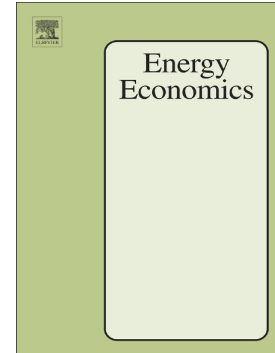


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Tight Oil Market Dynamics: Benchmarks, Breakeven Points, and Inelasticities

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Revision for Energy Economics

Tight Oil Market Dynamics: Benchmarks, Breakeven Points, and Inelasticities

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Abstract

When comparing oil and gas projects - their relative attractiveness, robustness, and contribution to markets - various dollar per barrel benchmarks are quoted in the literature and in public debates. Among these benchmarks are a variety of breakeven points (also called breakeven costs or breakeven prices), widely used to predict producer responses to market conditions. These analyses have not proved reliable because (1) there has been no broadly accepted agreement on the definitions of breakeven points, (2) there are various breakeven points (and other benchmarks) each of which is applicable only at a certain stage of the development of a resource, and (3) each breakeven point is considerably more dynamic than many observers anticipated, changing over time in response to internal and external drivers. In this paper we propose standardized definitions of each breakeven point, showing which elements of field and well development are included in each. We clarify the purpose of each breakeven point and specify at which stage of the development cycle the use of each becomes appropriate. We discuss in general terms the geological, geographical, product quality, and exchange rate factors that affect breakeven points. We describe other factors that contribute to tight oil market dynamics, including factors that accelerate the growth and retard the decline of production; technological and legal influences on the behavior of market participants; and infrastructure, labor, and financial inelasticities. The role of tight oil in short-term and medium-term oil market stability is discussed. Finally, we explore the implications of a broader, more rigorous, and more consistent application of the breakeven point concept, taking into account the inelasticities that accompany it.

Keywords: tight oil, shale, market dynamics, breakeven

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