

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: 03/01/2025 - End date: 02/07/2025

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 third six months of project realization have been delivered and achieved. In this period, activities within the work packages WP1, WP2, WP4, WP5 and WP7 were conducted.

WP3 was finished in M12, but some results of this work package have been published during this reporting period in the scientific journal: Živković, M., Pavlović, B., Ivezic, D., Tanasijević, M., Stojanović, D. Challenges on the pathway to climate neutrality: insights from district heating systems in Serbia, Utilities Policy, Volume 96, October 2025, 102002 (<https://doi.org/10.1016/j.jup.2025.102002>).

The project proposal envisaged quarterly reporting to the Science Fund. Considering obligatory reporting every six months, D1.1 for the fifth quarter (Q5 or M13-M15) in the framework of WP3 was realized as a short note about project realization from 3.1.2025 to 2.4.2025 and was distributed to all team members (<https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2025/07/IZVESTAJ-D1.1-M15.pdf>).

The WP2 has successfully finished in M15. In the period M13-M15, Subactivity 2.3 was realized. This activity proposed a combination of different advanced HVAC systems. This includes various combinations of HP systems, ST, PV, PV/T systems, and thermal storage. Part of the results were published in the paper Kardaš-Andić, D., Komatina, M., Oviro, P., Photovoltaic module temperature estimation under various environmental conditions: Preliminary experimental and theoretic study, Thermal Science 2025 Online-First Issue 00, Pages: 49-49 (<https://doi.org/10.2298/TSC214224049K>). Based on the research conducted within D2.3, Deliverable D2.3 - Webinar for stakeholders from all Serbian municipalities - members of SCTM was created for employees in local governments who work as energy managers and energy efficiency officers, as well as for the general public interested in energy efficiency and the use of renewable energy sources (RES) in residential buildings. On the project website (https://ffgreen.rgf.bg.ac.rs/?page_id=1841), there are recordings of four lectures (total duration: 92 minutes) that make up this webinar:

- Improving Energy Efficiency in Residential Buildings – Introduction (12.27)
- Improving Energy Efficiency in Residential Buildings – Modeling and Energy Renovation Measures (24.08)
- Improving Energy Efficiency in Residential Buildings – Heating Systems (21.35)
- Hybrid RES Systems for Residential Buildings (35.48)

The webinar link was sent to the project partner - the Standing Conference of Towns and Municipalities (SCTM), for distribution through the Network of Energy Managers and Energy Efficiency Officers. The webinar was presented live on June 6th, 2025, at a meeting of the Network of Energy Managers and Energy Efficiency Officers (<https://ffgreen.rgf.bg.ac.rs/?p=1873>). In total, 37 participants from over 25 Serbian municipalities participated in this meeting (https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2025/06/FF-GreEN_sastanak-mreze-e.m._v1.pdf).

Within WP4, two subactivities were realized in the reporting period: Subactivity 4.1 – Establishing Baseline Models and Subactivity 4.2 – Energy Modeling of Individual Energy Saving Measures.

Deliverable D4.1 Report on building energy performance and consumption, including breakdown to end users is available at: <https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2025/01/WP4-Modeling-based-baseline-report.pdf>

The research concerning whole-building energy modeling conducted within this work package has been published in scientific papers, as follows:

- Muhić, S., Manić, D., Čikic, A., Komatina, M. Influence of Building Envelope Modeling Parameters on Energy Simulation Results. Sustainability 2025, 17, 5276 (<https://doi.org/10.3390/su17125276>)
- Kepeki, H., Komatina, M. CFD investigation on heat transfer performance of different pipe geometries at various Reynolds numbers, Thermal Science 2025 Online-First Issue 00, Pages: 76-76 (<https://doi.org/10.2298/TSC250105076K>)

In addition, some results from WP2 and WP4 have been presented as an invited paper at the TOPS 2025 Scientific Conference (June 1st to 5th, 2025, Zlatibor). The title of the presentation (printed in the Conference Proceedings) was "Energy Transition in the Household Sector in Serbia – The FF GreEN Project" (<https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2025/06/SaNTOPS2025.pdf>).

