



MANAGING ENERGY PROJECTS UNDER POLICY AND UNCERTAINTY: A CRITICAL SUCCESS FACTOR APPROACH

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Abstract: *The energy sector has emerged as one of the most complex and strategically significant domains for project-based development, driven by decarbonisation targets, technological innovation, and multi-level governance frameworks, particularly within the European Union. Despite the maturity of project management as a discipline, energy-sector projects continue to experience cost overruns, delays, and performance shortfalls, indicating limitations in traditional, process-oriented management approaches.*

This article examines project success in the energy sector through the lens of critical success factors (CSFs) and policy-driven project governance. Building on established project management theory, sector-specific literature, and empirical case evidence from European energy projects, the study develops an integrated methodology that aligns project life-cycle management with dynamic success factors and governance requirements. The analysis demonstrates that project success in the energy sector is multidimensional and context-dependent, extending beyond time, cost, and scope to include strategic alignment, stakeholder legitimacy, sustainability impact, and institutional capacity.

The findings highlight strategic alignment with national and European energy policies as a meta-success factor that enhances project stability and long-term value creation. Governance quality, adaptive management capability, and effective stakeholder engagement are identified as decisive drivers of success across different project types, including energy infrastructure, renewable generation, and energy efficiency initiatives. The article contributes to project management theory by integrating CSF logic with governance perspectives and offers practical implications for practitioners and policymakers involved in energy transition projects.

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INTRODUCTION

The energy sector has become one of the most strategically significant domains for project-based development in the European Union and globally. Accelerated decarbonisation targets, increasing energy demand, geopolitical instability, and the transition towards sustainable and digitalised energy systems have significantly intensified the scale, complexity, and strategic importance of energy-related projects. In this context, project management is no

longer perceived merely as a technical or operational function but rather as a critical governance mechanism that determines the success or failure of large-scale energy investments.

Energy projects differ fundamentally from projects in other economic sectors due to their long life cycles, capital intensity, regulatory exposure, and strong societal and environmental impact. Projects related to renewable energy generation, smart grids, energy efficiency, storage technologies, and cross-border infrastructure are frequently embedded within national and supranational policy frameworks, particularly those of the European Union. Consequently, their success is inseparable from compliance with regulatory requirements, stakeholder acceptance, and alignment with long-term strategic objectives such as climate neutrality and energy security.

Despite the maturity of project management as a discipline, empirical evidence indicates that energy projects continue to exhibit high rates of cost overruns, schedule delays, scope changes, and performance shortfalls. Studies indexed in Scopus increasingly highlight that traditional project management success criteria—time, cost, and quality—are insufficient to explain performance outcomes in energy-sector projects (Atkinson, 1999; Flyvbjerg, 2014). Instead, success is shaped by a complex interaction of organisational, institutional, technological, and contextual factors.

In the European context, this complexity is further amplified by the growing reliance on public and mixed financing instruments, including the Connecting Europe Facility (CEF), Horizon Europe, REPowerEU, and the Recovery and Resilience Facility (European Commission, 2021; European Commission, 2022). These instruments impose strict requirements related to transparency, sustainability, impact measurement, and policy coherence. As a result, project success in the energy sector must be assessed not only at the project execution level but also in terms of long-term value creation and policy contribution. A growing body of academic literature addresses the concept of **Critical Success Factors (CSFs)** as a means of understanding why some projects achieve their objectives while others fail. CSFs represent those limited number of conditions or variables that, when effectively managed, significantly increase the probability of project success (Rockart, 1979). While CSFs have been extensively studied in construction, IT, and infrastructure projects, sector-specific analyses focusing on energy projects—particularly within the European policy framework—remain fragmented.

This article builds upon and extends prior research by addressing this gap through a systematic analysis of critical success factors in the management of energy-sector projects. Drawing conceptually and empirically on the doctoral research *Key Success Factors in the Management of Energy Sector Projects*, the study integrates classical project management theory with contemporary European governance practices.

