Talk

Accelerating technology innovation for addressing climate change, energy, and sustainability goals

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Host: ISTA Sustainability Group

Accelerating technological innovation is essential for decarbonizing the energy system and for meeting climate and energy goals. The International Energy Agency estimates that technologies to meet three-fourths of long-term sustainable energy goals are still not mature. Addressing the climate challenge therefore involves increasing research and development but also ensuring that climate and energy technologies scale up rapidly and can be deployed cost effectively. In this talk, I will discuss three different challenges for why it is difficult to accelerate innovation in these technologies. First, climate and energy innovation has long development cycles, i.e., it can take decades to move from discovery to real world deployment. Second, innovation is not simply about end products (e.g., wind turbines, electric vehicles, or battery storage) – it occurs across the value chain with components and processes of different complexities, requiring different skills or material inputs. Third, climate and energy innovation is a systems challenge requiring breakthroughs in multiple scientific and technical domains along with public policy incentives, behavior change, and private sector transformation.

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Heinzel Seminar Room / Office Bldg West (hybrid enabled) (I21.EG.101)

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