

## Curriculum Vitae

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### **Steven K. Rose, Ph.D.**

Senior Research Economist, Global Climate Change Research Group  
Electric Power Research Institute (EPRI)  
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### **Current Positions**

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**Senior Research Economist**, Global Climate Change Research Group, Electric Power Research Institute (EPRI), Oct 2008 – present.

**Graduate Faculty**, Department of Economics, Purdue University, Special appointment 2008 – 2013.

**Chair**, Land Modeling Subgroup, Stanford University's Energy Modeling Forum, 2005 – present.

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### **Additional Professional Responsibilities and Honors**

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**Expert Panel**, U.S. Carbon Cycle Science Program Carbon Cycle Scientific Steering Group, invited 2011.

**Deputy Associate Editor**, *Climatic Change*, current.

**Advisory Board**, International Council on Clean Transportation Study on Indirect Land-use Change, current.

**Expert Panel**, Council on Sustainable Biomass Production Biofuel and Biopower Greenhouse Gas Standards, 2010.

**Guest Editor**, *Environment and Development Economics*, Special Issue on Reduced Emissions from Deforestation and Forest Degradation, 2010-11.

**Lead Author**, IPCC 5<sup>th</sup> Climate Change Assessment of Working Group III

**Scientific Steering Committee**, Integrated Assessment Modeling Consortium, appointed September 2009.

**Research Fellow**, Global Trade Analysis Project (GTAP), 2008-2011, Purdue University.

**Board Member**, Global Trade Analysis Project (GTAP), Purdue University, since Summer 2009.

**Co-winner 2008 Nobel Peace Prize**, IPCC Lead Author

**2008 Outstanding Article of the Year**, *Choices Magazine*, peer reviewed magazine of the Agricultural & Applied Economics Association

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**Technical Expert**, Member of the U.S. Delegation, IPCC Working Group III, Fourth Assessment Report Approval Meeting, Bangkok, Thailand, 2007.

**Expert**, U.S. Government Review Panel, IPCC Fourth Assessment Report, Working Groups II and III and Synthesis Report.

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## Education

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**Ph.D., Economics**, Cornell University, 2000

Major Field: Environmental and Natural Resource Economics

Minor Fields: Applied econometrics and mathematical programming, microeconomics, experimental economics, and development economics

**B.A., Economics with Mathematical Emphasis, honors distinction**, Univ. of Wisconsin-Madison, 1989

Minor Fields: Mathematics, econometrics, computer science, liberal arts studies

Honors: Phi Beta Kappa, Phi Kappa Phi, Dean's List, Omicron Delta Epsilon

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## Publications

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Rose, S.K. and B. Sohngen, 2011. "Global Forest Carbon Sequestration and Climate Policy Design," *Environment and Development Economics*, in press (available on-line April 14, 2011), pp 26.

Bosetti, V. and S.K. Rose, 2011. "Reducing carbon emissions from deforestation and forest degradation: issues for policy design and implementation." *Environment and Development Economics*, in press (available on-line June 13, 2011), pp 4.

Rose, S., H. Ahammad, B. Eickhout, B. Fisher, A. Kurosawa, S. Rao, K. Riahi, D. van Vuuren, 2011. "Land-based mitigation in climate stabilization," *Energy Economics*, in press.

Avetisyan, M., A. Golub, T. Hertel, S.K. Rose, 2011. "Why a global carbon policy could have a dramatic impact on the pattern of the worldwide livestock production," *Applied Economic Perspectives and Policy*, conditionally accepted.

van Vuuren, D., K. Riahi, R. Moss, J. Edmonds, A. Thomson, N. Nakicenovic, T. Kram, F. Berkhout, R. Swart, A. Janetos, S.K. Rose and N. Arnell, 2011. "Developing new scenarios as a common thread for future climate research." *Global Environmental Change*, in press.

van Vuuren, D.P., J. Edmonds, M. Kainuma, K. Riahi, A. Thomson, K. Hibbard, G.C. Hurtt, T. Kram, V. Krey, J-F. Lamarque, T. Matsui, M. Meinshausen, N. Nakicenovic, S.J. Smith, S.K. Rose, 2011. "The Representative Concentration Pathways: An overview," *in review*.

Rose, S., 2011. "The role of the social cost of carbon in policy," *in review*.

Rose, S., M. Avetisyan, T. Hertel, 2010. "Development of the Preliminary version 7 non-CO2 GHG emissions dataset," GTAP Research Memorandum No. 17, January.

Manning, M. R., J. Edmonds, S. Emori, A. Grubler, K. Hibbard, F. Joos, M. Kainuma, R. F. Keeling, T. Kram, A. C. Manning, M. Meinshausen, R. Moss, N. Nakicenovic, K. Riahi, S. K. Rose, S. Smith, R. Swart, D. P. van Vuuren, 2010. "Misrepresentation of the IPCC CO2 emission scenarios," *Nature Geoscience* 3: 376-377.