A novel methodological framework for the strategic planning of households' energy transition based on the integration of a participatory approach and backcasting process, and energy system modeling is created within WP5. Within Subactivity 5.1, the representative set of indicators for guiding the energy planning process was determined and published on the project website (<https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2025/04/WP5-Pregled-literature-01042025.pdf>). This set is based on a literature survey and includes technical, economic, environmental, and social indicators. It will be used as an input in the energy planning and decision-making processes.

Subactivity 5.2: Development of ABM support tool used a uniquely rich and comprehensive dataset from the household survey (outcomes of WP3), and RES-based technologies (proposed in WP2). The outcome of this activity is Milestone/Deliverable M5.1/D5.1ABM support tool – ABM of households (software). This Milestone/Deliverable is available for download from the project website (https://ffgreen.rgf.bg.ac.rs/?page_id=1204). Besides the NetLogo code and an Excel file with specific settings for the Serbian households, the available zip file contains instructions for downloading and installing the tool. When the tool is installed, it includes very detailed instructions for use. By exploring the adoption of energy efficiency measures and modern technologies by households that are modeled as individual, independent, and complex entities, the ABM model provided insights into the effects of different energy policy instruments (subsidies, tax reductions, technology restrictions, awareness raising campaigns, etc.).

Within WP7, there were no planned deliverables for this reporting period. However, PI promoted the project results achieved so far at the meeting of the Network of Energy Managers and Energy Efficiency Officers in Vrdnik (<https://ffgreen.rgf.bg.ac.rs/?p=1873>).

In addition, project results concerning (WP3 and WP4) have been presented at 40th International Conference ENERGETIKA 2025, organized by the Association of Energy Professionals, which took place in Zlatibor from April 14 to April 17, 2025. The team members have two presentations at the conference (that will be published later as scientific papers in the journal):

- Evaluation of Energy Conservation Measures for Existing Residential Buildings in Novi Beograd Using Building Energy Modelling, Authors: Dimitrije Manić, Mirko Komatina, Dragi Antonijević, Olivera Ećim-Dunđić, Dejan Ivezić
- Households and Energy Transition in the Republic of Serbia: Legislative Framework and Real Practice, Authors: Aleksandar Madžarević, Bojan Pavlović, Dušan Mojić, Dejan Ivezić, Maja Živković

Additionally, a special session titled "Citizens in Energy Transition" was held, moderated by PI (<https://ffgreen.rgf.bg.ac.rs/?p=1858>).

Recapitulation of deliverables and milestones for the reporting period:

- Deliverable D1.1: A quarterly administrative and financial report was planned for M15 and M18. For M15, it was published in time on the project website, while for M18 will be realized with the acceptance of this report.
- Deliverable D2.3: A webinar for stakeholders from all Serbian municipalities - members of SCTM was planned for M15, and it was realized in M15.
- Deliverable D4.1: Report on building energy performance and consumption, including breakdown to end users was planned for M15, and it was realized in M15.
- Milestone/Deliverable M5.1/D5.1ABM support tool – ABM of households (software) was planned for M18, and it was realized in M18.

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.