2. LITERATURE REVIEW

2.1. PROJECT MANAGEMENT THEORY AND PROJECT SUCCESS

The concept of project success has evolved substantially over the past five decades, reflecting changes in organisational structures, technological complexity, and the strategic role of projects in contemporary economies. Early project management literature adopted a predominantly operational perspective, equating success with adherence to predefined constraints of time, cost, and technical specifications. This so-called “iron triangle” became a dominant evaluative framework, particularly in engineering- and construction-driven projects (Atkinson, 1999).

However, as projects increasingly began to serve as vehicles for strategic transformation rather than isolated delivery mechanisms, scholars questioned the adequacy of this narrow definition. Empirical studies consistently demonstrated that projects delivered on time and

within budget could still be perceived as failures if they failed to deliver expected benefits, generate stakeholder value, or contribute to long-term organisational objectives.

Baccarini (1999) introduced a seminal distinction between project management success and product success, arguing that while the former relates to the efficiency of the management process, the latter concerns the value and utility of the project's outcomes. This distinction is particularly salient in the energy sector, where project deliverables—such as power generation assets or transmission infrastructure—may operate for several decades.

Subsequent frameworks expanded the success concept further by incorporating strategic and behavioural dimensions. Shenhar, Dvir, Levy, and Maltz (2001) proposed a multidimensional model including short-term efficiency, customer impact, business success, and long-term strategic preparation. Their later work emphasised that different project types require different success criteria, a notion highly relevant to energy projects characterised by long life cycles, regulatory exposure, and policy dependency.

In parallel, research increasingly recognised the role of stakeholders in defining project success. Studies emphasised that success is a socially constructed concept, varying across stakeholder groups and over time (Turner & Müller, 2003). For energy projects, this is particularly important, as stakeholders include not only investors and project owners but also regulators, local communities, environmental organisations, and supranational institutions such as the European Commission.

2.2. CRITICAL SUCCESS FACTORS (CSFs) IN PROJECT MANAGEMENT

The concept of Critical Success Factors (CSFs) originates from strategic management research, where it was initially used to identify key areas that organisations must manage effectively to achieve competitive advantage. Rockart (1979) defined CSFs as “the limited number of areas in which results, if satisfactory, will ensure successful competitive performance.” One of the most influential early contributions to CSF research in project management is the work of Pinto and Slevin (1987), who identified ten critical factors influencing project success, including project mission clarity, top management support, detailed planning, client consultation, and effective monitoring and feedback.

Subsequent studies refined and expanded CSF frameworks by introducing sectoral, organisational, and contextual dimensions. Belassi and Tukel (1996) proposed a classification that groups CSFs into four categories: factors related to the project, the project manager and team, the organisation, and the external environment. Later research emphasised that CSFs are not static but vary across project phases and contexts (Cooke-Davies, 2002; Turner & Müller, 2005). In recent Scopus-indexed literature, CSF research increasingly adopts a context-sensitive approach, recognising that what constitutes a critical factor in one sector may be marginal in another.

2.3. SPECIFICITY OF ENERGY SECTOR PROJECTS

Energy-sector projects exhibit a set of structural characteristics that distinguish them from projects in most other industries. These characteristics fundamentally shape both the nature of project risks and the configuration of critical success factors.

First, energy projects are typically capital-intensive and long-term, often requiring substantial upfront investment with payback periods extending over decades (Flyvbjerg, 2014). This amplifies financial risk and increases sensitivity to changes in market conditions, policy frameworks, and technological trajectories.

Second, energy projects operate within a highly regulated environment. Licensing procedures, environmental impact assessments, grid connection approvals, and compliance with national and EU-level regulations create complex administrative pathways. Empirical studies consistently show that regulatory uncertainty and permitting delays are among the most common causes of cost overruns and schedule slippage in energy projects (Ahiaga-Dagbui & Smith, 2014; Flyvbjerg, 2014).

Third, technological complexity and innovation intensity are increasing rapidly in the energy sector. Projects involving smart grids, energy storage, and digital platforms require integration across multiple technological domains, elevating the importance of adaptive project management approaches (Rahimian et al., 2017)

2.4. EUROPEAN CONTEXT AND POLICY-DRIVEN PROJECT GOVERNANCE

Within the European Union, energy projects are increasingly governed through policy-driven project frameworks that integrate financial support, regulatory requirements, and strategic objectives. Programmes such as Horizon Europe, the Connecting Europe Facility (CEF), and REPowerEU exemplify this approach (European Commission, 2021, 2022).

