



## TRIPLE-A SURVEY ON BUILDING SECTOR: THE CASE OF GREECE

*Briefing Note No.2, February 2021*

### SUMMARY

The 2<sup>nd</sup> Triple-A Briefing Note analyses the results of the Triple-A stakeholder consultation in Greece. The consultation took place during the period from June to July 2020 and was a structured participatory approach that utilised a questionnaire dedicated for this purpose.

In particular, the Questionnaire developed as part of the Triple-A stakeholder consultation process was on the Building Sector and in cooperation with the Association of Greek Valuers (A.V.A.G.) received seventy-seven (77) responses by key stakeholders (i.e., bankers, investors, and real estate professionals).

### KEYWORDS

Building Sector, Association of Greek Valuers, COVID-19 impact, Greece

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## 1 Introduction

In order to successfully fulfil the scope of the Triple-A project, which is to identify and finance attractive Energy Efficiency (EE) project ideas, relevant key actors should be engaged<sup>1</sup>. To ensure the effectiveness of EE financing, it is important to understand what type of effort should be used for each target group, while participatory activities should be proposed including concrete actions, to foster their contribution<sup>2</sup>.

In this context, considering that the Triple-A Tools are going to be used by EE market professionals, project developers, investors, and financiers, their feedback and expertise become crucial for the Triple-A methodology development and implementation. Thus, a targeted Triple-A Questionnaire had been developed and distributed among relevant key players, in order to gather their insights, needs, and feedback to be incorporated into the Triple-A analysis and Tools<sup>3</sup>. This stakeholder consultation approach mainly focuses on validating and enhancing the Triple-A methodology, in order to fine-tune the Triple-A Tools in terms of their functionalities and specifications.

This Note analyses the results of the [Triple-A Questionnaire on the Building Sector](#), being a part of the Triple-A stakeholders consultation process for the Greek case study. The survey took place during the period from June to July 2020 and 77 responses were received by key stakeholders such as bankers, investors, and real estate professionals, all Members of the Association of Greek Valuers (A.VA.G.). Due to the COVID-19 pandemic, the consultation process has been realised via online methods, disseminating the Triple-A questionnaire in an online form and engaging stakeholders mainly via e-mail.

## 2 Triple-A Questionnaire

The main objectives of this online questionnaire (Figure 1) are to:

- assess the current situation of the Greek building stock in terms of EE;
- outline the behaviour of Greek stakeholders regarding EE in buildings;
- outline the link between the EE performance of buildings and their value in the real estate market;
- evaluate the added value of implementing EE investments in the building sector;
- fine-tune and harmonise the Triple-A Tools, in order to extract more accurate and according to the user needs and priorities results.

The figure displays two overlapping screenshots of the Triple-A Questionnaire for the Building Sector. The top screenshot shows the title 'TRIPLE-A Questionnaire for Building Sector' and a brief introduction. The bottom screenshot shows a specific question: '2. Current building stock situation in your portfolio' with sub-question '2.1 Which is the estimated percentage of buildings in your portfolio, that have a (voluntary) Energy Performance Certificate (or Energy Label)?'. Below the question are four radio button options: '0% - 20%', '20% - 40%', '40% - 60%', and '60% - 80%'.

Figure 1: Triple-A Questionnaire on Building Sector

<sup>1</sup> Karakosta, C., Papapostolou, A., Vasileiou, G., Psarras, J. (2021). Financial Schemes for Energy Efficiency Projects: Lessons Learnt from In-Country Demonstrations. Energy Services Fundamentals and Financing. Edited by: David Borge-Diez and Enrique Rosales-Asensio. USA: Academic Press, Elsevier, ISBN: 9780128205921, <https://doi.org/10.1016/C2018-0-04950-6>, pp 55-78

<sup>2</sup> Papapostolou, A., Karakosta, C., Mylona, Z., Psarras, J. (2020). Financing Sustainable Energy Efficiency Projects: The Role of Stakeholders. Book of Proceedings of the XIV Balkan Conference on Operational Research, Operational Research in the Era of Digital Transformation and Business Analytics, 30 September - 3 October 2020, Thessaloniki, Greece, (pp. 116-120), ISBN – 978-618-85079-0-6.

<sup>3</sup> Triple-A (2020). Final Standardised Triple-A Tools, Deliverable 4.2, Horizon2020 Triple-A project, No. 846569

The main characteristics of the questionnaire are the following:

- Explorative, semi-quantitative online questionnaire.
- Different question formats, from Likert-like scales to multiple choice and free text boxes.
- Questionnaire Dissemination Tool: Google Forms.

