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The potential impact of energy policies on energy costs

Moving forward to the ambitious goals of climate neutrality governments are looking for the most cost-efficient solutions. Due to this, it is highly important to identify the potential costs positions to be reflected in the zero emissions models. The research focuses on the different world sustainable energy policy scenarios and corresponding policy instruments in relation with the factors affecting energy costs. The research concludes that factors affecting energy costs could be combined into to the three basic groups: energy demand factors, energy supply factors and energy system and network costs. It highlights that future persistence assessments against cyber threats should be treated with caution, as a false sense of security is a major vulnerability. Similarly, system scale changes can lead to an essential change in the threat perception. At the same time, digitization of energy systems has a great potential to effectively speed up efforts to achieve carbon neutrality to promote the achievements of data, analytics, and systems, and this can significantly increase the overall energy infrastructure efficiency and energy use with reduced costs. Development of climate neutral plans at the municipal level has also a particularly great potential, considering local features and opportunities for higher rate or renewable energy sources in the local energy portfolio. However, moving towards sustainability purposes, it is highly important to ensure an optimal energy trilemma balance without compromising energy security and ensuring relatively lower energy costs, facilitating a competitiveness of economy.

Key words: sustainability, energy costs, energy modelling, zero emissions

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