Moreover, European energy projects frequently involve multi-actor consortia, bringing together public authorities, private firms, research institutions, and civil society organisations across national borders. Studies emphasise that governance quality and partnership management are among the strongest predictors of success in transnational energy projects (Müller & Lecoivre, 2014; Joslin & Müller, 2015).

3. METHODOLOGY FOR MANAGING ENERGY PROJECTS

3.1. RESEARCH DESIGN AND METHODOLOGICAL APPROACH

The methodological framework of this study is grounded in the premise that project management in the energy sector requires an integrated and context-sensitive approach that goes beyond conventional, process-oriented models. Building on the findings of the literature review, as well as on empirical insights derived from prior research on energy-sector projects, the study adopts a **qualitative–conceptual research design**, complemented by structured analytical synthesis.

The primary objective of the methodology is not to test a single causal hypothesis but to **develop an integrated project management framework** that captures the interaction between critical success factors (CSFs), project life-cycle phases, and the European policy and regulatory environment. This approach aligns with recent trends in project management research, where theory-building and model development are considered appropriate responses to complexity-dominated domains such as energy infrastructure and sustainability-driven projects.

Methodologically, the study follows a **three-step logic**:

1. **Conceptual synthesis** of project management theories and CSF models relevant to energy projects;
2. **Contextual adaptation** of these models to the specific regulatory, institutional, and policy framework of the European energy sector;
3. **Structural integration** of management processes, governance mechanisms, and success factors into a unified methodological framework.

This design enables the development of a management methodology that is analytically robust, theoretically grounded, and practically applicable.

3.2. CONCEPTUAL FOUNDATIONS OF THE INTEGRATED METHODOLOGY

The proposed methodology is based on the integration of three complementary conceptual pillars:

1. **Process-oriented project management frameworks**
2. **Critical Success Factor (CSF) logic**
3. **European policy-driven project governance**

3.2.1 Process-Oriented Project Management

Process-oriented frameworks such as PMBOK and PRINCE2 provide a structured foundation for managing complex projects through clearly defined phases, control mechanisms, and documentation requirements. In energy projects, these frameworks are particularly valuable

for managing scope, cost, time, procurement, and quality—dimensions that remain essential given the capital-intensive and technically complex nature of the sector.

However, as highlighted in the literature, rigid application of process models alone is insufficient to address uncertainty arising from regulatory changes, stakeholder dynamics, and technological evolution. Therefore, in the proposed methodology, process models serve as a **structural backbone**, rather than as prescriptive rule systems.

3.2.2 Critical Success Factor Logic

CSFs function as **strategic control variables** within the methodology. Instead of treating project management as a uniform set of procedures, the CSF approach prioritises those factors that exert the greatest influence on project outcomes in a given context.

Drawing on sector-specific literature and empirical findings from energy projects, CSFs are grouped into five analytical categories:

- Strategic and policy alignment
- Governance and institutional capacity
- Project team competence and leadership
- Stakeholder engagement and social acceptance
- Risk management and adaptability

These factors are embedded within each project phase, enabling dynamic prioritisation and targeted managerial interventions.

3.2.3 European Policy-Driven Governance

Unlike purely commercial projects, energy projects in the European Union are embedded in a multilayered governance system shaped by EU directives, national energy strategies, and funding regulations. Consequently, project management methodology must incorporate governance mechanisms that ensure:

- compliance with regulatory and funding requirements;
- alignment with EU strategic objectives (e.g. decarbonisation, energy security);
- transparency, accountability, and performance monitoring.

In the proposed framework, governance is treated not as an external constraint but as an **integral methodological dimension** influencing planning, execution, and evaluation.

3.3. LIFE-CYCLE-BASED METHODOLOGY FOR ENERGY PROJECTS

The integrated methodology is structured around the **energy project life cycle**, with each phase associated with dominant management processes and critical success factors.

