January 2010

### SERGEY PALTSEV

77, Massachusetts Ave., E19-429F Massachusetts Institute of Technology Cambridge, MA 02139 USA

E-mail:paltsev@mit.eduPhone:617-253-0514Fax:617-253-9845Webpage:http://web.mit.edu/paltsev/www

# Employment:

• Principal Research Scientist (since 2008), Research Scientist in Economics, Joint Program on the Science and Policy of Global Change, Massachusetts Institute of Technology, Cambridge, MA, 2002-present.

Work on the economics and policy of climate change, with particular responsibility for sustenance, development, and policy application of the MIT Emission Prediction and Policy Analysis (EPPA) model.

```
• Consultant, The World Bank, Washington DC, 2001, 2002.
```

An assignment with the VP Development Economics and Chief Economist (DEC). Developing the services CGE model for the Russian Federation. Working on the Trade and Poverty in the Least Developed Countries Project.

• Instructor, Research Assistant, Teaching Assistant, Department of Economics, The University of Colorado, Boulder, CO, 1994-1995, 1997-2002.

Teaching courses in microeconomics, international finance, economic forecasting, and macroeconomics. Research sponsored by the U.S. Department of Energy on creating a global economic-energy dataset, GTAP-EG, and quantitative assessment of carbon leakage based on the Kyoto Protocol goals.

• Visiting Instructor, The Economics Institute, Boulder, CO, 1994-1995, 1999-2001.

Teaching courses in microeconomics and a seminar on a transition to a market economy to students preparing for graduate study in USA. Directing the symposium on transitional economies for senior government officials from the Central Asian Republics of the former USSR.

• Actuarial Modeling Expert, International Management and Communications Corporation (IMCC), Arlington, VA, 1998-1999.

Working on USAID-funded worldwide study on Pension System Issues and Their Relation to Economic Growth. The objectives of this project are to develop for USAID and for national governments contemplating pension system reform a compact overview and assessment of alternative approaches to such reform and of their likely effects upon economic growth and the social security of the population. Analyzing the population dynamics and the projection of demand for pension benefits over periods ranging until 2075 for a selection of developing and transition economies on the assumption that existing PAYGO systems will be retained.

# • Consultant, The World Bank, Washington DC, 1999.

Creating a core computable general equilibrium model for Russia based on the Goskomstat inputoutput table. Assessing marginal excess burdens of indirect taxes. Developing an internet-based CGI environment for remote access to GAMS-MPSGE models. • Executive Director, Masters Program in Economics and Management of Technology in Belarus, The Economics Institute, Boulder, CO, 1995-1997.

Directing the Economics Institute's Masters Program in Economics and Management of Technology at Belarusian State University, Minsk, Belarus. The program was a joint U.S. – Belarus pilot project sponsored by the U.S. Agency for International Development through The Eurasia Foundation. Creation and registration of the entity with Belarusian authorities, teaching, and day-to-day management of the program. The program has now been transformed into the School of Business and Management of Technology at Belarusian State University.

- Scientific Worker, Belarusian State University, Minsk, Belarus, 1990-1993.
  - Research sponsored by the Belarus Fund of Fundamental Investigations on correlation analysis of random flows of signals.
- Engineer-Designer, Brest Computer Production Amalgamation, Brest, Belarus, 1989-1990. Designing of specialized computer hardware. Supervision of production process.

# **Education:**

- University of Colorado, Boulder, USA, PhD, Economics, 2001. Dissertation: General Equilibrium Assessment of Public Policy Issues in the Newly Independent States. Advisor – Professor Thomas F. Rutherford
- University of Colorado, Boulder, USA, MA, Economics, 1996.
- The Economics Institute, Boulder, USA, Magna Cum Laude Advanced Diploma in Economics, 1994.
- Belarusian State University, Minsk, Belarus, Post-Graduate School, Application of Mathematical Methods, Mathematical Modeling and Computers in Scientific Research, 1993.
- Belarusian State University, Minsk, Belarus, Diploma, Radiophysics and Electronics, 1989.

#### Awards:

Global Trade Analysis Project (GTAP) Research Fellow, 2008-2011. Best 2004 Research Award, Tokyo Electric Power Company, Japan (with Yasuyuki Endo, Kok Hou Tay, Henry Jacoby, and John Reilly).

# **Consulting and Advisory Experience:**

The Biofuels Market: Current Situation and Alternative Scenarios, United Nations Conference on Trade and Development (UNCTAD), 2007-2008.

Expert Panel on the Economics of Climate Change, U.S. Government Accountability Office (GAO), 2007-2008.

Global Trade Analysis Project (GTAP) Advisory Board Meetings, Purdue University, 2006, 2007, 2009. Tax Reform and Foreign Trade in Uzbekistan, United Nations Development Programme (UNDP), 2006. Second Generation Model Advisory Panel, Science Advisory Board, U.S. Environmental Protection Agency (EPA), 2004-2006.

Trade and Poverty in the Least Developed Countries, The World Bank. 2001, 2002.

Assessment of the Marginal Excess Burden of Taxes in the Russian Economy, The World Bank. 1999. Pension Reform in the Kyrgyz Republic, IMCC for Asian Development Bank. 1998-1999.

#### Administrative Experience:

Creating and managing the joint US-Belarus Masters level educational Program in Economics and Management of Technology (PEMT) at Belarusian State University, Minsk, Belarus. The project was sponsored by The United States Agency for International Development through The Eurasia Foundation. 1995-1997.

