Capturing Key Energy and Emission Trends in CGE Models: Assessment of Status and Remaining Challenges

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Insights into recent advances in modeling future energy profiles and emission abatement

- Review of 17 “state-of-art” models

Specific focus on:

- Fossil fuel extraction
- Power generation
- Transportation
- Manufacturing industries
- Buildings
- Agriculture and forestry

Three different approaches to baseline quantification:

(a) exploiting bottom-up model characteristics to endogenize responses of technological investment and utilization,

(b) relying on external information sources to feed the exogenous parameters and variables of the model,

(c) linking the model with more technology-rich, partial models to obtain bottom-up- and pathway-consistent parameters.