



Project Progress Update

1. General Information

1.1. Program and Project information	
Name of the Program:	PRIZMA_TT
Name of the Project:	Forward-Looking Framework for Accelerating Households' Green Energy Transition
The Project acronym:	FF GreEN
Reference period for the Project Progress Update (Start date - End date):	Start date: 03/01/2024 - End date: 02/07/2024

2. Project Progress Update

2.1. Briefly describe the progress of your project and provide information if the project is realizing in accordance with the project description and contract. Include information such as accomplished deliverables/results, challenges, risks, and other relevant information for the reference period.

The project has been realized following the project description and contract. All envisaged deliverables and milestones for the first six months of project realization have been delivered and achieved.

The project officially started on January 3rd, and the project Kick-off meeting was held on January 29th (<https://ffgreen.rgf.bg.ac.rs/?p=1304>). The project proposal envisaged quarterly reporting to the Science Fund. Considering obligatory reporting every six months, D1.1 for the first quarter (M3) was realized as a short note about project realization from 3.1.2024 to 2.4.2024. was distributed to all team members.

The research started with an analysis of currently used technologies in households and mapping and assessment of energy-efficient technologies aiming to increase RES share in households (WP2 - D2.1). Concerning outdated, low-efficiency, fossil fuel-powered heating systems, common throughout municipalities and urban settlements, their evaluation was done and the suggestions for appropriate improvements or complete replacement by more efficient alternatives were considered to provide significant energy savings followed by economic and environmental benefits. Therefore D2.1 provided suggestions about the type, size, and features of the retrofit/improvement. A simplified pattern (Manual) for feasibility estimation and planning of heating systems retrofit was delivered. Results conducted in this part of the research have been published in Simon Muhić, Dimitrije Manić, Ante Čikić, Mirko Komatina, Influence of building thermal envelope modeling parameters on results of building energy simulation, Journal of Building Engineering 87 (2024) 109011, <https://doi.org/10.1016/j.job.2024.109011>.

In WP3, research related to energy policy concerning the household sector was realized (WP3-D.3.1). One of the aims of this WP was to present the EU's regulatory and strategic framework "Clean Energy for All Europeans" in the part related to the household sector and to analyze its transposition into key legal provisions dealing with this topic in the Republic of Serbia. The package of legislative measures "Clean Energy for All Europeans" is a comprehensive set of laws defining European climate and energy policy after 2020. This package encompasses and links a series of topics related to the household sector. Through this package, member states are required to set high goals for energy efficiency and decarbonization in the construction and revitalization of residential buildings, while simultaneously implementing measures concerning households affected by energy poverty. The Directive on the Energy Performance of Buildings, the Energy Efficiency Directive, the Renewable Energy Directive, the Regulation on the Governance of the Energy Union and Climate Action, and the Regulation on the Establishment of a Framework for Achieving Climate Neutrality cover the main issues related to energy transition policy in households in the European Union. As a member of the Energy Community and a candidate for membership in the European Union, Serbia has committed to harmonizing its energy policy and legislation, accepting technical assistance and support in implementing reforms to adapt the national energy system to European standards. This research was presented at the International Conference Energy 2024, held from 25th to 28th of June 2024 on Zlatibor and the summary was published in the Book of abstract. The full-length paper will be published in the journal "Energija, ekonomija, ekologija". In the framework of the same WP, the survey questionnaire (WP3-D3.2) was created. It will be used in the survey of a representative sample of households. The questionnaire was formed based on a review of the best international practices concerning the local specificities of the target population. In addition, a similar pilot questionnaire was used for the survey of representatives of district heating systems in Serbia. The results of survey was published in paper Marija Živković, Dejan Ivezić, Boban Pavlović, BARRIERS TO DECARBONIZATION OF DISTRICT HEATING SYSTEMS IN SERBIA – VIEWS OF HEATING PLANT REPRESENTATIVES, Proceedings of the professional-scientific conference TOPS 2024, Zlatibor, Jun 2024. ISBN 978-86311-12-2 (in Serbian).