#### **Teaching Experience:**

#### Instructor:

Principles of Microeconomics (Undergraduate Level) - The University of Colorado, Fall 1998, Spring 2002 - The Economics Institute, Fall 1999.

Microeconomic Theory (Upper Undergraduate Level) - The University of Colorado, Summer 1998, Summer 2000, Summer 2001 – The Economics Institute, Fall 1999, Spring 2000, Summer 2000, Spring 2001, Summer 2001.

International Finance (Masters level) – The University of Colorado, Spring 2001, Spring 2002 (co-teaching with Professor C.M.Becker).

Economic Forecasting (Masters level) – The University of Colorado, Spring 2002.

Microeconomics and its Applications (USAID-sponsored course for senior government officials from the former Soviet Union) - The Economics Institute, Fall 1994, Summer 1995.

Microeconomic Theory (Masters Level) - Belarusian State University, Fall 1996 – University of Colorado, Fall 2001.

Seminar on a Transition to a Market Economy (USAID-sponsored course for senior government officials from the former Soviet Union) - The Economics Institute, Summer 1995.

#### Teaching Assistant:

Principles of Microeconomics - The University of Colorado, Spring 1995, Fall 1997, Spring 1998. Principles of Macroeconomics - The University of Colorado, Fall 1994, Fall 1995. Mathematical Modeling - Belarusian State University, Fall 1992.

Short courses on computable general equilibrium (CGE) modeling:

Economic Modeling of Energy and Environment: Current Approaches and Challenges (February 2009, Center for Economic and Financial Research at New Economic School, Moscow, Russia), 1-day Workshop, Instructor.

Introduction to Computable General Equilibrium Modeling with GAMS and MPSGE (October 2007, Ruhr Graduate School of Economics, University of Duisburg-Essen, Essen, Germany), 5-day Workshop, Instructor (with David Tarr and Volker Clausen).

Introduction to Computable General Equilibrium Modeling with GAMS and MPSGE (December 2006, Institute for Privatization and Management, Minsk, Belarus), 5-day Workshop for Ministry of Economy, National Bank of Belarus, Institute for Privatization and Management, Belarusian State University, and Belarusian State Economic University, Instructor (with David Tarr).

Climate and Energy Policy Applications in CGE Modeling (November 2006, Ruhr Graduate School of Economics, University of Duisburg-Essen, Essen, Germany), 3-day Workshop for Ruhr Graduate School of Economics and RWI Essen, Instructor.

Introduction to Computable General Equilibrium Modeling with GAMS and MPSGE (September 2006, Center for Economic Research, Tashkent, Uzbekistan), 2-day Workshop for Ministry of Economy, Ministry of Finance, Ministry of Foreign Economic Affairs, State Tax Committee, State Statistics Committee, and Center for Economic Research, Instructor (with Miles Light).

Dynamic Modeling with MPSGE (April 2005, Ann Arbor, Michigan, USA), 5-day Workshop, Instructor (with Thomas Rutherford and Laurent Cretegny).

Modeling Economic Equilibrium in a Complementarity Format: An Introduction to GAMS/MCP and GAMS/MPSGE (March 2000, Boulder, Colorado, USA), 4-day Workshop, Teaching Assistant (for Instructors Thomas Rutherford and Richard Cottle).

# **Publications:**

# I. Refereed Journal Articles:

1. Prinn, R., S. Paltsev, A. Sokolov, M. Sarofim, J. Reilly, and H. Jacoby, 2010, "Scenarios with MIT Integrated Global Systems Model: Significant Global Warming Regardless of Different Approaches," *Climatic Change*, (in press).

2. Selin, N., S. Wu, K.M. Nam, J. Reilly, S. Paltsev, R. Prinn, and M. Webster, 2010, "Global Health and Economic Impacts of Future Ozone Pollution," *Environmental Research Letters*, (in press).

3. Webster, M., S. Paltsev, and J. Reilly, 2010, "The Hedge Value of International Emissions Trading under Uncertainty," *Energy Policy*, (in press).

4. Paltsev, S., J. Reilly, H. Jacoby, and J. Morris, 2009, "The Cost of Climate Policy in the United States," *Energy Economics*, 31(S2), S235-S243.

5. Melillo, J., J. Reilly, D. Kicklighter, A. Gurgel, T. Cronin, S. Paltsev, B. Felzer, X. Wang, A. Sokolov, and C.A. Schlosser, 2009, "Indirect Emissions from Biofuels: How Important?" *Science*, 326, 1397-1399.

6. Wigley, T., L. Clarke, J. Edmonds, H. Jacoby, S. Paltsev, H. Pitcher, J. Reilly, R. Richels, M. Sarofim, and S. Smith, 2009, "Uncertainties in Climate Stabilization," *Climatic Change*, 97(1-2), 85-121.

7. Sandoval, R., V. Karplus, S. Paltsev, and J. Reilly, 2009, "Modeling the Prospects for Hydrogen Powered Transportation through 2100," *Journal of Transport Economics and Policy*, 43(3), 291-316.

