

## Natural Gas Production Forecasts Using Diffusion Models

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**Abstract :** Different options for natural gas production in wide geographic areas may be described through diffusion of innovation models. This type of modeling approach provides an indirect estimate of an ultimately recoverable resource, URR, capture the quantitative effects of observed strategic interventions, and allow ex-ante assessments of future scenarios over time. In order to ensure a sustainable energy policy, it is important to forecast the availability of this natural resource. Considering a finite life cycle, in this paper we try to investigate the natural gas production of Myanmar and Algeria, two important natural gas provider in the world energy market. A number of homogeneous and heterogeneous diffusion models, with convenient extensions, have been used. Models validation has also been performed in terms of prediction capability.

**Keywords :** diffusion models, energy forecast, natural gas, nonlinear production

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