Moss, R.H., J.A. Edmonds, K.A. Hibbard, M.R. Manning, S.K. Rose, D.P. van Vuuren, T.R. Carter, S. Emori, M. Kainuma, T. Kram, G.A. Meehl, J.F.B. Mitchell, N. Nakicenovic, K. Riahi, S.J. Smith, R.J. Stouffer, A.M. Thomson, J.P. Weyant, T.J. Wilbanks, 2010. "The next generation of scenarios for climate change research and assessment," *Nature* Volume 463, 11 February 2010.

- Baker, J.S., B.A. McCarl, B.C. Murray, S.K. Rose, R.J. Alig, D. Adams, G. Latta, R. Beach, A. Daigneault, 2010. "Net Farm Income and Land Use under a U.S. Greenhouse Gas Cap and Trade," *Policy Issues* 17 (April):1–5.
- Hibbard, K., A. Janetos, D.P. van Vuuren, J. Pongratz, S.K. Rose, R. Betts, M. Herold, and J.J. Feddema, 2010. "Research Priorities in Land Use and Land Cover Change for Earth System and Integrated Assessment Modeling," *International Journal of Climatology* 30 (13): 2118–2128.
- Rose, S., 2010. "Federal decision-making on the uncertain impacts of climate change: incremental vs. non-incremental climate decisions," invited paper, Pew Center on Global Climate Change, Assessing the Benefits of Avoided Climate Change: Cost-Benefit Analysis and Beyond, <http://www.pewclimate.org/publications/report/workshop-proceedings-assessing-benefits-avoided-climate-change>.
- Clarke, L., J. Edmonds, V. Krey, R. Richels, S. Rose, M. Tavoni, 2009. "International climate policy architectures: Overview of the EMF 22 International Scenarios," *Energy Economics* 31 (Supplement 2): S64-S81.
- Golub, Alla, Thomas Hertel, Huey-Lin Lee, Steven Rose, and Brent Sohngen, 2009. "The Opportunity Cost of Land Use and the Global Potential for Greenhouse Gas Mitigation in Agriculture and Forestry," *Resource and Energy Economics* 31: 299-319.
- Hertel, Thomas, Steven Rose, Richard Tol (eds.), 2009. *Economic Analysis of Land Use in Global Climate Change Policy*, Routledge Publishing.
- Hertel, Thomas, Steven Rose, and Richard S.J. Tol, 2009. "Land use in computable general equilibrium models: and overview", in Thomas Hertel, Steven Rose, Richard Tol (eds.), *Economic Analysis of Land Use in Global Climate Change Policy*, Routledge Publishing.
- Hertel, T., H-L Lee, S. Rose, B. Sohngen, 2009. "Modeling Land-use Related Greenhouse Gas Sources and Sinks and their Mitigation Potential" in T.W. Hertel, S. Rose, R. Tol (eds.), *Economic Analysis of Land Use in Global Climate Change Policy*, Routledge Publishing.
- Lee, H-L, T.W. Hertel, S. Rose, M. Avetisyan, 2009. "An Integrated Global Land Use Data Base for CGE Analysis of Climate Policy Options" in T.W. Hertel, S. Rose, R. Tol (eds.), *Economic Analysis of Land Use in Global Climate Change Policy*, Routledge Publishing.
- Rose, Steven and Huey-Lin Lee, 2009. "Non-CO2 Greenhouse Gas Emissions Data for Climate Change Economic Analysis" in Thomas W. Hertel, Steven Rose, Richard Tol (eds.), *Economic Analysis of Land Use in Global Climate Change Policy*, Routledge Publishing.
- Del Grosso, S., D. Ojima, W.J. Parton, E. Stehfest, B. DeAngelo, and S. Rose, 2009. "Global scale DAYCENT model analysis of greenhouse gas mitigation strategies for cropped soils," *Global and Planetary Change*, Vol 67 (1-2): 44-50.
- Principle Author, 2008. *Technical Support Document on Benefits of Reducing GHG Emissions*, U.S. Environmental Protection Agency, June 12, 2008, [www.regulations.gov](http://www.regulations.gov) (search phrase "Technical Support Document on Benefits of Reducing GHG Emissions").
- Rose, S., B. McCarl, 2008. "Greenhouse gas emissions, stabilization and the inevitability of adaptation: challenges for agriculture," Climate Change Economics Special Issue, *Choices* 23(1): 15-18. Agricultural & Applied Economics Association Outstanding Article of the Year, awarded 2009.
- Beach, R.H., B.J. DeAngelo, S.K. Rose, C. Li, W. Salas, and S.J. DelGrosso, 2008. Mitigation potential and costs for global agricultural greenhouse gas emissions, *Agricultural Economics* 38: 1-7. Recipient of the 2006 T.W. Schultz Prize for best paper by a young economist by International Association of Agricultural Economists.