8. Sokolov, A., P. Stone, C. Forest, R. Prinn, M. Sarofim, M. Webster, S. Paltsev, A. Schlosser, D. Kicklighter, S. Dutkiewicz, J. Reilly, C. Wang, B. Felzer, and H. Jacoby, 2009, "Probabilistic Forecast for 21st Century Climate Based on Uncertainties in Emissions (Without Policy) and Climate Parameters," *Journal of Climate*, 22(19), 5175-5204.

9. Babiker, M., A. Gurgel, S. Paltsev, and J. Reilly, 2009, "Forward Looking versus Recursive Dynamic Modeling in Climate Policy Analysis: A Comparison," *Economic Modelling*, 26(6), 1341-1354.

10. McFarland, J., S. Paltsev, and H. Jacoby, 2009, "Analysis of the Coal Sector under Carbon Constraints," *Journal of Policy Modeling*, 31(3), 404-424.

11. Paltsev, S., J. Reilly, H. Jacoby, A. Gurgel, G. Metcalf, A. Sokolov, and J. Holak, 2008, "Assessment of U.S. GHG Cap-and-Trade Proposals," *Climate Policy*, 8(4), 395-420.

12. Van Vuuren, D., M. Meinshausen, G.-K. Plattner, K. Strassmann, S. Smith, T. Wigley, S. Raper, K. Riahi, F. de la Chesnaye, M. den Elzen, J. Fujino, K. Jiang, N. Nakicenovic, S. Paltsev, and J. Reilly, 2008, "Temperature Increase of 21<sup>st</sup> Century Mitigation Scenarios," *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 105(40), 15258-15262.

13. Webster, M., S. Paltsev, and J. Reilly, 2008, "Autonomous Efficiency Improvement or Income Elasticity of Energy Demand: Does It Matter?" *Energy Economics*, 30(6), p. 2785-2798.

14. Matus, K., T. Yang, S. Paltsev, J. Reilly, and K-M. Nam, 2008, "Toward Integrated Assessment of Environmental Change: Air Pollution Health Effects in the USA," *Climatic Change*, 88(1), p. 59-92.

15. Gurgel, A., J. Reilly, and S. Paltsev, 2007, "Potential Land Use Implications of a Global Biofuels Industry," *Journal of Agricultural and Food Industrial Organization*, 5(2), Article 9, 1-34.

16. Reilly, J., S. Paltsev, B. Felzer, X. Wang, D. Kicklighter, J. Melillo, R. Prinn, M. Sarofim, and C. Wang, 2007, "Global Economic Effects of Changes in Crops, Pasture, and Forests due to Changing Climate, Carbon Dioxide, and Ozone," *Energy Policy*, 35(11), p. 5370-5383.

17. Kasahara, S., S. Paltsev, J. Reilly, H. Jacoby, and A.D. Ellerman, 2007, "Climate Change Taxes and Energy Efficiency in Japan," *Environmental and Resource Economics*, 37(2), p. 377-410.

18. Reilly, J., M. Sarofim, S. Paltsev, and R. Prinn, 2006, "The Role of Non-CO2 GHGs in Climate Policy: Analysis Using the MIT IGSM," *Energy Journal*, Multigas Mitigation and Climate Policy Special Issue, p. 503-520.

19. Jacoby, H., J. Reilly, J. McFarland, and S. Paltsev, 2006, "Technology and Technical Change in the MIT EPPA Model," *Energy Economics*, 28(5-6), p. 610-631.

20. Becker, C. and S. Paltsev, 2004, "Economic Consequences of Demographic Change in the Former USSR: Social Transfers in the Kyrgyz Republic," *World Development*, 32(11), p. 1849-1870.

21. Paltsev S., 2001, "The Kyoto Protocol: Regional and Sectoral Contributions to the Carbon Leakage," *Energy Journal*, 22(4), p. 53-79.

22. Becker, C. and S. Paltsev, 2001, "Macro-Experimental Economics in the Kyrgyz Republic: Social Security Sustainability and Pension Reform," *Comparative Economic Studies*, 43(3), p. 1-34.

23. Apanasovich, V. and S. Paltsev, 1995, "Distortion of photon correlation function in detection systems with paralyzable dead time effects," *Journal of the Optical Society of America B*, 12(9), p. 1550-1554.

24. Apanasovich, V., I. Gulakov, A. Zenevich, Ye. Novikov, and S. Paltsev, 1994, "The analyzer of temporal and correlation characteristics of random flows of signals," *Pribory i Tekhnika Eksperimenta*, 37(2), p. 201-202 (in Russian, the journal is published in English as "*Instruments and Experimental Techniques*").

25. Apanasovich, V. and S. Paltsev, 1994, "Modeling and comparative analysis of correlators of random flows of signals," *Electronnoe Modelirovanie*, 16(1), p. 84-87 (in Russian, the journal is published in English as "*Engineering Simulation*").

### II. Book Chapters:

1. Jacoby, H., M. Babiker, S. Paltsev, and J. Reilly, 2009, "Sharing the Burden of GHG Reductions," in *Post-Kyoto International Climate Policy*, J. Aldy and R. Stavins (eds.), Cambridge University Press (in press).

2. Paltsev, S. and J. Reilly, 2009, "Energy Scenarios for East Asia: 2005-2025," in *From Growth to Convergence: Asia's Next Two Decades*, F. Zhai (ed.), Palgrave Macmillan, p. 211-239.

3. Reilly, J. and S. Paltsev, 2009, "Biomass Energy and Competition for Land," in *Economic Analysis of Land Use in Global Climate Change Policy*, T. Hertel, S. Rose, R. Tol (eds.), Routledge, p. 184-207.

