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There are many competing transition paths toward sustainability and even more competing visions and expectations, while only a limited number of paths can be supported. In the literature so far, not much attention has been paid to the question: what makes one expectation more credible than another? On the basis of a case study on the US Department of Energy's (DOE) Hydrogen Program we show how credible expectations build on three arguments in favor of the promising option. First there is the technology's current level of performance and its historical progress toward that level. Second a path forward is constructed to argue that even higher levels of performance can be achieved. And third, an end target is constructed that relates to relevant societal needs. All three elements can, and often are, subject of contestation and competing options will provide the same type of arguments and relate to the same societal needs. Finally, a transition path needs promising enabling technologies to remain credible, and the 'losers' are dropped as soon as the credibility of the path is challenged.

Highlights

□ Expectations are crucial to sociotechnical transitions, but not all are credible. □ What makes one technological expectation more credible than another? □ A case study on the US Department of Energy's Hydrogen Program. □ Credible expectations build on recent progress and a substantiated path forward. □ When a pathway's credibility is challenged, technological 'losers' are dropped.

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