- Contributing Author, 2008. Long-term scenarios and land-use (Chapter 4), *International Assessment of Agricultural Science and Technology for Development*, World Bank.
- Moss, Richard, Mustafa Babiker, Sander Brinkman, Eduardo Calvo, Tim Carter, Jae Edmonds, Ismail Elgizouli, Seita Emori, Lin Erda, Kathy Hibbard, Roger Jones, Mikiko Kainuma, Jessica Kelleher, Jean Francois Lamarque, Martin Manning, Ben Matthews, Jerry Meehl, Leo Meyer, John Mitchell, Nebojsa Nakicenovic, Brian O'Neill, Ramon Pichs, Keywan Riahi, Steven Rose, Paul Runci, Ron Stouffer, Detlef van Vuuren, John Weyant, Tom Wilbanks, Jean Pascal van Ypersele, Monika Zurek, 2008. *Towards New Scenarios for Analysis of Emissions, Climate Change, Impacts, and Response Strategies: IPCC Expert Meeting Report, 19–21 September, 2007, Noordwijkerhout, The Netherlands*, [www.ipcc.ch](http://www.ipcc.ch).
- Rose, S., H. Ahammad, B. Eickhout, B. Fisher, A. Kurosawa, S. Rao, K. Riahi, D. van Vuuren, 2008. *Land in climate stabilization modeling: Initial observations*, Energy Modeling Forum Report #21 (EMF #21), Stanford University.
- Contributing analyst, 2007-2008, United States Environmental Protection Agency's Analysis of Senate Climate Bills S.2191, S.1766, S.280 in the 110th Congress, <http://www.epa.gov/climatechange/economics/economicanalyses.html>
- Lead Author, Long-term mitigation (Chapter 3), *Climate Change 2007*. Fourth Assessment Report, Mitigation Working Group (Working Group III), Intergovernmental Panel on Climate Change (IPCC), [www.ipcc.ch](http://www.ipcc.ch).
- Contributing Author, 2007. Agriculture (Chapter 8), *Climate Change 2007*. Fourth Assessment Report, Mitigation Working Group (Working Group III), Intergovernmental Panel on Climate Change (IPCC), [www.ipcc.ch](http://www.ipcc.ch).
- Contributing Author, 2007. Forestry (Chapter 9), *Climate Change 2007*. Fourth Assessment Report, Mitigation Working Group (Working Group III), Intergovernmental Panel on Climate Change (IPCC), [www.ipcc.ch](http://www.ipcc.ch).
- Ramankutty, Navin, Tom Hertel, Huey-Lin Lee, Steven K. Rose, 2007. "Global Agricultural Land Use Data for Integrated Assessment Modeling," *Human-Induced Climate Change: An Interdisciplinary Assessment*, Cambridge University Press
- DeAngelo, B., S. Rose, R. Beach, W. Salas, C. Li, T. Sulstur, S. Del Grosso, 2006. *Global Mitigation of Non-CO2 Greenhouse Gases, Chapter V: Agriculture*, United States Environmental Protection Agency, Washington, DC, 430-R-06-005.
- Li, C., W. Salas, B. DeAngelo, and S. Rose, 2006. "Assessing Alternatives for Mitigating Net Greenhouse Gas Emissions and Increasing Yields from Rice Production in China Over the Next 20 Years," *Journal of Environmental Quality* 35(4): 1554-1565.
- Ibarraran, M., E. La Rovere, S. Rose, M. Heil, P. Runci, H. Pitcher, 2006. "Latin America modeling in global scenarios: observations and recommendations," Report developed from the Latin America Modeling and Scenarios Workshop, Rio de Janeiro, Brazil, September, 2006.
- Houghton, J., S. Rose, S. Smith, and T. Wilson, 2006. "Sessions on Biotechnologies: Land, Production, Transformation, and Economics", Report from the Energy Modeling Forum Workshop on Critical Issues in Climate Change, Snowmass, Colorado, Aug 2-3, 2006.
- Andrasko, K., S. Rose, R. Alig, J. Lewandrowski, R. MacGregor, and B. Murray, 2005. "Agriculture, Forestry and Greenhouse Gases: Research provides insights for public policy," Farm Foundation, September
- Lee, H-L, T. Hertel, B. Sohngen, and N. Ramankutty in collaboration with F. de la Chesnaye and S. Rose, 2005. "Towards an integrated land use database for assessing the potential for greenhouse gas mitigation," GTAP Technical Paper No. 25.