4. Paltsev, S., J. Reilly, H. Jacoby, and K-H. Tay, 2007, "How (and Why) Do Climate Policy Costs Differ Among Countries?" in *Human-Induced Climate Change: An Interdisciplinary Assessment*, M. Schlesinger et al (eds.), Cambridge University Press, p. 282-293.

5. Reilly J. and S. Paltsev, 2006, "European Greenhouse Gas Emissions Trading: A System in Transition," in *Economic Modeling of Climate Change and Energy Policies*, M. De Miguel, X. Labandeira, B. Manzano (eds.), Edward Elgar Publishing, p. 45-64.

6. Yang, T., J. Reilly, and S. Paltsev, 2005, "Air Pollution Health Effects: Toward an Integrated Assessment," in *The Coupling of Climate and Economic Dynamics*, A.Haurie and L.Viguier (eds.), Springer, p. 267-294.

7. Paltsev, S., H. Jacoby, J. Reilly, L. Viguier, and M. Babiker, 2005, "Modeling the Transport Sector: The Role of Existing Fuel Taxes in Climate Policy", in *Energy and Environment*, [25th Anniversary volume of

the Group for Research in Decision Analysis (GERAD), Volume 3], R. Loulou, J.-P. Waaub, G. Zaccour (eds.), Springer, p. 211-238.

III. MIT Joint Program Reports and Other Publications:

1. Paltsev, S., J. Reilly, and A. Gurgel, 2009, "Greenhouse Gas Markets, Carbon Dioxide Credits, and Biofuels," in *The Biofuels Market: Current Situation and Alternative Scenarios*, S. Zarrilli (ed.), United Nations: Geneva and New York, p. 15-27.

(available at: http://www.unctad.org/en/docs/ditcbcc20091\_en.pdf)

2. Paltsev, S., J. Reilly, and A. Gurgel, 2009, "Commercial Viability of Second Generation Biofuel Technology," in *The Biofuels Market: Current Situation and Alternative Scenarios*, S. Zarrilli (ed.), United Nations: Geneva and New York, p. 29-50. (available at: http://www.unctad.org/en/docs/ditcbcc20091 en.pdf)

3. Rausch, S., G. Metcalf, J. Reilly, and S. Paltsev, 2009, "Distributional Impacts of a U.S. Greenhouse Gas Policy: A General Equilibrium Analysis of Carbon Pricing," MIT Joint Program on the Science and Policy of Global Change, Report 182, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt182.pdf)

4. Webster, M., A. Sokolov, J. Reilly, C. Forest, S. Paltsev, A. Schlosser, C. Wang, D. Kicklighter, M. Sarofim, J. Melillo, R. Prinn and H. Jacoby, 2009, "Analysis of Climate Policy Targets under Uncertainty," MIT Joint Program on the Science and Policy of Global Change, Report 180, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt180.pdf)

5. Nam, K.M., N. Selin, J. Reilly and S. Paltsev, 2009, "Measuring Welfare Loss Caused by Air Pollution in Europe: A CGE Analysis," MIT Joint Program on the Science and Policy of Global Change, Report 178, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt178.pdf)

6. Selin, N., S. Wu, K.-M. Nam, J. Reilly, S. Paltsev, R. Prinn and M. Webster, 2009, "Global Health and Economic Impacts of Future Ozone Pollution," MIT Joint Program on the Science and Policy of Global Change, Report 177, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt177.pdf)

7. Gitiaux, X., S. Paltsev, J. Reilly and S. Rausch, 2009, "Biofuels, Climate Policy and the European Vehicle Fleet," MIT Joint Program on the Science and Policy of Global Change, Report 176, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt176.pdf)

8. Paltsev, S., J. Reilly, H. Jacoby and J. Morris, 2009, "The Cost of Climate Policy in the United States," MIT Joint Program on the Science and Policy of Global Change, Report 173, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt173.pdf)

9. Paltsev, S., J. Reilly, N. Tourdyeva, 2009, "Russia and the World Energy Markets: Long-Term Scenarios", GTAP Conference on Global Economic Analysis: Trade Integration and Sustainable Development - Looking for an Inclusive World, Economic Commission for Latin America and the Caribbean; Santiago, Chile.

(available at: https://www.gtap.agecon.purdue.edu/resources/download/4378.pdf)

10. Karplus, V., S. Paltsev, and J. Reilly, 2009, "Prospects for Plug-in Hybrid Electric Vehicles in the United States and Japan: A General Equilibrium Analysis," MIT Joint Program on the Science and Policy of Global Change, Report 172, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt172.pdf)

11. Reilly, J., A. Gurgel, and S. Paltsev, 2009, "Biofuels and Land Use Change," in *Transition to the Bioeconomy: Impacts on the Rural Development and the Environment*, M. Khanna (ed.), Farm Foundation, Oak Brook, IL, p. 1-17.

