MAXIMILIAN AUFFHAMMER: Energy efficiency policies

Global Climate Change is predicted to lead to significantly higher mean summer temperatures with significant increases in the number of extreme heat days. Households react to higher temperatures by purchasing air conditioners or more intensive use of their existing air conditioning equipment. In this presentation four studies will be described, which simulate the impacts of higher temperatures resulting from anthropogenic climate change on residential electricity consumption for California. Results for peak load and consumption at the grid level will be discussedas well as impacts based on a comprehensive household level dataset of billing data for California's three investor-owned utilities (Pacific Gas and Electric, San Diego Gas and Electric, and Southern California Edison). Finally, simulations consistent with higher adoption of cooling equipment in non-saturated areas will be conducted, as well as gains in efficiency from aggressive energy efficiency policies. The presentation will end with a comparison of air conditioner penetration in the United States versus China.