The questions were structured around 6 sections:

1. Current building stock situation in stakeholder's portfolio.
2. Behaviour of stakeholders towards EE upgrades of buildings.
3. Relation between EE upgrades and value of property.
4. Identification of risks in EE projects.
5. Contribution of Triple-A Tools to the real estate sector.
6. Use of state-of-the-art Tools in the real estate sector.

The findings of the analysis outline that most of the buildings with Energy Performance Contract (EPC) pertain to poor or really poor performance (classes D-G), while the majority of owners would not assess their asset's energy performance, if they were not obliged by law.

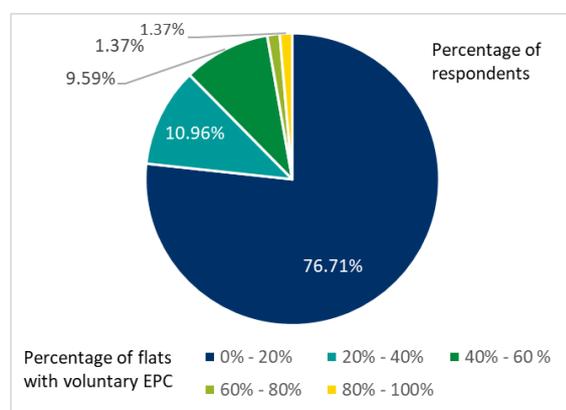


Figure 2: Distribution of flats with a voluntary EPC

Only 13% of the flats with EPC are high energy efficient buildings, demonstrating the need of action to be taken towards mainstreaming EE, at least in the building sector (Figures 2 & 3).

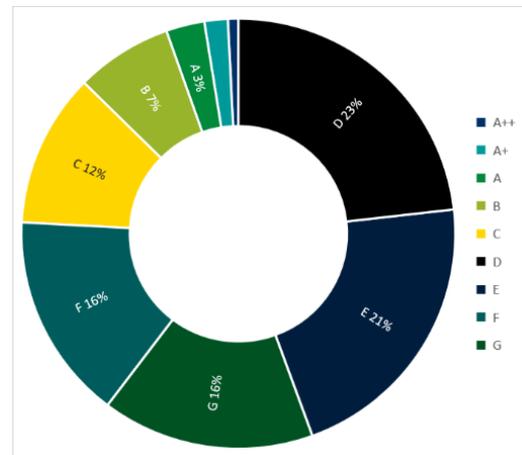


Figure 3. EPC classes allocation of the Greek building stock

In Greece only a small evolution apropos EE in building assets is recorded. At the same time, no difference has been noticed in buyers' or renters' behaviour since the formal obligation for EPCs in the country (Figure 4).

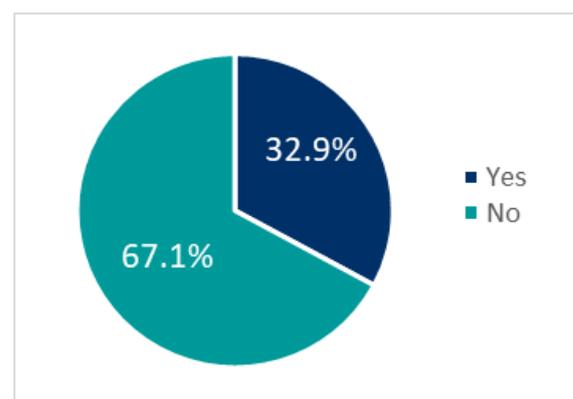


Figure 4: Change of stakeholders' preferences and selection criteria since EPC became obligatory in Greece

Most of the responders have expressed their belief that the pandemic imposed an impact on the real estate sector and affected it to some (47.4%), moderate (21.1%), or large (10.5%) extent. The absence of negative results from the COVID-19 has been observed by a relatively low share (2.6%) of the responders (Figure 5).

With regards to the increase of property values that EE measures provoke, envelope retrofits constitute mainly the EE upgrade with the highest correlation to the increase in property value, followed by lighting appliances' retrofits. Measures related to district energy networks have the lowest correlation between EE measures and asset price, most probably due

to the low popularity of such infrastructures in Greece (Figure 6).