- Rose, S.K. and D. Chapman, 2003. "Timber Harvest Adjacency Economies, Hunting, Species Protection, and Old Growth Value: Seeking the Dynamic Optimum," *Ecological Economics* 44: 325-344.
- Rose, S.K., 2003. *Military Water Rights: Issues Affecting Water Reliability and Efficiency*, CNA Research Memorandum D0009067.A2, October.
- Rose, S.K., 2003. *Identifying and Assessing Training-Range Encroachment and Resources*, CNA Research Memorandum D0007497.A2, January.
- Rose, S.K., J. Clark, G.L. Poe, D. Rondeau, W.D. Schulze, 2002. "The Private Provision of Public Goods: Tests of a Provision Point Mechanism for Funding Green Power Programs," *Resource And Energy Economics* 24 (1-2): 131-155.
- Rose, S.K., 1998. "Non-market Valuation Techniques: The State of the Art." Report prepared for The World Bank Group, October. Based on a Cornell University working paper: Working Paper Series in Environmental and Resource Economics ERE 99-01, Cornell University, January, 1998.
- Rose, S.K., 1998. "The International Public Good Literature—A Review." Report prepared for The World Bank Group, October.
- Rose, S.K. and S. Volskaya-Winbourne, 1998. "Ukrainian Public Timber Allocation and Forest Management." Report prepared for USAID project Environmentally Sound Business Development for Ukraine, contract no. AEP-5470-I-00-5034-00, March.

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## Working Papers/Work in Progress

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- Rose, S.K., B. McCarl, G. Latta, "Biomass supply for power & environmental implications," EPRI Working Paper, June, 2011.
- Rose, S.K., A. Golub, B. Sohngen, T. Hertel, "Agricultural impacts of reduced tropical deforestation (RED)," paper prepared for the Fourteenth Annual Conference of Global Economic Analysis, 2011.
- Rose, S.K., "Agricultural Non-CO2 Greenhouse Gas Abatement Supplies for Global CGE Modeling," Technical Note.
- Rose, S.K. and B. McCarl, "U.S. biomass supply for electricity generation: Climate policy implications and carbon neutrality," paper prepared for the International Agricultural and Trade Consortium Public Trade Policy Research and Analysis Symposium on Climate Change in World Agriculture: Mitigation, Adaptation, Trade and Food Security, June 27 - 29, 2010, Stuttgart-Hohenheim, Germany.
- Rose, S.K., S. Finn, E. Scheele, J. Mangino, K. Delhotal, J. Siedenburg, and H. Perez, 2010. "Detailed non- CO2 and non-fossil fuel combustion CO2 greenhouse gas emissions data for global economic modeling", Draft, September.
- Anthoff, D., S. Rose, R.S.J. Tol, and S. Waldhoff, 2011. "The Marginal Damage Costs of Different Greenhouse Gases: An Application of FUND," ESRI Working Paper No. 380, <http://www.esri.ie/UserFiles/publications/WP380/WP380.pdf>.
- Anthoff, D., S. Rose, R.S.J. Tol, and S. Waldhoff, 2011. "Regional and Sectoral Estimates of the Social Cost of Carbon: An Application of FUND," ESRI Working Paper No. 375, <http://www.esri.ie/UserFiles/publications/WP375/WP375.pdf>.
- Choi, S., Sohngen, B., Rose, S., Hertel, T., and A. Golub. 2010 "Total Factor Productivity Change in Agriculture and Emissions from Deforestation" Paper presented at ASSA meeting at Atlanta, GA.

- Golub, A., B. Henderson, T. Hertel, S. Rose, M. Avetisyan, "Effects of the GHG Reduction Policies on Livestock Sectors," working paper prepared for Thirteenth Annual Conference on Global Economic Analysis, 2010.
- Golub, A., T. Hertel, S. Rose, B. Sohngen, "Global interactions between bioenergy and climate policies," working paper prepared for the Agricultural & Applied Economics Association's 2010 AAEA, CAES and WAEA Joint Annual Meeting, Denver, CO, July 25-27, 2010.
- Kim, Y., B. Sohngen, A. Golub, T. Hertel, S. Rose, "Impact of US and European Biofuel Policies on Forest Carbon," working paper prepared for the AAEA Annual Meeting, 2010.
- Choi, S-W, B. Sohngen, S. Rose, T. Hertel, A. Golub. "Total Factor Productivity Change in Agriculture and Emissions from Deforestation," working paper prepared for the ASSA Annual Meeting, 2010.
- Birur, D., A. Golub, T. Hertel, S. Rose. "The Economy-wide Greenhouse Gas Impacts of the Biofuels Boom (or Bust)," working paper prepared for the Agricultural & Applied Economics Association 2009 AAEA & ACCI Joint Annual Meeting, Milwaukee, WI, July 26-29, 2009.
- Golub, A., T. Hertel, S. Rose, B. Sohngen, M. Avetisyan. "The Relative Role of Land in Climate Policy," working paper prepared for the Agricultural & Applied Economics Association 2009 AAEA & ACCI Joint Annual Meeting, Milwaukee, WI, July 26-29, 2009.
- Beach, R.H., A.J. Daigneault, B.A. McCarl, and S. Rose. "Preliminary Insights on Alternative Policies for U.S. Forestry and Agricultural GHG Mitigation," working paper prepared for the Association of Environmental and Resource Economics Workshop on Energy and the Environment, June 18-20, 2009, Washington, DC.
- Rose, S., R.H. Beach, C. Li, W. Salas. "Modeling marginal abatement cost curves for agricultural GHG emissions when producers adopt multiple mitigation options," working paper prepared for the Fifth International Symposium on Non-CO2 Greenhouse Gases: Science, Reduction Policy and Implementation, Wageningen, The Netherlands, June 30 - July 3, 2009.
- van Vuuren, D.P., J. Feddema, J-F. Lamarque, K. Riahi, S. Rose, S. Smith, K. Hibbard, "Work plan for data exchange between the Integrated Assessment and Climate Modeling communities in support of Phase-0 of scenario analysis for climate change assessment (Representative Concentration Pathways)"
- Reilly, J., R. Tol, T. Kram, and S.K. Rose, *New Approaches to Improve the Characterization of Climate Impact Analyses in Integrated Assessment Models, Part 14: Characterizing Impacts in Integrated Assessment Frameworks*, white paper - draft.
- Thomson, A.M., S.K. Rose, *New Approaches to Improve the Characterization of Climate Impact Analyses in Integrated Assessment Models, Part 6: Agricultural and Water Resources*, white paper - draft.