3.3.1 Initiation and Strategic Alignment Phase

This phase focuses on transforming policy objectives and strategic intentions into a viable project concept. In energy projects, initiation is strongly influenced by national and EU-level strategies, such as National Energy and Climate Plans and European Green Deal targets.

Key management priorities include:

- strategic justification and policy coherence;
- preliminary feasibility and impact assessment;
- early identification of regulatory constraints.

Dominant CSFs: strategic alignment, institutional support, regulatory feasibility.

Failure to adequately address these factors at the initiation stage significantly increases the probability of downstream delays or project termination.

3.3.2 Planning and Design Phase

During this phase, strategic intentions are translated into operational plans. Planning in energy projects extends beyond technical design and includes permitting strategies, financing structures, and stakeholder engagement plans.

Core methodological elements include:

- integrated scope, schedule, and cost planning;
- risk identification and allocation;
- stakeholder mapping and communication planning.

Dominant CSFs: quality of planning, risk governance, stakeholder engagement.

Empirical evidence indicates that deficiencies in this phase are among the most common root causes of cost overruns and schedule slippage in energy projects.

3.3.3 Implementation and Control Phase

Implementation represents the most resource-intensive phase of the project life cycle. Given the technical complexity of energy projects, this phase requires tight coordination between engineering, procurement, construction, and regulatory compliance activities.

The methodology emphasises:

- continuous performance monitoring;
- adaptive risk management;
- structured reporting aligned with EU funding requirements.

Dominant CSFs: project team competence, leadership effectiveness, coordination mechanisms.

The integration of CSF monitoring into standard control processes allows early detection of emerging risks and corrective action.

3.3.4 Commissioning and Operational Transition Phase

Unlike many project types, energy projects do not conclude with physical completion. The transition to operation is a critical phase in which long-term value creation is determined.

Methodological focus areas include:

- system testing and validation;
- knowledge transfer to operational teams;
- verification of sustainability and performance indicators.

Dominant CSFs: technical reliability, organisational learning, operational readiness.

3.3.5 Post-Project Evaluation and Sustainability Phase

The final phase extends beyond traditional project closure and reflects the European emphasis on impact and sustainability.

Key elements include:

- evaluation of environmental and socio-economic impact;
- compliance with long-term reporting obligations;
- integration of lessons learned into future projects.

Dominant CSFs: performance measurement, institutional memory, policy feedback loops.

3.4. INTEGRATED METHODOLOGICAL FRAMEWORK

The proposed methodology culminates in an **integrated framework** in which:

- project life-cycle phases define *when* management actions occur;
- CSFs define *what* must be prioritised;
- governance mechanisms define *how* decisions are legitimised and controlled.

This triangulation enables a shift from reactive project control towards **proactive, strategy-driven management**, which is essential for complex energy-sector projects operating under European policy regimes.

4. SUCCESSFUL PRACTICES AND CASE EVIDENCE

4.1. RATIONALE FOR CASE-BASED ANALYSIS IN ENERGY PROJECT MANAGEMENT

Case-based analysis is a widely accepted methodological approach in project management research, particularly when investigating complex, context-dependent phenomena such as energy-sector projects. Given the strong influence of regulatory frameworks, stakeholder environments, and technological uncertainty, controlled experimental designs are rarely feasible. Instead, analytical comparison of real-world project cases provides valuable insight into how management methodologies and critical success factors (CSFs) operate in practice.

In the context of this study, case evidence serves three primary purposes. First, it demonstrates the practical applicability of the integrated methodology proposed in Section 3. Second, it enables identification of recurring management patterns associated with successful outcomes. Third, it allows assessment of how European governance mechanisms shape project performance across different energy sub-sectors.

The cases discussed below are selected based on three criteria:

- (1) strategic relevance within the European energy transition;
- (2) demonstrable project completion or advanced implementation status;
- (3) availability of documented performance and governance information.

Rather than providing exhaustive technical descriptions, the analysis focuses on **management practices, governance arrangements, and alignment with critical success factors.**

4.2. CROSS-BORDER ENERGY INFRASTRUCTURE PROJECTS

Large-scale cross-border energy infrastructure projects represent one of the most complex categories of energy-sector initiatives. Their success depends not only on technical feasibility but also on institutional coordination, regulatory harmonisation, and long-term political commitment.