In WP7, The dissemination and exploitation plan was realized (WP7-D7.1). This plan described the targeted dissemination and exploitation activities and channels for the project as well as the general dissemination and exploitation strategy. The realization of activities proposed in this plan has been immediately started. It included the creation of the website (WP7-D7.2) and profiles on social networks (LinkedIn and Instagram). In addition, the project team presented the project in the journal "Diplomacy@Commerce"

Accomplished deliverables/milestones are, as follows:

Deliverable D1.1. Quarterly administrative and financial report The project proposal envisaged quarterly reporting to the Science Fund. Considering obligatory reporting every six months, D1.1 for the first quarter (M3) was realized as a short note about project realization from 3.1.2024 to 2.4.2024. (<https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2024/07/Note-about-project-realization-in-period-3.1.2024---2.4.2024.pdf>).

Deliverable D2.1. Manual with the rule of thumb retrofit solutions with integrated RES hybrid systems for residential buildings based on feasibility assessment; Realised in June 2024; Available at <https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2024/06/Smernice-za-energetsku-sanaciju-i-upotrebu-OIE-i-toplotnih-pumpi-integriranih-u-hibridne-sisteme-za-grejanje-i-hlajenje-stambenih-objekata-1.pdf> The energy consumption of characteristic types of residential buildings in the Republic of Serbia has been surveyed. The interdependence of energy renovation of the existing buildings and potential patterns of energy retrofit solutions and improvements based on renewable energy systems, heat pumps, and thermal energy storage has been disclosed. The outcomes should serve as a rule of thumb and a cornerstone for the next stages of optimization of advanced hybrid energy systems for residential buildings.

Deliverable D3.1. Report on energy policy concerning households; Realised in March 2024; Available at https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2024/03/Politike-i-instrumenti-EU-i-RS_260324.pdf The existing energy policy framework was analyzed in this document. The analysis included EU, national, and local legislative and strategic frameworks (strategic documents, policy documents related to RES, energy efficiency, and communal utilities). The policy instruments implemented at the local/national level to develop the policy mixtures in the forward-looking scenario analysis were considered.

Deliverable D3.2. Survey questionnaires; Realised in June 2024; Available at <https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2024/06/Survey-Questionnaire.pdf> The questionnaire was created. It will be used in the survey of a representative sample of households. The questionnaire was formed based on a review of the best international practices concerning the local specificities of the target population.

Deliverable D7.1/Milestone M7.1 Dissemination and exploitation plan; Realised in March 2024; Available at <https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2024/03/Dissemination-and-Communication-StrategyFFGrEN1.pdf> This plan described the targeted dissemination and exploitation activities and channels for the project as well as the general dissemination and exploitation strategy.

Deliverable D7.2/Milestone M7.2 Web site & Project profiles on social networks; Realised in March 2024; Web site available at: <https://ffgreen.rgf.bg.ac.rs/>
Profiles on social networks available at: <https://www.linkedin.com/company/project-ffgreen/>; <https://www.instagram.com/project.fffgreen/>

By filling out this section, Principal Investigator confirms that all planned activities, milestones and deliverables are accomplished in accordance to the Project Plan and Gantt Chart of the Project. Any delay or deviation from the Project Description and the Gantt Chart should be reported and explained in the section 2.1.1. of the Project Progress Update.

* Please keep the same order and numeration of project activities, milestones and deliverables as it is in the Project Description and the Gantt Chart.

2.1.1. Please provide justification if there were any deviations from the project implementation plan or contract in the reference period. In case that any activity, milestone or deliverable is not reached in accordance to the plan, please specify them and provide their names and numbers as it is stated in the Project Description and in the Gantt Chart, and also provide justification of deviations.

N/A. There were no deviations from the project implementation plan or contract in the reference period.

* Please keep the same order and numeration of project activities, milestones and deliverables as it is in the Project Description and the Gantt Chart.

2.1.2. If applicable, please describe relevant Environmental and Social Management Framework activities for the reference period. Please provide details in terms of Environmental and Social Management Checklist/Plan implementation for the reference period (monitoring activities, risk management, mitigation plan). Please list official protocols or permissions obtained by the public authorities you follow, if any.