(available at: http://www.farmfoundation.org/news/articlefiles/401-Final\_version\_Farm\_Foundation%20feb%2020%2009.pdf)

12. Sokolov, A., P. Stone, C. Forest, R. Prinn, M. Sarofim, M. Webster, S. Paltsev, C.A. Schlosser, D. Kicklighter, S. Dutkiewicz, J. Reilly, C. Wang, B. Felzer, and H. Jacoby, 2009, "Probabilistic Forecast for 21st Century Climate Based on Uncertainties in Emissions (without Policy) and Climate Parameters," MIT Joint Program on the Science and Policy of Global Change, Report 169, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt169.pdf)

13. Melillo, J., A. Gurgel, D. Kicklighter, J. Reilly, T. Cronin, B. Felzer, S. Paltsev, C.A. Schlosser, A. Sokolov and X. Wang, 2009, "Unintended Environmental Consequences of a Global Biofuels Program," MIT Joint Program on the Science and Policy of Global Change, Report 168, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt168.pdf)

14. Jacoby, H., M. Babiker, S. Paltsev, and J. Reilly, 2008, "Sharing the Burden of GHG Reductions," MIT Joint Program on the Science and Policy of Global Change, Report 167, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt167.pdf) also available as:

Harvard Project on International Climate Agreements, Discussion Paper 08-09, Cambridge, MA. (available at: http://belfercenter.ksg.harvard.edu/files/JacobyWeb2.pdf)

15. Webster, M., S. Paltsev, J. Parsons, J. Reilly, and H. Jacoby, 2008, "Uncertainty in Greenhouse Emissions and Costs of Atmospheric Stabilization," MIT Joint Program on the Science and Policy of Global Change, Report 165, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt165.pdf)

16. Prinn, R., S. Paltsev, A. Sokolov, M. Sarofim, J. Reilly, and H. Jacoby, 2008, "The Influence on Climate Change of Differing Scenarios for Future Development Analyzed Using MIT Integrated Global System Model," MIT Joint Program on the Science and Policy of Global Change, Report 163, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt163.pdf)

17. Babiker, M., A. Gurgel, S. Paltsev, and J. Reilly, 2008, "A Forward-Looking Version of the MIT Emissions Prediction and Policy Analysis (EPPA) Model," MIT Joint Program on the Science and Policy of Global Change, Report 161, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt161.pdf)

18. Metcalf, G., S. Paltsev, J. Reilly, H. Jacoby, and J. Holak, 2008, "Analysis of U.S. Greenhouse Gas Tax Proposals," MIT Joint Program on the Science and Policy of Global Change, Report 160, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt160.pdf) also available as:

National Bureau of Economic Research (NBER), 2008, Working Paper 13980, Cambridge, MA (available at: http://www.nber.org/papers/w13980.pdf)

19. McFarland, J., S. Paltsev, and H. Jacoby, 2008, "Analysis of Coal Sector under Carbon Constraints," MIT Joint Program on the Science and Policy of Global Change, Report 158, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt158.pdf)

20. Paltsev, S., V. Karplus, and J. Reilly, 2008, "Incorporating Household Transportation Sector into a General Economic Equilibrium Model: Implications for Climate Policy," Prepared for Global Trade Analysis Project Conference, Helsinki, Finland.

(available at: https://www.gtap.agecon.purdue.edu/resources/download/3827.pdf)

21. Gurgel, A., J. Reilly, and S. Paltsev, 2008, "Potential Land Use Implications of a Global Biofuels Industry," MIT Joint Program on the Science and Policy of Global Change, Report 155, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt155.pdf)

22. Sandoval, R., V. Karplus, S. Paltsev, and J. Reilly, 2008, "Modeling the Prospects for Hydrogen Powered Transportation through 2100," MIT Joint Program on the Science and Policy of Global Change, Report 154, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt154.pdf)

23. Paltsev, S. and J. Reilly, 2008, "Energy Scenarios for East Asia: 2005-2025," MIT Joint Program on the Science and Policy of Global Change, Report 152, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt152.pdf)

24. Gurgel. A., S. Paltsev, J. Reilly, and G. Metcalf, 2007, "U.S. GHG Cap-and-trade Proposals: Application of a Forward-Looking Computable General Equilibrium Model," MIT Joint Program on the Science and Policy of Global Change, Report 150, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt150.pdf)

25. Reilly, J., S. Paltsev, B. Felzer, X. Wang, D. Kicklighter, J. Melillo, R. Prinn, M. Sarofim, and C. Wang, 2007, "Global Economic Effects of Changes in Crops, Pasture, and Forests due to Changing Climate, Carbon Dioxide, and Ozone," MIT Joint Program on the Science and Policy of Global Change, Report 149, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt149.pdf)

26. Paltsev, S., J. Reilly, H. Jacoby, A. Gurgel, G. Metcalf, A. Sokolov, and J. Holak, 2007, "Assessment of U.S. Cap-and-trade Proposals," MIT Joint Program on the Science and Policy of Global Change, Report 146, Cambridge, MA (with J. Reilly et al.).

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt146.pdf) also available as:

National Bureau of Economic Research (NBER), 2007, Working Paper 13176, Cambridge, MA (available at: http://www.nber.org/papers/w13176.pdf)

27. Reilly, J. and S. Paltsev, 2007, "Biomass Energy and Competition for Land," MIT Joint Program on the Science and Policy of Global Change, Report 145, Cambridge, MA (with J. Reilly). (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt145.pdf)

28. Reilly, J., S. Paltsev, and F. Choumert 2007, "Heavier Crude, Changing Demand for Petroleum Fuels, Regional Climate Policy, and the Location of Upgrading Capacity: A Preliminary Look," MIT Joint Program on the Science and Policy of Global Change, Report 144, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt144.pdf)

29. Reilly, J., S. Paltsev, and F. Choumert 2007, "Oil Market: Transition or Evolution? The Emissions Prediction and Policy Analysis Model," in *Modeling the Oil Transition: DOE/EPA Workshop on the Economic and Environmental Implications of Global Energy Transitions,* D. Greene (ed.), Oak Ridge National Laboratory Report ORNL/TM-2007/014, Oak Ridge, TN, p. 125-129.