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## Select Presentations

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- Rose, S., B. McCarl, G. Latta, "Biomass supply for power & environmental implications," invited, United States Energy Association, June 23, 2011 (available at <http://www.usea.org/>); EPRI Global Climate Change Research Seminar, May 25, 2011 ([http://globalclimate.epri.com/annual\\_events/gcc\\_research\\_seminar.html](http://globalclimate.epri.com/annual_events/gcc_research_seminar.html)); Iowa State University, May 17, 2011; and EPRI Advisory Council, April 28, 2011.

- Rose, S.K., A. Golub, B. Sohngen, T. Hertel, "Agricultural impacts of reduced tropical deforestation (RED)," Fourteenth Annual Conference of Global Economic Analysis, Venice, Italy, June 16-18, 2011.
- Rose, S., "The Economics of Climate Change," invited, New York Academy of Sciences, June 1, 2011.
- Rose, S., F de la Chesnaye, A. Diamant, "Estimating Market Potential for Offset Greenhouse Gas Abatement," The Role of Carbon Offsets in Climate Policy: Theory and Practice, Cornell University, May 13 – 15, 2011.
- Blanford, G., M. Tavoni, S. Rose, "Asia Baseline Scenario Analysis," Asia Modeling Exercise, March, 2011.
- Rose, S., "The SCC – What is it good for?" invited, AGU Annual Meetings, San Francisco, CA, December 13-17, 2010.
- Rose, S., B. McCarl, G. Latta, "U.S. and Regional Agriculture and Forestry Biomass Supply for Electric Generation and GHG Implications," invited, USDA Bioelectricity and GHG Workshop, November 15, 2010.
- Rose, S. and B. McCarl, "Biomass Supply for Generation and Net GHG Emissions," invited, Electric Power Research Institute Biomass to Electricity Workshop, November 10, 2010.
- Rose, S.K. and B. McCarl, "U.S. biomass supply for electricity generation: Climate policy implications and carbon neutrality," International Agricultural and Trade Consortium Public Trade Policy Research and Analysis Symposium on Climate Change in World Agriculture: Mitigation, Adaptation, Trade and Food Security, June 27 - 29, 2010, Stuttgart-Hohenheim, Germany.
- Rose, S., "The social cost of carbon and federal regulations," invited. Utility Air Regulatory Group, June, 2010.
- Choi, S-W, B. Sohngen, S. Rose, T. Hertel, A. Golub. "Total Factor Productivity Change in Agriculture and Emissions from Deforestation," Allied Social Science Association Annual Meeting, Atlanta, Georgia, January 2-5, 2010.
- Rose, S. and B. Sohngen, "Climate policy design and forest carbon sequestration: transitioning to a global forest carbon market," invited, London Energy Forum, Nov 9-10, 2009, The Royal Society, London, United Kingdom.
- Rose, S., "The role of the social cost of carbon in climate policy," invited, Environmental Defense Fund Climate Economics Seminar Series, November 24, 2009.
- Rose, S., "Reassessing potential supplies of US and international forestry and agricultural offsets (& bioenergy)," EPRI Global Climate Change Area Council Environment Advisory Meeting, Boulder, Colorado, October, 2009.
- Rose, S., "New integrated scenarios approach & Representative Concentration Pathways (RCPs)," Integrated Assessment Modeling Consortium Meetings, Tsukuba, Japan, Sep. 15-16, 2009.
- Rose, S., "IAM and economic modeling of bioelectricity and biofuels," EMF Workshop on Climate Change Impacts and Integrated Assessment: Critical Issues in Climate Change, Snowmass, CO, Aug. 6, 2009.
- Rose, S., "An incomplete list of key issues (challenges) for IAM & ESM land modeling," EMF Workshop on Climate Change Impacts and Integrated Assessment: Critical Issues in Climate Change, Snowmass, CO, July 30, 2009.
- Avetisyan, M. A. Golub, T. Hertel, H.-L. Lee, S. Rose, B. Sohngen, "The Role of Land in Climate Policy," Agricultural & Applied Economics Association Annual Meeting, Milwaukee, Wisconsin, July 26-29, 2009.