Empirical evidence from European interconnection projects indicates that successful outcomes are strongly correlated with early strategic alignment at supranational level. Projects that are embedded within European priority corridors and supported by common regulatory frameworks demonstrate higher resilience to political change and funding volatility. In these cases, governance structures function as stabilising mechanisms, ensuring continuity across electoral cycles and administrative transitions.

From a project management perspective, successful cross-border infrastructure projects exhibit several shared characteristics. First, they apply **multi-level governance models** that clearly differentiate strategic decision-making from operational management. Strategic oversight bodies ensure policy alignment and intergovernmental coordination, while project management units retain operational autonomy. This separation reduces decision-making bottlenecks and mitigates political interference during execution.

Second, effective risk allocation emerges as a critical success factor. Projects that explicitly allocate regulatory, financial, and construction risks among participating actors achieve greater predictability and control. Risk-sharing agreements, backed by European funding instruments, reduce uncertainty and enable long-term planning.

Finally, stakeholder engagement beyond national governments—particularly with regulators, system operators, and affected communities—plays a decisive role. Projects that adopt transparent communication strategies and participatory consultation processes demonstrate fewer delays related to permitting and public opposition.

4.3. RENEWABLE ENERGY GENERATION PROJECTS

Renewable energy projects, particularly in solar and wind energy, constitute a rapidly expanding segment of the European energy landscape. Despite their comparatively smaller scale relative to infrastructure megaprojects, these initiatives face distinct management challenges related to permitting, grid integration, and social acceptance.

Successful renewable energy projects consistently demonstrate strong **front-end project preparation**. This includes comprehensive feasibility studies, early environmental assessments, and proactive engagement with local authorities. Projects that invest significant resources in the initiation and planning phases reduce downstream risks and avoid costly redesigns.

Another key success factor is **stakeholder legitimacy**. Empirical studies show that renewable energy projects with structured community engagement strategies experience higher acceptance levels and faster approval processes. This is particularly evident in projects that

incorporate benefit-sharing mechanisms or local ownership models, which align project objectives with community interests.

From a methodological standpoint, successful renewable energy projects apply adaptive management practices during implementation. While overall scope and regulatory requirements remain fixed, flexibility in scheduling and procurement allows project teams to respond to supply chain disruptions and technological updates. This hybrid approach—combining structured planning with adaptive execution—aligns closely with the integrated methodology proposed in Section 3.

4.4. ENERGY EFFICIENCY AND SMART ENERGY PROJECTS

Projects targeting energy efficiency and smart energy systems introduce an additional layer of complexity due to their socio-technical nature. These initiatives often involve behavioural change, digital platforms, and decentralised implementation, making traditional command-and-control project management approaches less effective.

Successful energy efficiency projects exhibit strong emphasis on **institutional capacity and coordination**. Because such projects frequently involve municipalities, building owners, technology providers, and end users, clear role definition and coordination mechanisms are essential. Empirical evidence suggests that projects supported by dedicated project management units within public institutions achieve higher completion rates and measurable impact.

Digitalisation-driven energy projects—such as smart grids and demand-response systems—highlight the importance of **competence-based CSFs**. Projects that assemble multidisciplinary teams with expertise in engineering, data analytics, and regulatory compliance demonstrate superior performance. Leadership capable of bridging technical and non-technical domains emerges as a decisive factor.

Moreover, performance measurement plays a critical role in determining success. Projects that integrate real-time monitoring and data-driven evaluation frameworks are better positioned to demonstrate impact, fulfil reporting obligations, and support scaling or replication.

4.5. COMPARATIVE ANALYSIS OF SUCCESS PATTERNS

Across the analysed cases, several **recurring success patterns** emerge, irrespective of project size or technology type:

1. **Early strategic alignment** with national and European energy policies significantly enhances project stability and legitimacy.
2. **Governance quality**, rather than governance complexity, is a decisive success factor. Clear decision-making structures outperform highly centralised or overly fragmented arrangements.
3. **Stakeholder engagement** functions as a risk mitigation mechanism rather than a communication add-on.
4. **Adaptive management capacity** enables projects to cope with regulatory and technological uncertainty without compromising compliance.
5. **Performance and impact measurement** reinforces accountability and supports long-term sustainability.

