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# Leveraging Green Public Procurement to Drive Energy Efficiency in European Public Buildings

10 July 2024

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WP3 Sectorally applied Sustainable Public Procurement



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 956696.



# Leveraging Green Public Procurement to Drive Energy Efficiency in European Public Buildings

## Introduction

The building sector represents 40% of the EU's total energy consumption and 36% of greenhouse gas emissions (IEA, 2022). Public buildings, a significant part of this footprint, offer a critical leverage point for change. Green Public Procurement (GPP), the integration of environmental criteria into public tenders, can drive demand for energy-efficient buildings and catalyze market transformation.

While the EU Public Procurement Directives (2014/24/EU and 2014/25/EU) enable GPP implementation, adoption remains inconsistent. This brief aims to:

1. Assess the current state of GPP implementation for energy efficiency in public buildings
2. Identify key barriers and challenges
3. Provide actionable policy recommendations grounded in a mission-oriented approach to enhance GPP as a strategic driver for sustainable building

Methodology - the findings and recommendations presented draw upon:

- Survey responses from 197 public procurers and construction businesses in Romania regarding barriers to nearly Zero Energy Building procurement
- In-depth interviews with 30 procurement experts, policymakers, academia and practitioners across EU countries exploring GPP potential, implementation challenges and success factors
- Comparative case study of 5 EU countries
- Literature review of GPP adoption in the EU and case study analysis

## Current State of GPP Implementation in the EU

Despite the opportunities presented by the 2014 Procurement Directives, GPP uptake remains uneven across member states (Rosell, 2021; OECD, 2023). Frontrunners like the Netherlands target 100% integration of green criteria in public contracts, while others lack basic GPP frameworks (European Commission, 2021; Rosell, 2021). For example, GPP accounts for less than 20% of total procurement value in countries like Romania, Bulgaria and Hungary (Rosell, 2021).

A study of the Tenders Electronic Daily (TED) database from 2006-2017 found that only 7.2% of Most Economically Advantageous Tender (MEAT) contracts incorporated green criteria (Rosell, 2021). This underutilization of GPP's potential is further exacerbated by a focus on discrete issues rather than comprehensive sustainability standards for whole buildings (Dodd et al., 2016). This narrow, compliance-oriented approach limits GPP's potential to stimulate deep energy renovation and the scale-up of nearly Zero Energy Buildings (nZEBs).

Contributing to this disparate adoption are systemic barriers such as financial constraints, bureaucratic inertia, and the complexity of green strategies (Mazzucato, 2020; Nilsson Lewis et al., 2023). These obstacles manifest organizationally, legally, politically, and economically, differing across nations and regions, signifying the need for a unified legislative approach to GPP.

Our empirical research identified several critical obstacles preventing broader GPP uptake for energy-efficient buildings:

1. Lack of technical expertise within contracting authorities to set appropriate award criteria and evaluate complex building projects (Interviews)



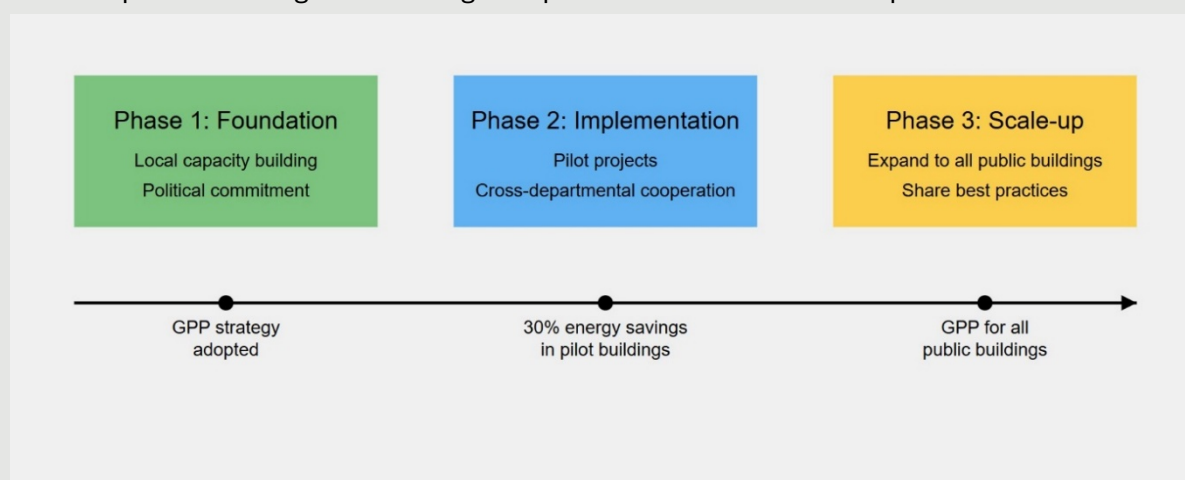
2. Higher upfront capital costs of energy efficiency measures and green construction, which conflict with shrinking public budgets (Interviews & Survey)
3. Unfavorable or unclear policies and regulations at national/local level, which often prioritize lowest-price rather than strategic goals (Interviews & Survey)
4. Risk aversion of procurement staff, favoring straightforward price criteria over sustainability impact to minimize legal challenges (Interviews)
5. Inconsistent practices and interpretations of GPP procedures, which create uncertainty and administrative burden for authorities (Interviews)

Other barriers cited in literature include lack of methodologies to verify green performance claims, low awareness of lifecycle costing benefits, misaligned incentives between owners and occupants, and limited market readiness for innovative solutions (Testa et al., 2016; Cheng et al., 2018).