(available at: http://www-cta.ornl.gov/cta/Publications/Reports/ORNL\_TM\_2007\_014\_EnergyTransitionsWorkshopSummary.pdf)

30. Choumert, F., S. Paltsev, and J. Reilly, 2006, "Improving the Refining Sector in EPPA," MIT Joint Program on the Science and Policy of Global Change, Technical Note 9, Cambridge, MA (with F. Choumert and J. Reilly).

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_TechNote9.pdf)

31. Asadoorian, M., M. Sarofim, J. Reilly, S. Paltsev, and C. Forest, 2006, "Historical Anthropogenic Emissions Inventories for Greenhouse Gases and Major Criteria Pollutants," MIT Joint Program on the Science and Policy of Global Change, Technical Note 8, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_TechNote8.pdf)

32. Webster, M., S. Paltsev, and J. Reilly, 2006, "The Value of Emissions Trading," MIT Joint Program on the Science and Policy of Global Change, Report 132, Cambridge, MA (with M. Webster and J. Reilly). (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt132.pdf)

33. Paltsev S. and J. Reilly, 2006, "Incorporating Climate Change Feedbacks into a General Economic Equilibrium Model," Proceedings of the GTAP Conference on Global Economic Analysis, GTAP and United Nations Economic Commission for Africa; Addis Ababa, Ethiopia. (available at: http://www.gtap.agecon.purdue.edu/resources/download/2587.pdf)

34. Reilly, J. and S. Paltsev, "An Analysis of the European Emission Trading Scheme," MIT Joint Program on the Science and Policy of Global Change, Report 127, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt127.pdf)

35. Paltsev, S., J. Reilly, H. Jacoby, R. Eckaus, J. McFarland, M. Sarofim, M. Asadoorian, and M. Babiker, 2005, "The MIT Emissions Prediction and Policy Analysis (EPPA) Model: Version 4," MIT Joint Program on the Science and Policy of Global Change, Report 125, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt125.pdf)

36. Sokolov, A., A. Schlosser, S. Dutkiewicz, S. Paltsev, D. Kicklighter, H. Jacoby, R. Prinn, C. Forest, J. Reilly, C. Wang, B. Felzer, M. Sarofim, J. Scott, P. Stone, J. Melillo, and J. Cohen, 2005, "The MIT Integrated Global System Model (IGSM) Version 2: Model Description and Baseline Evaluation," MIT Joint Program on the Science and Policy of Global Change, Report 124, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt124.pdf)

37. Kasahara, S., S. Paltsev, J. Reilly, H. Jacoby, and A.D. Ellerman, 2005, "Climate Change Taxes and Energy Efficiency in Japan," MIT Joint Program on the Science and Policy of Global Change, Report 121, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt121.pdf)

38. Paltsev, S., H. Jacoby, J. Reilly, L. Viguier, and M. Babiker, 2004, "Modeling the Transport Sector: The Role of Existing Fuel Taxes in Climate Policy," MIT Joint Program on the Science and Policy of Global Change, Report 117, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt117.pdf)

39. Reilly, J., M. Sarofim, S. Paltsev, and R. Prinn, 2004, "The Role of Non-CO2 Greenhouse Gases in Climate Policy: Analysis Using the MIT IGSM," MIT Joint Program on the Science and Policy of Global Change, Report 114, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt114.pdf)

40. Yang, T., K. Matus, S. Paltsev, and J. Reilly, 2004, "Economic Benefits of Air Pollution Regulation in USA: An Integrated Approach," MIT Joint Program on the Science and Policy of Global Change, Report 113, Cambridge, MA (with T. Yang et al.).

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt113.pdf) also available as:

Proceedings of the EcoMod International Conference on Policy Modeling, 2004, Paris, France. (available at: http://www.ecomod.net/conferences/ecomod2004/ecomod2004 papers/816.pdf)

41. Paltsev, S., J. Reilly, H. Jacoby, and K-H. Tay, 2004, "The Cost of Kyoto Protocol Targets: The Case of Japan," MIT Joint Program on the Science and Policy of Global Change, Report 112, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt112.pdf)

42. Jacoby, H., J. Reilly, J. McFarland, and S. Paltsev, 2004, "Technology and Technical Change in the MIT EPPA Model," MIT Joint Program on the Science and Policy of Global Change, Report 111, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt111.pdf)

43. Paltsev, S., L. Viguier, M. Babiker, J. Reilly, and K-H. Tay, 2004, "Disaggregating Household Transport in the MIT-EPPA Model," MIT Joint Program on the Science and Policy of Global Change, Technical Note 5, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_ TechNote5.pdf) also available as:

Proceedings of the GTAP Conference on Global Economic Analysis, 2004, GTAP and The World Bank; Washington, DC.

