

论文

转型期中国物质生产能源消费与CO₂排放关联特征

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摘要:

论文利用计量经济模型,就近30 a来我国物质生产过程中能源消费与CO₂排放变动关联特征进行研究,结果表明:①物质生产部门能源消费的持续增长是我国能源消费总量增长与CO₂排放量增长的主要驱动因子;②物质生产部门的产业能源消费结构均衡度长期以来处于较低水平,呈现“低水平不平衡—平衡—较高水平不平衡”的变化规律;③物质生产部门能源消费-GDP脱钩弹性系数分布情况与物质生产部门CO₂排放-GDP脱钩弹性系数分布情况相似,均表明目前我国物质生产对能源消费的依赖度趋低,单位能源消费的经济产出量逐渐提高,但我国物质生产部门的经济产出与能源消费的弱脱钩关系相较于发达国家的强脱钩关系之间仍存在较大差距。最后,论文针对研究结论,从物质生产部门行业结构、能源消费结构、经济增长与能源消费间脱钩关系三个角度,提出调控未来物质生产部门能源消费的建议要点。

关键词: 物质生产 能源消费 二氧化碳 关联特征

Characteristics of Variable Association between Energy Consumption and CO₂ Emissions in Material Production Sector during the Period of Economic Transition

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Abstract:

This paper, applying econometrics model method, makes an analysis on variable association between energy consumption and CO₂ emissions in material production process in the recent 30 years in China. The result indicates that: 1) The growth of energy consumption of material production departments and the rising movement of CO₂ emissions are affected predominantly by the energy consumption in material production process; 2) the energy consumption equilibrium in material production sector has been at a low level, energy consumption always maintained a high concentration on the specific industries, but the phasic variation also existed, that reflects the phenomenon: imbalance at low level→balance at low level→imbalance at higher level; 3) in material production sector, Tapio indicator of energy-GDP(TIEG) is in a cluster in the weak decoupling range, that indicates the rate of energy consumption growth is lower than the rate of economic growth largely, but the level of energy consumption efficiency still is behind the developed countries; and 4) the Tapio indicator distributions of CO₂-GDP(TICG) and TIEG are very similar, but Tapio indicator of CO₂-GDP(TICG) was more concentrated and decoupled. Finally, the paper puts forward the next direction and priority of the future work.

Keywords: material production energy consumption CO₂ variable association

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