The Electric Ceiling Limits and Costs of Full Electrification

**Author:**David S. Rapson, James B. Bushnell

Electrification is a centerpiece of global decarbonization efforts. Yet there are reasons to be skeptical of the inevitability, or at least the optimal pace, of the transition. We discuss several under-appreciated costs of full, or even deep, electrification. Consumer preferences can operate in favor of and in opposition to electrification goals; and electrification is likely to encounter physical and economic obstacles when it reaches some as-yet-unknown level. While we readily acknowledge the external benefits of decarbonization, we also explore several under-appreciated external costs. The credibility and eventual success of decarbonization efforts is enhanced by foreseeing and ideally avoiding predictable but non-obvious costs of promising abatement pathways. Thus, even with all of its promise, the degree of electrification may ultimately reach a limit.

**Url:**<https://www.nber.org/papers/w30593>