### Success Factors: Lessons from Alba Iulia

The Romanian city of Alba Iulia demonstrates how a comprehensive, strategic approach to GPP can drive significant energy efficiency outcomes in public buildings. Since 2012, the city has achieved 30-35% energy savings and 36-38% CO2 reductions across 38 of its 58 public facilities, through a program that aligns with the three-phase framework presented in this brief (see Image 1):

1. **Foundation:** Alba Iulia established a strong GPP strategy, backed by political commitment and local capacity building. The city enshrined sustainable development in its long-term Energy Efficiency Improvement Program, setting concrete targets and measures to reduce energy consumption and emissions, with a focus on public buildings.
2. **Implementation:** The city carried out pilot projects focusing on cross-departmental cooperation. These projects integrated thermal renovation, renewable energy (e.g., PV on schools), smart management systems, and e-mobility measures, demonstrating the potential of a holistic approach to GPP.
3. **Scale-up:** Building on the success of its pilot projects, Alba Iulia is now expanding GPP to all public buildings and sharing best practices to drive wider adoption.

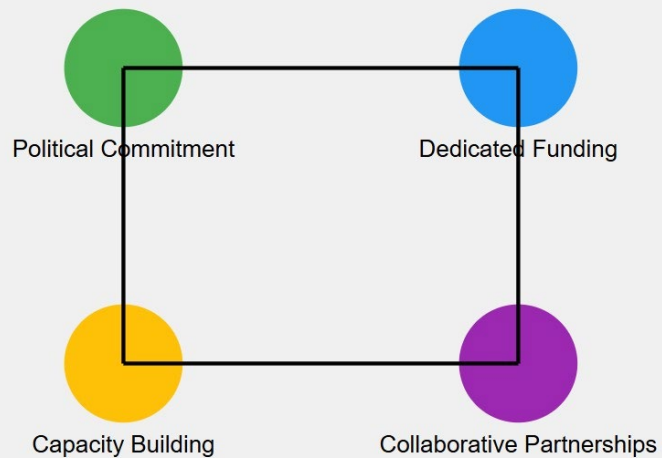


Alba Iulia's success factors mirror the key elements identified in this brief's policy recommendations (see Image 2):

- **Political commitment:** The city's leadership has demonstrated a strong commitment to sustainable development, providing the necessary vision and support for GPP initiatives.



- **Dedicated funding:** Alba Iulia has leveraged a combination of EU grants and innovative financing schemes, such as energy performance contracting, to fund its GPP projects.
- **Capacity building:** The city has invested in systematic capacity building and market consultation to align procurement needs with industry capabilities and build the necessary skills among its staff.
- **Collaborative partnerships:** Alba Iulia has fostered cross-departmental cooperation and partnerships with local stakeholders (e.g., university, businesses) and technology suppliers to enable a coordinated, multi-stakeholder approach to GPP.



Alba Iulia's achievements demonstrate that, even on an equal playing field, some cities can make significant strides through a strategic and collaborative approach to GPP implementation, serving as a model of best practices for others to follow. The city's substantial investments in energy efficiency not only benefit the environment and society but also make economic sense, as the resulting savings on energy bills and maintenance costs free up municipal budget to reinvest in further value-creating initiatives, exemplifying the potential of mission-oriented public procurement as envisioned by (Mazzucato, 2013; Hudson & Mazzucato, 2021). By actively shaping markets to address societal challenges, Alba Iulia illustrates how GPP can be leveraged as a powerful tool for innovation and sustainability.

### Policy Recommendations

Drawing on the research insights and lessons from Alba Iulia, the following actions can help scale up GPP as a driver of energy efficiency:

1. Develop a comprehensive EU GPP framework with standardized criteria, procedures, and reporting in collaboration with technical experts and control bodies to provide clear, consistent guidance for sustainable procurement.
2. Establish dedicated funding streams and incentive mechanisms for GPP in public buildings to cover the incremental costs of sustainable construction and motivate contracting authorities to prioritize energy efficiency.
3. Invest in systematic capacity building, including training, guides, and decision-support tools, to enable contracting authorities to implement GPP effectively and evaluate bids based on life-cycle costs and environmental performance.
4. Harmonize GPP criteria at EU level, focusing on recognized building certification schemes (e.g., BREEAM, LEED, DGNB) and nZEB standards to create a level playing field and drive market transformation.
5. Set up an EU-wide GPP monitoring framework and award scheme to track progress, enable benchmarking, disseminate best practices, and recognize leadership in sustainable procurement.



6. Promote the formation of multidisciplinary procurement teams that integrate technical, legal, financial, and sustainability expertise to manage the complexity of green building projects effectively.
7. Foster cross-sector collaboration and market dialogue to align GPP requirements with industry capabilities, stimulate innovation, and accelerate the development and deployment of energy-efficient solutions in the built environment.

## Conclusions

Green Public Procurement represents a powerful, flexible tool for driving energy efficiency in public buildings and shaping markets for sustainable solutions. By adopting a mission-oriented approach that positions GPP as a strategic instrument for innovation and sustainability, the EU can accelerate its transition to a climate-neutral built environment while generating long-term public value.

The recommendations in this brief aim to address key barriers, build capacity, and create a supportive ecosystem for effective GPP implementation. By investing in these areas, policymakers can unlock the full potential of GPP to generate long-term value for public authorities, stimulate innovation in the construction sector, and contribute significantly to the EU's climate objectives.

Realizing this potential requires strong political commitment, cross-sector collaboration, and a shift in perspective from procurement as a purely administrative function to a strategic tool for market shaping and societal change. With concerted effort and an enabling policy framework, GPP can become a cornerstone of the EU's mission-oriented strategy for sustainable, energy-efficient public buildings.

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