- Birur, D., A. Golub, T. Hertel, S. Rose, "The Economy-wide Impact of Biofuels Boom on Land Use Emissions," Agricultural & Applied Economics Association 2009 AAEA & ACCI Joint Annual Meeting, Milwaukee, Wisconsin, July 26-29, 2009.
- Rose, S., R. Beach, C. Li, W. Salas, A. Daigneault, "Modeling Marginal Abatement Cost Curves for Agricultural GHG Emissions when Producers Adopt Multiple Mitigation Options," 5<sup>th</sup> Symposium on Non-CO2 Greenhouse Gases: Science, Reduction Policy and Implementation, Wageningen, The Netherlands, June 30 - July 3, 2009.
- Rose, S., "Forest (& agriculture) carbon policy: design and coordination insights from recent modeling efforts," EPRI Global Climate Change Research Seminar, May 20-21, 2009 Washington, DC.
- Rose, S., "Sensitivity of agricultural and forest GHG mitigation potential," RFF/EPA Workshop Modeling the Costs and Volumes of GHG Offsets, May 12, 2009.
- Rose, S., B. Sohngen, "Climate Policy Design and Forest Carbon Sequestration," REDD Modeling Forum and National REDD Reference Case Workshop, World Bank, April 21-22, 2009 Washington, DC.
- Choi, S-W, B. Sohngen, and S. Rose, "Global Forestry and Agriculture Land Use Model," 5th Workshop of the Forestry and Agriculture Greenhouse Gas Modeling Forum, Shepherdstown, WV, April 7-9, 2009.
- Rose, S., "IAM and economic modeling of bioelectricity and biofuels," 5th Workshop of the Forestry and Agriculture Greenhouse Gas Modeling Forum, Shepherdstown, WV, April 7-9, 2009.
- Rose, S., "Climate change decisions and long-run perspectives," Guest Lecture, Graduate Seminar on Climate Change, Florida Atlantic University, April 2, 2009.
- Rose, S., "Federal decision-making on the uncertain impacts of climate change: Working with what you have," Assessing the Benefits of Avoided Climate Change, Workshop of the Pew Center on Global Climate Change, March 16-17, 2009, Washington, DC.
- Rose, S., R. Beach, C. Li, W. Salas, A. Daigneault, "Modeling Marginal Biophysical Responses to Assess Cropland Greenhouse Gas Abatement Potential," The IARU International Scientific Congress on Climate Change, 10 – 12 March 2009, Copenhagen, Denmark.
- Beach, R., A. Daigneault, S. Rose, B. McCarl, B. Murray, "Modeling Alternative Policies for Forestry and Agricultural GHG Mitigation: Allowances vs. Offsets," The IARU International Scientific Congress on Climate Change, 10 – 12 March 2009, Copenhagen, Denmark.
- Daigneault, A., R. Beach, B. McCarl, D. Adams, R. Alig, G. Latta, S. Rose, B. Murray, "Implications of Offset Eligibility Provisions on GHG Mitigation for U.S. Forestry and Agriculture Carbon Sinks," The IARU International Scientific Congress on Climate Change, 10 – 12 March 2009, Copenhagen, Denmark.
- Rose, S., "Forestry & agriculture greenhouse gas policy design and coordination insights from recent modeling," U.S. EPA National Center for Environmental Economics Climate Economics Seminar Series, July 15, 2009.
- Rose, S., B. McCarl, B. Murray, F. de la Chesnaye, "Potential for Agricultural and Forest GHG Mitigation in the U.S.," EPRI Greenhouse Gas Emissions Offset Policy Dialogue – Workshop 4, February 19, 2009.
- Rose, S., 2008. "Coping with Uncertainty and Risk within the EPA," Climate Change Impacts and Integrated Assessment: Critical Issues in Climate Change, Snowmass, Colorado, July 28–Aug 7, 2008.
- Rose, S. and K. Hibbard, 2008. "Representative Concentration Pathways (RCPs): Data handshake between IAMs and ESMs," Climate Change Impacts and Integrated Assessment: Critical Issues in Climate Change, Snowmass, Colorado, July 28–Aug 7, 2008.
- Golub, A., T. Hertel, S. Rose, and B. Sohngen, 2008. "Biofuels Growth: Global GHG Emissions Impacts from Changes in Forest Carbon Stocks," AAEA & ACCI Joint Annual Meeting, July 27-29, 2008.

