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Poster Title: How Stable Are Preferences among Emerging Electricity Generation Technologies

Abstract: Coal-fired power plants with carbon capture and sequestration (CCS), natural-gas-fired power plants with CCS, and Small Modular Reactors (SMR) are potentially important emerging energy technologies that could help mitigate climate change and contribute to a low-carbon future. They are not widely available today. Public opinion and preferences towards these technologies will affect their adoption when they are technologically ready to be implemented. This study examines the nature and stability of public preferences among these options. We look at preferences among these technologies as the replacement for a soon-to-be-retired conventional coal-fired power plant, presented as one of the incremental decisions that can shape an evolving energy portfolio. We find that participants have internally consistent preferences, when tested in several ways. Overall, they prefer SMRs to natural gas with CCS to coal with CCS. On a group level, these preferences depend on the choice alternatives, but not on how fully the technologies are described nor how far away a hypothetical power plant would be sited. On the individual level, preferences are related to participants' perceptions of the technology and their political ideology. Our findings suggest that presenting the three technologies together will produce the most balanced, informed judgment, with the least influence of political ideology.