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

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

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, Boban Pavlović, Dejan Ivezić, Miloš Tanašijević, Dejan Stojanović	Marija Živković, Boban Pavlović, Dejan Ivezić, Miloš Tanašijević, Dejan Stojanović. Challenges on the pathway to climate neutrality: insights from district heating systems in Serbia. Utilities Policy 96 (2025), 102002. https://doi.org/10.1016/j.jup.2025.102002	Article	M22	Published Online	Yes	5	3
2	Haydar Kepekci, Mirko Komatina	Haydar Kepekci, Mirko Komatina. CFD Investigation on Heat Transfer Performance of Different Pipe Geometries at Various Reynolds Numbers. Thermal Science (2025), OnLine-First. https://doi.org/10.2298/TSCI250105076K	Article	M23	Published Online	Yes	2	1
3	Danijela Kardaš Ančić, Mirko Komatina, Petar Gvero	Photovoltaic Module Temperature Estimation under Various Environmental Conditions: Preliminary Experimental and Theoretic Study. Thermal Science (2025), OnLine-First. https://doi.org/10.2298/TSCI241224049K	Article	M23	Published Online	Yes	3	2
4	Simon Muhić, Dimitrije Manić, Ante Čukić, Mirko Komatina	Simon Muhić, Dimitrije Manić, Ante Čukić, Mirko Komatina. Influence of Building Envelope Modeling Parameters on Energy Simulation Results. Sustainability 17 (2025), 5276. https://doi.org/10.3390/su17125276	Article	M22	Published Online	Yes	4	2
5	Dejan Ivezić, Boban Pavlović, Dimitrije Manić, Marija Živković, Dušan Mojić, Mirko Komatina, Aleksandar Madžarević, Dragi Antonijević, Miroslav Crnogorac, Olivera Ećim-Durić, Dušan Danilović	Dejan Ivezić, Boban Pavlović, Dimitrije Manić, Marija Živković, Dušan Mojić, Mirko Komatina, Aleksandar Madžarević, Dragi Antonijević, Miroslav Crnogorac, Olivera Ećim-Durić, Dušan Danilović. Energetska tranzicija u sektoru domaćinstava u Srbiji - projekt FF GREEN. Stručno-naучna konferencija TOP5 2025. Zlatibor, jun 2025. ISBN: 978-86-86311-13-9. https://www.topnaresrbije.org.rs/uploads/dk_editor/files/Zbornik%20radova%20TOP5%202025%2C%20word.pdf	Conference paper	M61	Published Online	Yes	11	11

*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*		Type of dissemination and communication activities**
WP of Project	Website/Social media link/Source of verification**	
WP3	Aleksandar Madžarević, Boban Pavlović, Dušan Mojić, Dejan Ivezić, Marija Živković. Households and energy transition in the Republic of Serbia: Legislative frameworks and real practice. Book of abstracts International Conference Energy 2025 (Energetika 2025), Zlatibor, 14-17.4.2025. https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2025/04/15-01-363_Aleksandar-Madzarevic_Boban-Pavlovic_Dusan-Mojic_Dejan-Ivezic_Marija-Zivkovic_Households-and-energy-transition-in-the-Republic-of-Serbia.pdf	Conference
WP4	Dimitrije Manić, Mirko Komatina, Dragi Antonijević, Olivera Ećim-Durić, Dejan Ivezić. Evaluation of Energy Conservation Measures for Existing Residential Buildings in Novi Beograd Using Building Energy Modeling. Book of abstracts International Conference Energy 2025 (Energetika 2025), Zlatibor, 14-17.4.2025. https://ffgreen.rgf.bg.ac.rs/wp-content/uploads/2025/04/02-08-374_Dimitrije-Manic_Mirko-Komatina_Dragi-Antonijevic_Olivera-Ecim-Djuric_Dejan-Ivezic_Evaluation-of-Energy-Conservation-Measures.pdf	Conference

*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

SRO	3.1. Bank account balance at the first day of the reference period in RSD	3.2. Bank account balance at the last day of the reference period in RSD
FMGUB	5.419.545,54	3.671.677,78
FMEUB	1.288.389,51	943.711,41
ICMF	1.288.034,43	868.236,56
UBFZF	370.678,94	178.712,78
AGRIF	691.305,39	538.276,92

3.3. Financial information

SRO	Amount received for the reference period in RSD*	Total amount received for the project realization in RSD**	Project realised costs for the reference period in RSD***	Cumulative realised costs in RSD****	Cumulative unspent funds out of disbursed for the reference period in RSD*****	Cumulative unspent funds out of disbursed in RSD*****
FMGUB	945.005,75	11.370.891,85	2.692.873,51	7.699.214,07	(1.747.867,76)	3.671.677,78
FMEUB	85.442,54	1.871.469,26	430.120,64	927.757,85	(344.678,10)	943.711,41
ICMF	327.755,70	2.921.630,72	747.553,57	2.053.394,16	(419.797,87)	868.236,56
UBFZF	79.242,67	831.205,08	271.208,83	652.492,30	(191.966,16)	178.712,78
AGRIF	125.668,83	1.397.909,27	278.697,30	859.632,35	(153.028,47)	538.276,92
TOTAL	1.563.115,49	18.393.106,18	4.420.453,85	12.192.490,73	(2.857.338,36)	6.200.615,45

*Total amount disbursed for the reference period.