- Rose, S., A. Golub, T. Hertel, and B. Sohngen, 2008. "Global GHG emissions impacts from growth in US biofuels," Eleventh annual conference on Global Economic Analysis, Helsinki, Finland, June 12-14, 2008.
- Rose, SK, 2008. "IPCC AR4 global forestry mitigation potential – top-down estimates," The Netherlands Environmental Assessment Agency Bottom-up – Top-down Forestry Workshop, Utrecht, The Netherlands, June 10, 2008.
- Rose, SK, and B. McCarl, 2008. "Greenhouse gas emissions, stabilization and the inevitability of adaptation: challenges for agriculture," Symposium highlighting articles from Choices Issue – Environmental Choices: Outlook and Investigation on Climate Change as it Relates to Agriculture and Natural Resources, Part II, May 20, 2008.
- Sulser, TB, MW Rosegrant, C Ringler, B DeAngelo, S Rose, RH Beach, 2008. "Managing the embodied greenhouse gas emissions in food" Global Environmental Change and Food Systems conference "Food Security and Environmental Change: Linking Science, Development and Policy for Adaptation" 2-4 April 2008 in Oxford, UK.
- Rose, SK, 2008. "Global land-use modeling – new resources, innovations, and opportunities." EMF-22 Working Group Meeting: Climate Change Control Scenarios, Washington, DC, February 5-6, 2008
- Rose, SK, 2008. "Integrated research questions & opportunities." EMF-22 Working Group Meeting: Climate Change Control Scenarios, Washington, DC, February 5-6, 2008.
- Rose, SK and P Runci, 2007. "Improving the representation of developing regions in global projections." *IPCC Expert Meeting on New Scenarios, 19–21 September, 2007, Noordwijkerhout, The Netherlands.*
- Edmonds, Jae, Kathy Hibbard, Tim Carter, Nebojsa Nakicenovic, Keywan Riahi, Steve Rose, Detlef van Vuuren, 2007. "Phases of Scenario Development and Application: Process Overview and Preliminary Scenario Recommendations." *IPCC Expert Meeting on New Scenarios, 19–21 September, 2007, Noordwijkerhout, The Netherlands.*
- Edmonds, Jae, Nebojsa Nakicenovic, Keywan Riahi, Steve Rose, Detlef van Vuuren, 2007. "Benchmark Concentration Scenarios for Earth System Models: New Scenarios for Analysis of Socio-economic, Emissions, Climate Change, Impacts, and Response Strategies." Climate Change Impacts and Integrated Assessment: Critical Issues in Climate Change, Snowmass, Colorado, July 23-August 3, 2007.
- Pitcher, Hugh and Steve Rose, 2007. "After the Benchmarks, What next?" Climate Change Impacts and Integrated Assessment: Critical Issues in Climate Change, Snowmass, Colorado, July 23-August 3, 2007.
- Suk-Won Choi and Brent Sohngen, Alla Golub, Thomas Hertel, Steven Rose, 2007. "Land Competition, Deforestation, and Carbon Sequestration in Forestry", poster, American Agricultural Economics Association Joint Annual Meetings, Portland, OR, July 29 – August 1, 2007.
- Rose, SK, R Beach, C Li, W Salas, J Siendenburg, 2007. "Modeling Marginal Biophysical Responses to Assess Cropland Greenhouse Gas Abatement Potential." Fourth USDA Greenhouse Gas Conference: Positioning Agriculture and Forestry to Meet the Challenges of Climate Change February 6 - 8, 2007, Baltimore, Maryland 1144
- Rose, S.K., "New land emissions scenarios and modeling innovations," EMF-22 Working Group Meeting: Climate Change Control Scenarios, Tsukuba, Japan December 12-14, 2006.
- Rose, S.K., T. Hertel, H-L. Lee, and B. Sohngen, "The role of global land use in determining greenhouse gas mitigation costs," EMF-22 Working Group Meeting: Climate Change Control Scenarios, Tsukuba, Japan December 12-14, 2006.
- Rose, S.K., "Non-CO2 greenhouse gas emissions and Latin America," Latin America Modeling and Scenarios Workshop, Rio de Janeiro, Brazil, September 13-14, 2006.
- Rose, S.K. and J. Weyant, "Multigas-Mitigation and Climate Change," Latin America Modeling and Scenarios Workshop, Rio de Janeiro, Brazil, September 13-14, 2006.
- Rose, S.K., "Preliminary comparison of integrated assessment model biomass modeling," Stanford University's Energy Modeling Forum's Climate Change Impacts and Integrated Assessment Workshop, Snowmass, CO, August 2-3, 2006.