(available at: http://www.gtap.agecon.purdue.edu/resources/download/1714.pdf)

44. Paltsev, S., 2004, "Moving from Static to Dynamic General Equilibrium Models (Notes for a Beginner in MPSGE)," MIT Joint Program on the Science and Policy of Global Change, Technical Note 4, Cambridge, MA.

(available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_TechNote4.pdf)

45. Bernard, A., S. Paltsev, J. Reilly, M. Vielle, and L. Viguier, 2003, "Russia's Role in the Kyoto Protocol," MIT Joint Program on the Science and Policy of Global Change, Report 98, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt98.pdf)

46. Paltsev S., J. Reilly, H. Jacoby, A.D. Ellerman, and K-H. Tay, 2003, "Emissions Trading to Reduce Greenhouse Gas Emissions in the United States: The McCain-Lieberman Proposal," MIT Joint Program on the Science and Policy of Global Change, Report 97, Cambridge, MA. (available at: http://globalchange.mit.edu/files/document/MITJPSPGC\_Rpt97.pdf)

47. Paltsev, S., 2000, "The Kyoto Protocol: "Hot Air" for Russia?" Discussion Papers in Economics, University of Colorado, Working Paper 00-09. (available at: http://www.colorado.edu/Economics/CEA/papers00/wp00-9.pdf)

48. Paltsev, S., 2000, "The Kyoto Agreement: Sectoral and Regional Contributions to the Carbon Leakage," Discussion Papers in Economics, University of Colorado, Working Paper 00-05. (available at: http://www.colorado.edu/Economics/CEA/papers00/wp00-5.pdf)

49. Rutherford, T. and S. Paltsev, 2000, "GTAP-Energy in GAMS: The Dataset and Static Model," Discussion Papers in Economics, University of Colorado, Working Paper 00-02. (available at: http://www.colorado.edu/Economics/CEA/papers00/wp00-2.pdf)

50. Paltsev, S., T. Rutherford, and A. Zemnitsky, 2000, "Assessment of marginal excess burden of taxation based on a CGE model," Mimeo, Department of Economics, University of Colorado (in Russian). (available at: http://web.mit.edu/paltsev/www/docs/tax\_russian.pdf)

51. Rutherford, T., and S. Paltsev, 1999, "From an Input-Output Table to a General Equilibrium Model: Assessing the Excess Burden of Indirect Taxes in Russia," Mimeo, Department of Economics, University of Colorado, 1999.

(available at: http://web.mit.edu/paltsev/www/docs/russia.html)

52. Apanasovich V., V. Molofeev, and S. Paltsev, 1996, "Project of the Masters Program in Economics and Management of Technology," in *Higher Education: State and Perspectives*. Minsk, p. 201-202 (in Russian)

53. Apanasovich, V., A. Domanevsky, and S. Paltsev, 1996, "Masters programs in the U.S. system of university education," *Visheishaya Schkola*, 1, 1996, p. 61-64 (in Russian).

54. Paltsev, S., 1995, "Government Behavior, Trade Policy and Bureaucracy in Belarus," EISED, 1, p.1-31.

55. Becker, C. and S. Paltsev, 1994, *Microeconomics and its applications*, The Economics Institute. Boulder, 1994.

56. Paltsev, S., 1992, "Algorythms and programs for correlation analysis of random flows of signals," in *Actual Problems of Informatics*, Minsk, University Press (in Russian).

57. Paltsev, S., 1992, "Analysis of methods for determination of correlation function of random processes," in *Microsystems*: Tomsk, 1992, p.9 (in Russian).

58. Apanasovich, V., Ye. Novikov, and S. Paltsev, 1989, "Software package for statistical analysis of signals," in *Informatica*-89: Minsk, V.2, p. 820-822 (in Russian).

### **Conferences, Meetings, Presentations:**

1. Seminar at the International Graduate School of Business and Management of Technology of Belarusian State University (November 2008, Belarusian State University; Minsk, Belarus). Presentation: "Economic Modeling of Energy and Environment".

2. GTAP Conference on Global Economic Analysis: Trade Integration and Sustainable Development - Looking for an Inclusive World (June 2009, Economic Commission for Latin America and the Caribbean; Santiago, Chile). Paper: "Russia and the World Energy Markets: Long-Term Scenarios" (with J. Reilly and N. Tourdyeva).

3. E.On Executive Program: Leading Innovation and Growth (October 2008, E.On Academy and MIT Sloan Executive Education; Dedham, MA, USA). Presentation: "Russian Perspective: Recent Developments and Long-Term Projections of Energy Markets".

4. Energy Modeling Forum Transition Policy Group (September 2008, Stanford University and International Institute for Applied Systems Analysis (IIASA); Laxenburg, Austria), Presentation: "U.S. Transition Scenarios: EPPA Results" (with J.Reilly, H. Jacoby, and J. Morris).

5. GTAP Conference on Global Economic Analysis: The Future of Global Economy (June 2008, Government Institute for Economic Research (VATT) and United Nations University - WIDER; Helsinki, Finland), Presentation: "Incorporating Household Transportation Sector into a General Economic Equilibrium Model: Implications for Climate Policy" (with V. Karplus and J. Reilly).

5. Jeddah Environmental Forum (April 2008, Jeddah Chamber of Commerce and Industry; Jeddah, Saudi Arabia), Presentation: "Energy Supply, Energy Demand, and Challenges of Climate Change".