N/A. There were no relevant Environmental and Social Management Framework activities for the reference period.

2.1.3. If applicable, please describe activities related to the Ethics issues of your project (research involving the use of animals/human participants or material, personal data protection, artificial intelligence etc). In case that any activity related to these issues was undertaken and/or any ethical risk emerged in the reference period, please elaborate. Please list official protocols or ethical permissions obtained in the reference period, if any.

N/A. There were no activities related to the Ethics issues in the reference period.

2.2. Scientific results achieved in the reference period*

Insert the full reference with the link.

No	Authors	Full Reference title with link	Type**	Scientific result ranking (M-category)***	Publication status****	Open Access (yes/no)	Number of authors	Number of project team members as authors
1	Marija Živković, Dejan Ivezić, Boban Pavlović	Marija Živković, Dejan Ivezić, Boban Pavlović, Prepreke dekarbonizaciji sistema daljinskog grejanja u Srbiji - Stavovi predstavnika toplana (BARRIERS TO DECARBONIZATION OF DISTRICT HEATING SYSTEMS IN SERBIA – VIEWS OF HEATING PLANT REPRESENTATIVES), Zbornik radova Stručno-naučna konferencija TOPS 2024, Zlatibor, jun 2024. ISBN 978-86311-12-2 https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2024/06/Rad-TOPS-2024.pdf https://www.toplanesrbije.org.rs/sr/dogadjaji/strucno-naučna-konferencija-tops-2024-profdr-marija-zivkovic_.html	Conference paper	M63	Published Hardcopy	No	3	3

2	Simon Muhić, Dimitrije Manić, Ante Čikić, Mirko Komatina	Simon Muhić, Dimitrije Manić, Ante Čikić, Mirko Komatina, Influence of building thermal envelope modeling parameters on results of building energy simulation, Journal of Building Engineering 87 (2024) 109011, https://doi.org/10.1016/j.jobe.2024.109011	Article	M21a	Published Online	No	4	2
3	Boban Pavlović; Aleksandar Madžarević; Marija Živković; Dejan Ivezić; Dušan Mojić	Boban Pavlović; Aleksandar Madžarević; Marija Živković; Dejan Ivezić; Dušan Mojić, ENERGY TRANSITION IN HOUSEHOLDS: ANALYSIS OF SERBIA'S COMPLIANCE WITH THE "CLEAN ENERGY FOR ALL EUROPEANS" PACKAGE, Book of abstracts International Conference Energy 2024, Zlatibor, 25-28.6.2024. https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2024/07/zbornik_apstrakata-prezentacija.pdf	Conference abstract	M34	Published Hardcopy	No	5	5

*Add as many rows as needed

** Type of scientific result: article in journal, publication/presentation in conference/workshop, book/monograph, book chapter,thesis/dissertation, technical solution, software, database, patent etc.

*** Please insert M-category ranking of each result as mandatory.

**** Status can only include: submitted, under review, accepted, or published.

2.3. Dissemination and communication*		
WP of Project	Website/Social media link/Source of verification**	Type of dissemination and communication activities***
WP 7 Dissemination and Communication	https://ffgreen.rgf.bg.ac.rs/	Project web site
WP 7 Dissemination and Communication	https://www.linkedin.com/company/project-ffgreen/	Social media LinkedIn
WP 7 Dissemination and Communication	https://www.instagram.com/project.ffgreen/	Social media Instagram
WP 7 Dissemination and Communication	https://www.diplomacyandcommerce.rs/ff-green-acceleration-of-green-energy-transition-in-housholds/	Article in the journal "DIPLOMACY & COMMERCE" (in press and online)

*Add as many rows as needed

**Please keep in mind that only activities that are properly labelled according to promotion, publicity and visibility rules as stated in the Contract of the Project financing will be accepted as Project results.

***List only activities directly linked to the Project like organisation of a conference, workshop, press release, website, social media, training, exhibition etc. Provide the website/social media link for this reference period. As additional documentation, please submit visibility activities supporting documentation (e.g. workshop materials, pictures, promotion materials etc).

3. Financial Progress Update