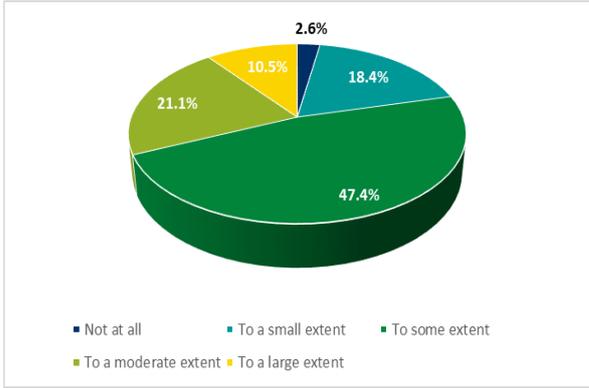


Figure 5: Impact of COVID-19 in the real estate sector

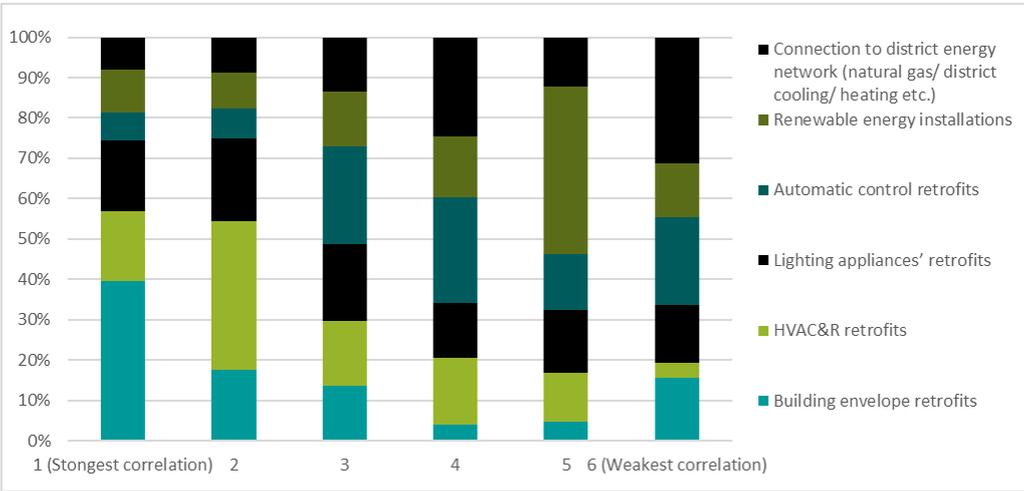


Figure 6: Correlation between EE measures and the price of the asset

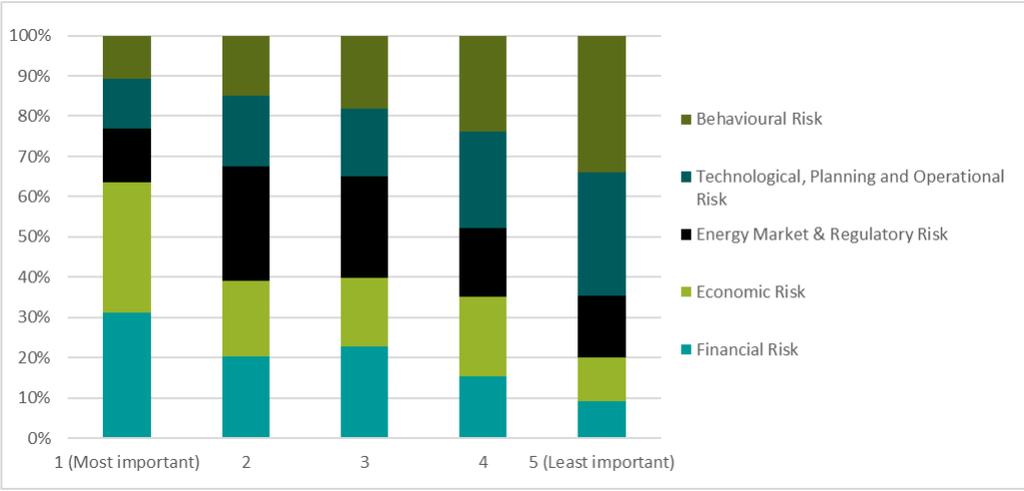
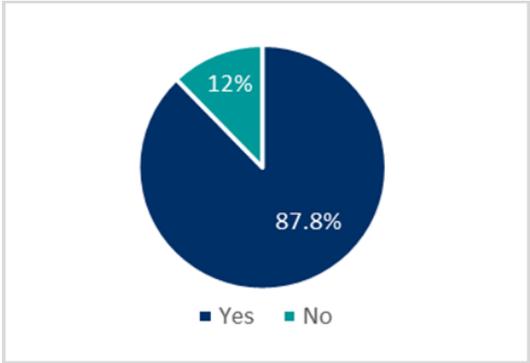