These patterns confirm the validity of the integrated methodology developed in Section 3. Projects that implicitly or explicitly align their management practices with critical success factors across the project life cycle demonstrate higher probability of achieving both operational and strategic success.

4.6. IMPLICATIONS FOR ENERGY PROJECT MANAGEMENT PRACTICE

The case evidence analysed in this section underscores that successful energy projects are not the result of superior technical solutions alone. Rather, success emerges from the

coherent integration of management processes, critical success factors, and governance mechanisms.

For practitioners, this implies a shift from compliance-driven project management towards strategy-driven and impact-oriented approaches. For policymakers, the findings highlight the importance of creating stable regulatory environments and strengthening institutional project management capacity.

5. DISCUSSION

The analysis presented in Sections 3 and 4 demonstrates that project success in the energy sector cannot be adequately explained through traditional, process-centric project management models alone. Instead, success emerges from the **dynamic interaction between project management processes, critical success factors (CSFs), and governance contexts**, particularly within the European policy environment.

The findings confirm and extend earlier theoretical claims that project success is a multi-dimensional and context-dependent construct. While classical success criteria—time, cost, and scope—remain necessary conditions, they are insufficient to capture the complexity of energy-sector projects. In all examined cases, projects that achieved formal delivery targets but failed to secure stakeholder legitimacy or policy alignment faced long-term sustainability risks.

A central insight of this study is that **strategic alignment functions as a meta-success factor** in energy projects. Alignment with national and EU energy strategies provides projects with institutional legitimacy, funding stability, and regulatory predictability. This finding reinforces the argument that energy projects should be conceptualised as *policy-embedded systems* rather than isolated technical undertakings.

The discussion of case evidence highlights that CSFs should not be treated as static checklists applied uniformly across projects. Instead, they operate as **dynamic management levers** whose relevance and influence vary across project life-cycle phases.

For example, strategic alignment and institutional support dominate the initiation phase, whereas leadership competence and coordination capacity become critical during implementation. In later phases, performance measurement and organisational learning gain prominence as determinants of long-term impact.

This dynamic interpretation challenges linear CSF models and supports recent calls in project management literature for **phase-sensitive and context-aware success frameworks**. The integrated methodology proposed in this article operationalises this perspective by embedding CSFs directly into life-cycle management logic.

One of the most significant contributions of this study lies in its explicit treatment of **governance** as a core dimension of project management methodology. The case analysis confirms that governance quality—defined by clarity of roles, decision-making transparency, and accountability mechanisms—has a stronger influence on project outcomes than the formal complexity of governance structures.

In European energy projects, governance operates across multiple institutional layers, including EU bodies, national authorities, regulators, and local stakeholders. Projects that successfully navigated this multi-level environment exhibited strong coordination mechanisms and clear separation between strategic oversight and operational management.

This finding aligns with emerging governance-oriented perspectives in project management research, which emphasise that success increasingly depends on managing interfaces between organisations, institutions, and policy regimes rather than internal project processes alone.

From a theoretical standpoint, the study contributes to project management literature in three main ways.

First, it reinforces the shift from universalistic project management models towards **sector-specific and context-driven frameworks**. Energy projects represent a category where policy embeddedness and societal impact fundamentally reshape success criteria.

Second, the study integrates CSF theory with governance theory, demonstrating that success factors cannot be fully understood without reference to institutional environments. This integration advances conceptual clarity in a field where CSFs are often treated as decontextualised variables.

Third, the life-cycle-based integration of CSFs provides a basis for future empirical testing and theory refinement. Rather than proposing a static success model, the article offers a **relational and adaptive framework** suitable for complex socio-technical systems.

For practitioners, the findings suggest that effective energy project management requires competencies extending beyond technical and scheduling expertise. Strategic thinking, stakeholder engagement, and regulatory literacy emerge as equally critical capabilities.