- Rose, S.K., T. Hertel, H-L. Lee, and B. Sohngen, "Land heterogeneity in determining climate change mitigation costs," Ninth Annual Conference on Global Economic Analysis, Addis Ababa, Ethiopia, June 15-17, 2006.
- DeAngelo, B., S. Rose, R. Beach, W. Salas, C. Li, T. Sulsur, S. Del Grosso, "Marginal Abatement Curves for Net GHGs from World Agriculture." Energy Modeling Forum-22: Land Use Subgroup, Washington, DC, 3 February 2006.
- Rose, S.K., Modeling Global cropland net greenhouse gas dynamics and mitigation costs, US Department of Energy's Sequestration Conference, Alexandria, VA, May 8-11, 2006
- Rose, S.K., B. Sohngen, S-W. Choi, B. Sun, T. Hertel, A. Golub, H-L. Lee, R. Sedjo, and R. Mendelsohn, "Estimating potential multi-gas abatement in forestry and agriculture with a global dynamic model." Non-CO2 Greenhouse Gas Symposium (NCGG-4), Utrecht, The Netherlands, July 4-6, 2005.
- DeAngelo, B., S. Rose, R. Beach, W. Salas, C. Li, T. Sulsur, S. Del Grosso, "Estimates of Joint Soil Carbon, CH4 and N2O Marginal Mitigation Costs from World Agriculture." Non-CO2 Greenhouse Gas Symposium (NCGG-4), Utrecht, The Netherlands, July 4-6, 2005
- Rose, S.K., "Advancing on land greenhouse gas emissions projections and land modeling." EMF-22 Land Modeling Subgroup, EMF-22 Working Group Meeting: Climate Change Control Scenarios, Stanford University, May 26, 2005
- Li, C., W. Salas, B. DeAngelo, and S. Rose, "Assessing Alternatives for Mitigating Net Greenhouse Gas Emissions and Increasing Yields from Rice Production in China Over the Next 20 Years," Third USDA Symposium on Greenhouse Gases & Carbon Sequestration in Agriculture and Forestry, March 21-24, 2005, Baltimore, MD
- Rose, S.K. and R. MacGregor, "How can we vertically integrate biophysical, economic, and policy analyses into credible mitigation programs?" Modeling to Support Policy Development Workshop of the Forestry and Agriculture Greenhouse Gas Modeling Forum, October 12-15, 2004, Shepherdstown, WV
- Rose, S.K. "A Vicious Cycle of Resource and Welfare Degradation: Insight and Policy Alternatives." Environmental Protection Agency National Center for Environmental Economics Seminar 2002-2003 Series, February 25, 2003.

### **Selection of other professional experience**

- Steering Committee**, Firth and Sixth Workshop of the Forestry and Agriculture Greenhouse Gas Modeling Forum, 2009 and 2011.
- Expert Reviewer**, U.S. Climate Action Report 2010, Fifth National Communication of the United States of America Under the United Nations Framework Convention on Climate Change, 2010.
- Expert Peer Reviewer**, IPCC Fourth Assessment Report of Working Group II (Climate Change Impacts) and Working Group III (Mitigation). 2005-2007
- Federal Advisor**, Climate Change Science Program (CCSP) Synthesis and Assessment Product 2.1B: Global Change Scenarios: Their Development and Use. Spring 2006 – Winter 2006
- Expert Peer Reviewer**, CCSP Synthesis and Assessment Product 2.1A: Scenarios of Greenhouse Gas Emissions and Atmospheric Concentrations. 2006-2007
- Senior Research Economist**, U.S. Environment Protection Agency, Office of Air and Radiation, Office of Atmospheric Programs, Climate Change Division, Oct 2003 – Oct 2008.
- Economist**, The CNA Corporation, Environment Program, Resource Analysis Division, June 2001 – Oct 2003.
- Assistant Professor**, Joint appointments in the Departments of Economics and Environmental Studies, Washington College, Chestertown, MD, August 2000 – June 2001.
- Researcher**, Hatch Research Project, Cornell University, Ithaca, New York, 1999. "Public Forest Land Allocation: A Dynamic Spatial Perspective on Environmental Timber Management."

**Consulting Economist**, The World Bank Group—Special Programs, 1998.

**Resource Economist**, USAID via Management Systems International, Inc., Washington DC, 1998.

**Journal referee** – *Climatic Change, Climate Policy, Ecological Economics, Energy Economics, Energy Journal, Environmental Research Letters, Human-Induced Climate Change: An Interdisciplinary Assessment (book), Mitigation and Adaptation Strategies for Global Change, Technological Forecasting and Social Change, Society and Natural Resources*