

Five Years of Progress in Household Energy Research and Future Directions

Webinar, September 22, 2020

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Note: Publications of EPA STAR (Science to Achieve Results) grantees sorted by grant, author, and year.

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Xie, M., Shen, G., Holder, A.L., Hays, M.D. and Jetter, J.J. (2018). 'Light absorption of organic carbon emitted from burning wood, charcoal, and kerosene in household cookstoves'. *Environ Pollut* 240, 60-67. doi: 10.1016/j.envpol.2018.04.085

International Standards Developed with Partners

ISO 19867-1 (2018). Harmonized Laboratory Testing Protocols for Evaluating Cookstove Emissions, Fuel Efficiency, Safety, and Durability. International Organization for Standardization (Working Group Project Leader: James Jetter), Geneva

ISO 19867-3 (2018). Technical Report: Harmonized Laboratory Testing, Voluntary Performance Targets. International Organization for Standardization (Working Group Project Leader: James Jetter), Geneva

Life Cycle Assessment

Cashman, S., Rodgers, M., Huff, M., Feraldi, R., Morelli, B. and Thorneloe, S. (2016). Life Cycle Assessment of Cookstove Fuels in India and China, EPA/600/R-15/325. U.S. Environmental Protection Agency, Washington DC

Morelli, B., Cashman, S. and Rodgers, M. (2017). Life Cycle Assessment of Cooking Fuel Systems in India, China, Kenya, and Ghana, EPA/600/R17/225. U.S. Environmental Protection Agency, Washington DC

Information Dissemination

Webinar: *Findings from Recent U.S. EPA Cookstove Research*. Jetter J, Mitchell J, Keating T, Thorneloe S, DeMarini D, Dye J, Shen G. Co-hosted by EPA and Winrock International. 2017.

<http://www.pciaonline.org/content/findings-recent-us-epa-cookstove-research>

Public meeting and online webinar: *STAR Measurements and Modeling for Quantifying Air Quality and Climatic Impacts of Residential Biomass or Coal Combustion for Cooking, Heating and Lighting, Kick-off Meeting*. EPA at Research Triangle Park, NC. February 25, 2015.

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Household Energy Research Workshop: *STAR Measurements and Modeling for Quantifying Air Quality and Climatic Impacts of Residential Biomass or Coal Combustion for Cooking, Heating and Lighting*. EPA at Research Triangle Park, NC. April 9-10, 2018.

Work-In-Progress Seminar, EPA Environmental Public Health Division: *EPA Cookstove Research*. Gibbs-Flournoy E. *In vivo and in vitro Approaches to the Assessment of the Toxicity of Cookstove Emissions*. 2016.

Abstract: *Extracted Cookstove Emissions Differentially Alter Pro-inflammatory and Adaptive Gene Expression in Lung Epithelial Cells*. Gibbs-Flournoy E, Preston B, Hays M, McGee J, Copeland L, Dye JA. Society of Toxicology 55th Annual Meeting, New Orleans, LA, March 2016.

Platform Presentation: *Acute pulmonary and innate immunity health effects in mice inhaling cookstove emissions*. Dye J, Gibbs-Flournoy E, Miller C, Copeland L, Daniels M, Jaskot R, Richards J, Stewart E, Harrison R, Higuchi M, Gilmour MI. Veterinary Comparative Respiratory Society 35th Symposium, Urbana, IL, Oct. 1-4, 2017.

International Presentations and Workshops 2015-2020, Jim Jetter

Beijing, China, 2019. 3rd Workshop on Household Energy and Air Pollution, Peking University, and Pellet-Fuel Testing Workshop and Practicum, Beihang University. Participated as an invited expert advisor and trainer.

Nairobi, Kenya, 2019. ISO Technical Committee 285, Clean Cooking Solutions, Plenary Meeting. Participated as a Technical Expert and represented EPA/ORD on delegation with U.S. Technical Advisory Group. Participated in biennial Clean Cooking Forum co-organized by the Clean Cooking Alliance and the Kenya Ministry of Energy. Sponsors included the World Bank, ESMAP, Shell Foundation, and the Kenya Ministry of Foreign Affairs.

Kampala, Uganda, 2019. Expert Consultation: Building Country Capacity Towards Clean Cooking Solutions. Sponsored by the World Health Organization, Clean Cooking Alliance, ISO, and EPA/OAR. Participated as an invited expert advisor and led week-long workshop on laboratory testing of cookstoves per international standards.

Kathmandu, Nepal, 2018. Stakeholder Consultation: Building Country Capacity for Adoption and Implementation of Standards and Voluntary Performance Targets for Clean Cookstoves and Clean Cooking Solutions." Sponsored by the World Health Organization, Clean Cooking Alliance, ISO, and EPA/OAR. Participated as an invited expert advisor and led week-long workshop on laboratory testing of cookstoves per international standards.

Dhaka, Bangladesh, 2018. Building a Foundation for National Cookstoves Standards Implementation in Bangladesh - Final Recommendations and New ISO Standards. Sponsored by CLASP (Collaborative Labeling and Appliance Standards Program) and WHO. Presented technical information on new ISO standards.

Tuxtla Guitierrez, Chiapas, Mexico, 2018. 3rd International Conference "University, Health, and Environment (UHE): Science, Technology and Innovation for the Inclusion and Promotion of Diversity." Sponsored by the Universidad Autonoma de Chiapas (UNACH) and the Universidad de Ciencias y Artes de Chiapas (UNICACH). Invited Keynote Speaker.

Morelia, Mexico, 2018. Training Workshop on Cookstove Testing and Research held at the National University of Mexico (UNAM), Morelia Campus, Michoacan. Presentations on technical capacity building and international standards development. Invited and travel sponsored by UNAM.

New Delhi, India, 2017. Clean Cooking Forum. Presentations on EPA household energy research, capacity building for regional testing centers, and international standards development.

Kathmandu, Nepal, 2017. ISO (International Organization for Standardization) Technical Committee 285 Plenary Meeting. Presentation on development of ISO Standard 19867-1 and led sessions as Project Leader of Working Group 2, Laboratory Testing.

La Paz, Bolivia, 2016. Training Workshop on Cookstove Testing and Research held at the Universidad Mayor de San Andrés (Higher University of San Andrés). Presentations on technical capacity building

and international standards development. Led week-long workshop. Invited and sponsored by the Universidad Mayor de San Andrés.

Kampala, Uganda, 2016. Training Workshop on Cookstove Testing held at the CREEC (Centre for Research in Energy and Energy Conservation) at Makerere University. Presentations on technical capacity building and international standards development. Led week-long workshop. Served as an invited expert.

Accra, Ghana, 2015. Clean Cooking Forum. Presentations on EPA household energy research, capacity building for regional testing centers, and international standards development.

Accra, Ghana, 2015. ISO Technical Committee 285 Plenary Meeting. Presentation on development of ISO Standard 19867 and led all sessions as Project Leader of Working Group 2, Laboratory Testing.

Beijing, China, 2015. ISO Technical Committee 285 Stakeholders Meeting. Presentation on laboratory testing of stoves for air pollutant emissions and fuel efficiency and led sessions on developing ISO standards as ISO Working Group Project Leader.