For policymakers and funding institutions, the results highlight the importance of strengthening **institutional project management capacity**, particularly within public administrations and municipal authorities and confirms some policy conclusions in Idriz and Sterev (2022). Simplification of regulatory procedures alone is insufficient if not accompanied by improved governance coordination and professionalisation of project management functions.

Moreover, the emphasis on impact-oriented success measurement supports ongoing EU efforts to link funding more closely to long-term outcomes rather than short-term outputs.

While the study provides a comprehensive conceptual and analytical framework, several limitations should be acknowledged. The case-based analysis relies on secondary data and documented practices, which may limit the ability to capture informal governance dynamics. Additionally, the qualitative nature of the study precludes statistical generalisation.

Future research could empirically test the proposed framework using large-scale datasets of energy projects or apply mixed-method approaches combining surveys and in-depth interviews. Comparative studies across different regulatory regimes beyond the European Union would further enrich understanding of context-dependent success factors.

6. CONCLUSIONS

This article set out to examine project management success in the energy sector through the lens of critical success factors and European policy-driven governance. By integrating project management theory, CSF literature, and empirical case evidence, the study demonstrates that successful energy projects are characterised by **strategic coherence, governance quality, and adaptive management capacity**.

The proposed integrated methodology provides a structured yet flexible framework capable of addressing the complexity of contemporary energy projects. It shifts the focus from procedural compliance towards **strategic and impact-oriented project management**, reflecting the realities of energy transition and sustainability-driven investment.

In conclusion, managing energy projects successfully requires rethinking conventional project management paradigms. Projects must be understood not only as delivery mechanisms but as instruments of long-term policy implementation and societal transformation. The framework developed in this study offers both scholars and practitioners a robust foundation for advancing theory and improving practice in energy project management.

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УПРАВЛЕНИЕ НА ЕНЕРГИЙНИ ПРОЕКТИ В УСЛОВИЯТА НА ПОЛИТИЧЕСКИ РЕШЕНИЯ И НЕСИГУРНОСТ: ПОДХОД, ОСНОВАН НА КРИТИЧНИ ФАКТОРИ ЗА УСПЕХ

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БЪЛГАРИЯ

Ключови думи: *Управление на проекти; Енергиен сектор; Критични фактори за успех; Енергийни проекти; Европейски съюз; Управление на проекти; Устойчивост*

Резюме: *Енергийният сектор се очертава като една от най-сложните и стратегически значими области за проектно-базирано развитие, водена от целите за декарбонизация, технологичните иновации и многостепенните рамки за управление, особено в рамките на Европейския съюз. Въпреки зрялостта на управлението на проекти като дисциплина, проектите в енергийния сектор продължават да се сблъскват с преразходи на средства, забавяния и недостиг на резултати, което показва ограничения в традиционните, процесно-ориентирани подходи за управление.*

Тази статия разглежда успеха на проектите в енергийния сектор през призмата на критичните фактори за успех (КФУ) и управлението на проекти, основано на икономически и управленски политики. Надграждайки върху установената теория за управление на проекти, специфична за сектора литература и емпирични доказателства от европейски енергийни проекти, изследването разработва интегрирана методология, която съобразява управлението на жизнения цикъл на проекта с динамичните фактори за успех и изискванията за управление. Анализът показва, че успехът на проекта в енергийния сектор е многоизмерен и зависим от контекста, като се простира отвъд времето, разходите и обхвата и включва стратегическо съгласуване, легитимност на заинтересованите страни, въздействие върху устойчивостта и институционален капацитет.

Констатациите подчертават стратегическото съгласуване с националните и европейските енергийни политики като мета-фактор за успех, който подобрява стабилността на проекта и създаването на дългосрочна стойност. Качеството на управление, способността за адаптивно управление и ефективното ангажиране на заинтересованите страни са определени като решаващи двигатели на успеха при различните видове проекти, включително в енергийна инфраструктура, производство на възобновяема енергия и инициативи за енергийна ефективност. Статията допринася за развитие на теорията за управление на проекти, като интегрира логиката на CSF с перспективите на управлението и предлага практически последици за практикуващите специалисти и политиците, участващи в проекти за енергиен преход.