's Air & Space Law Forum, 2002-2009. Was sole non-lawyer invited to participate in Forum's 2004 Working Group on Foreign Ownership of U.S. Airlines.

Board member and VP for Programs, International Aviation Womens Association (2003-2004).

Associate Editor, Journal of Policy Analysis and Management (1990-1993).

Book Review Editor, *Issues in Science and Technology*. Wrote quarterly column reviewing books on economics and industry strategy for this National Academy of Sciences magazine (1986-1989).