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“Towards a European Strategic Autonomy in the Energy Field”

Abstract

The proposed dissertation examines the crucial issue of European strategic energy autonomy, with a specific focus on the region's dependence on natural gas and the evaluation of various strategies to enhance energy independence. In an era where energy security is paramount due to geopolitical tensions and environmental concerns, this research aims to provide a comprehensive analysis of Europe's energy landscape, highlighting the historical context, current market dynamics, policy frameworks, and future prospects. The dissertation seeks to offer a nuanced understanding of the complexities involved in achieving energy autonomy, while proposing viable policy recommendations to bolster Europe’s energy security and sustainability.

European energy policy has undergone significant transformations over the decades, driven by the need to balance economic growth, environmental sustainability, and geopolitical stability. Natural gas has played a pivotal role in Europe’s energy mix, providing a substantial portion of the continent's energy needs. However, this reliance on external sources for natural gas has exposed Europe to vulnerabilities related to supply disruptions, price volatility, and geopolitical conflicts. The dissertation explores the historical and contemporary significance of natural gas within Europe, assessing the main sources of foreign dependence and the implications for energy security.

The natural gas market in Europe is characterized by a complex network of production, supply, and transport infrastructure. The research delves into the primary natural gas producing and supplying countries, highlighting the geopolitical and economic factors that influence the market. Key infrastructure components, such as pipelines and LNG terminals, are examined to understand their roles in ensuring a steady supply of natural gas. Additionally, the dissertation analyzes market dynamics and pricing policies that shape the economic landscape of natural gas in Europe.

European energy policies play a critical role in shaping the region's approach to natural gas and overall energy autonomy. The dissertation reviews the main legislative and regulatory frameworks governing natural gas in Europe, with an emphasis on diversification strategies aimed at reducing dependence on single suppliers. Measures to enhance energy security and supply resilience are evaluated, considering their effectiveness and potential areas for improvement. This analysis is complemented by an exploration of the geopolitical impacts of natural gas imports, the challenges of environmental sustainability, and the opportunities presented by technological innovations.

A significant component of the research involves case studies of key natural gas projects, such as the Nord Stream and Trans Adriatic Pipeline (TAP), which illustrate the practical challenges and opportunities in the quest for energy autonomy. These case studies provide real-world examples of how infrastructure projects can influence energy security and geopolitical relations.

Looking to the future, the dissertation projects potential trends in the natural gas market and evaluates various policy scenarios that could impact Europe’s energy landscape. By examining

these scenarios, the research aims to identify the most promising pathways for achieving greater energy autonomy. Policy recommendations are formulated based on the comprehensive analysis of historical data, market dynamics, and future projections, providing actionable insights for policymakers.

Proposed Research Methodology

The proposed research methodology combines qualitative and quantitative analyses, leveraging a robust literature review to ground the research in existing knowledge while contributing new insights through empirical analysis. This approach ensures a holistic understanding of the multifaceted issue of European energy autonomy, integrating historical perspectives, market analysis, policy evaluation, and future forecasting.

- Qualitative Analysis: This component includes an in-depth literature review of historical and contemporary sources related to European energy policy, natural gas market dynamics, and energy security strategies. Key documents, such as policy papers, regulatory frameworks, and geopolitical analyses, will be scrutinized to understand the evolution of Europe's energy landscape and the factors influencing current policies and practices.
- Quantitative Analysis: The quantitative aspect involves the analysis of statistical data related to natural gas production, supply, consumption, and pricing. This includes examining data from international energy agencies, market reports, and government publications. Statistical techniques will be used to identify trends, correlations, and patterns in the data, providing empirical evidence to support the qualitative findings.
- Case Studies: Detailed case studies of significant natural gas projects, such as the Nord Stream and TAP pipelines, will be conducted. These case studies will involve document analysis, interviews with key stakeholders (where possible), and evaluation of project impacts on energy security and geopolitical relations. The case study approach will offer practical insights into the challenges and opportunities associated with large-scale energy infrastructure projects.
- Policy Scenario Analysis: Future projections and policy scenarios will be developed based on current trends, potential technological advances and geopolitical developments. The scenarios will be analysed to assess their potential impacts on Europe's energy autonomy and to identify the most promising strategies for improving energy security.
- Policy Recommendations: Based on the findings from the qualitative and quantitative analyses, case studies, and scenario evaluations, policy recommendations will be formulated. These recommendations will aim to address the identified vulnerabilities in Europe's energy supply chain, promote sustainable energy practices, and enhance the region's strategic autonomy in the energy sector.