7. India and China's Role in International Trade and Finance and Global Economic Governance (December 2007, Indian Council for Research on International Economic Relations, Konrad-Adenauer-Stiftung, and International Monetary Fund; Delhi, India), Paper: "China and India in Energy Markets and Its Implications for Global Greenhouse Gas Emissions" (with J. Reilly).

8. Potential Climate Impacts (November 2007, Shell International B.V; The Hague, The Netherlands), Presentation: "Economic and Climate Studies Using the MIT Integrated Global System Model" (with R. Prinn).

9. Energy and Environmental Modeling (September 2007, Ecomod, Academy of the National Economy under the Government of Russian Federation, and Institute for the Economy in Transition; Moscow, Russia), Paper: "Long-Term Energy Scenarios for Asia" (with J. Reilly).

10. Climate Policy Network Meeting (March 2007, Zentrum fur Europaische Wirtschaftsforschung (ZEW); Mannheim, Germany), Presentation: "Cost of Climate Stabilization in Computable General Equilibrium Models (based on the U.S. Climate Change Science Program Synthesis and Assessment Product 2.1.a)".

11. Macroeconomic Models of Uzbekistan (September 2006, United Nations Development Programme, Tashkent, Uzbekistan). Paper: "Aggregated Version of CGE Model for Uzbekistan: Taxation and International Trade" (with M. Light).

12. GTAP Conference on Global Economic Analysis: Multilateralism, Bilateralism, and Development (June 2006, United Nations Economic Commission for Africa; Addis Ababa, Ethiopia). Paper: "Incorporating Climate Change Feedbacks into a General Economic Equilibrium Model" (with J. Reilly).

13. XXIV MIT Global Change Forum (January 2006, Coral Gables, Florida, USA). Presentation: "Ongoing Stabilization Scenario Exercises: New Scenarios for the U.S. Climate Change Science Program".

14. Climate Policy Network Meeting (September 2005, Chia Laguna, Sardinia, Italy). Presentation: "Incorporating Climate Change Feedbacks into the EPPA model". 15. European Geosciences Union General Assembly (April 2005, Vienna, Austria). Paper: "Uncertainty in Emissions Projections in the MIT Integrated Global System Model" (with C. Forest, T. Frank, H. Jacoby, J. Reilly, A. Sokolov, and M. Webster).

16. American Geophysical Union Meetings (December 2004, San Francisco, USA). Paper: "The Economic Impact of CO2 and Tropospheric Ozone on Crop Yields in China, USA, and Europe" (with J. Reilly, B. Felzer, J. Melillo, R. Prinn, C. Wang, A.Sokolov, and X. Wang).

17. Conference of the International Society for Environmental Epidemiology: Addressing Urban Environmental Problems (August 2004, New York University, New York, USA), Paper: "Air Pollution Health Effects: Toward an Integrated Assessment" (with J. Reilly and T. Yang).

18. International Conference on Policy Modeling (July 2004, Universite Paris I - Pantheon Sorbonne; Paris, France). Paper: "Air Pollution Health Effects: Toward an Integrated Assessment" (with J. Reilly and T. Yang).

19. GTAP Conference on Global Economic Analysis: Trade, Poverty, and the Environment (June 2004, The World Bank; Washington DC, USA). Paper: "Disaggregating Household Transport in the MIT-EPPA Model" (with L. Viguier, M. Babiker, J. Reilly, and K.H. Tay).

20. Purchasing-Power-Parity vs Market-Exchange-Rate Workshop (February 2004, Stanford University, Australian Greenhouse Gas Office, and U.S. Environmental Protection Agency; Palo Alto, USA), Participant.

21. American Geophysical Union Meetings (December 2003, San Francisco, USA). Paper: "Climate Change, Air Pollution, and the Economics of Health Impacts" (with J. Reilly, T. Yang, C. Wang, R. Prinn, and M. Sarofim).

22. Western Economic Association International Meetings (July 2001, San Francisco, USA). Paper: "Demographic Change and Long Run Transition Costs in the Former Soviet Union" (with C.M. Becker).

23. The Economic Consequences of Alternative Pension Policies (February 1999, Asian Development Bank, International Management and Communication Corporation, Social Fund of Kyrgyz Republic; Bishkek, Kyrgyzstan). Paper: "Structure and uses of PROST".

24. Economic Transformation in Russia: Views of a New Generation (May 1997, International Research and Exchanges Board (IREX), New Economic School, United States Information Agency; Moscow, Russia). Participant.

25. Business Training for Multinational Corporations (January-February 1997, ACTR/ACCELS, U.S.-Russia Business Forum, United States Information Agency; St. Petersburg, Russia). Participant.

26. Higher Education: State and Perspectives (December 1995, The Ministry of Education and Science of the Republic of Belarus and The Republican Institute of Higher School and Humanities; Minsk, Belarus). Paper: "Project of the Masters Program in Economics and Management of Technology" (with V. Apanasovich and V. Molofeev).

27. Central Asia's Economies in Transition (July 1995, The Economics Institute, The United States Agency for International Development and Academy for Educational Development; Boulder, USA). Symposium Director.

28. Contemporary Russia: Myth and Reality (April 1995, The University of Colorado at Denver and The National Endowment for the Humanities; Denver, USA). Paper: "Pace of the Economic Reform in Belorussia".

29. The Transition to a Market Economy in the Central Asian Republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan (December 1994, The Economics Institute; Boulder, USA). Chairman of the Session.