Figure 7: Importance of the most popular Risk Categories in EE financing

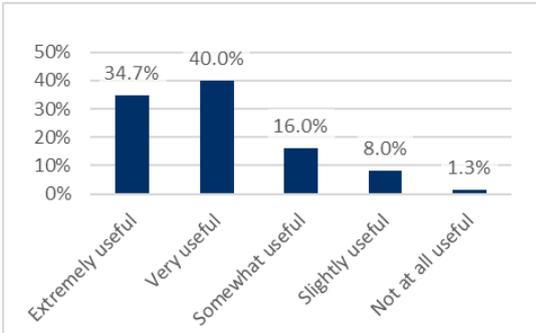
Concerning the main risks that halt EE measures from being implemented, the financial risk is recorded as the most critical, followed by the energy market and regulatory risk<sup>4</sup>. Besides, additional risk factors constitute the absence of proper education, technical expertise and adequate certification, the consent of building property owners to these developments, the lack of proper works certification and the frequent defects in constructions (Figure 7).

Remarkable positive response has been observed in favour of possible online platforms that would present building properties selected for EE upgrades (such as the Triple-A Tools) (Figure 8).



**Figure 8: Interest of respondents in online EE financing tools**

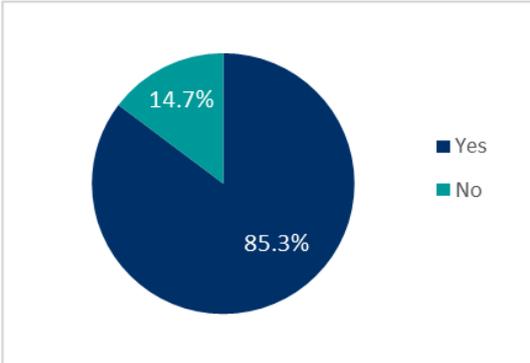
In addition, most of the participants found the state-of-the-art financing platforms extremely or very useful (Figure 9).



**Figure 9: Perception of respondents towards state-of-the-art financing platforms**

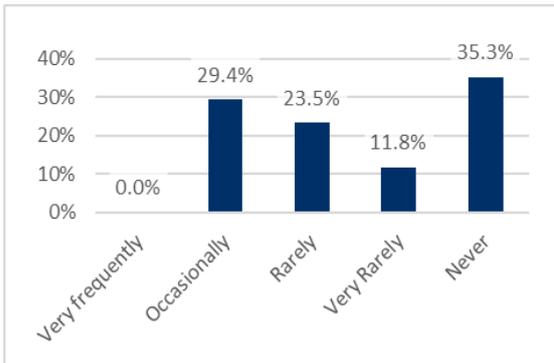
Coupled with the positive feedback on the development of online tools, a significant amount of the respondents would provide statistical data for sales and rents for academic research.

Remarkably, the vast majority of the A.V.A.G. members apply Automated Valuation Models (AVMs) for professional tasks (Figure 10).



**Figure 10: Use of AVMs**

With regards to the frequency of use of AVMs, one-third of the respondents (real estate professionals) have stated that they never use AVMs to evaluate building assets (Figure 11). Thus, it is evident that customised to the stakeholders' needs and user-friendly evaluation Tools would provide services of high value.



**Figure 11: Frequency of use of AVMs**

<sup>4</sup> Triple-A (2020). Final Report on Risks of Energy Efficiency Financing and Mitigation Strategies Typology, Deliverable 3.1, Horizon2020 Triple-A project, No. 846569.

### 3 Conclusions

After analysing the responses received the key highlights arisen are:

- Buildings' owners are not expected to **assess their assets' energy performance** by their own will.
- It is estimated that the majority of buildings assessed in Greece are in the **lowest EE classes**.
- Stakeholders' **interest** has hardly shifted towards **EE in buildings**.
- **EE profile of a building** is considered a **valuable asset** for long-term capital investments.
- **Lack of capital** and the **high costs** compose the major factors that hinder buildings' owners to implement EE measures.
- **Building envelope retrofits** are expected to **increase the value** of the property when being applied.
- **COVID-19 pandemic** has **affected** the real estate sector.
- When EE upgrades have been applied to a building, a **price increase** is foreseen in case of selling or renting a property.
- **Financial and economic risks** were rated as the most critical ones affecting the successful financing of EE investments.
- **Triple-A Tools** could provide services of high-value in the real estate sector.

#### TRIPLE-A IN BRIEF

Triple-A -Enhancing at an Early Stage the Investment Value Chain of EE Projects - is an EU-funded research project under the Horizon 2020 programme, aiming to assist financial institutions to increase their deployment of capital in EE, making investments more transparent.

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