**Total amount disbursed to date, starting from the beginning of the project and including this referent period.

*** Total amount of realised costs for the reference period.

**** Total amount of realised costs to date

*****Unspent funds for the reference period should be equal to the total amount received for the reference period reduced for project realised costs for the reference period.

***** Unspent funds at the end of the reference period should be equal to the total amount received reduced for project realised costs.

3.4. Project realised costs for the reference period per SRO per budget category in RSD*

	FMGUB	FMEUB	ICMF	UBFZF	AGRIF					Cumulative realized cost per category for the reference period	Cumulative realized cost per category
Personnel	1.789.508,88	220.635,36	603.844,16	194.340,62	278.697,30					3.087.026,32	8.695.675,34
Procurements	150.061,42	186.855,20	83.325,00	39.768,23	0,00					460.009,85	1.498.291,91
Equipment and Consumables	0,00	103.200,00	0,00	0,00	0,00					103.200,00	839.766,00
Contingency Reserve	0,00	0,00	0,00	0,00	0,00					0,00	0,00
Travel	150.061,42	83.655,20	83.325,00	39.768,23	0,00					356.809,85	658.525,91
Dissemination and Visibility	0,00	0,00	0,00	0,00	0,00					0,00	0,00
Services and sub-contracting	28.000,00	0,00	0,00	0,00	0,00					28.000,00	999.880,00
Indirect costs	725.303,21	22.630,08	60.384,41	37.099,98	0,00					845.417,68	998.643,48
SRO Administrative and other costs	725.303,21	22.630,08	60.384,41	37.099,98	0,00					845.417,68	998.643,48
Other indirect costs	0,00	0,00	0,00	0,00	0,00					0,00	0,00

External audit costs	0,00	0,00	0,00	0,00	0,00					0,00	0,00
TOTAL cost per SRO for the reference period	2.692.873,51	430.120,64	747.553,57	271.208,83	278.697,30						
TOTAL cost per SRO (cumulative)	7.699.214,07	927.757,85	2.053.394,16	652.492,30	859.632,35						
TOTAL unspent for the reference period	(1.747.867,76)	(344.678,10)	(419.797,87)	(191.966,16)	(153.028,47)						
TOTAL unspent per SRO	3.671.677,78	943.711,41	868.236,56	178.712,78	538.276,92						

*Insert costs only for the reference period

3.5. Financial Information
Please provide justification if there were any deviations from the budget plan in the reference period.

Information about unspent funds:

Unspent funds for FMGUB amount to RSD 3.671.677,78.
 Out of this sum, RSD 328.848,00 will be used for purchasing a laptop computer approved by the budget modification. App. RSD 1.803.368,00 will be used for personal costs in the next 6 months. In addition, dr Boban Pavlović and Prof. Ivezic will travel to Dubrovnik in October this year to participate in the SDEWES conference, so app. RSD 360.000 is estimated to be the cost of travel, stay, and per diem. The money for Translation and Proofreading will be spent according to needs. The costs of Dissemination and Visibility until the end of 2025 are estimated to RSD 360.000 (Publishing papers in international open-access journals). SRO Administrative and other expenses in amounts of app. 350.000 will be spent until the end of 2025. The rest of the money is planned to be spent in 2026 (National Conference, Workshops in selected municipalities, International Conferences, Personal cost).

Unspent funds for FMEUB amount to RSD 943.711,41.
 Out of this sum, RSD 315.376,00 will be used for personal costs in the next 6 months. In addition, app. RSD 150.000 will be spent for RETScreen - Building thermal loads and HVAC systems sizing software annual license. The money for Translation and Proofreading will be spent according to need. The costs of Dissemination and Visibility until the end of 2025 are estimated to RSD 90.000 (Publishing papers in international open-access journals). SRO Administrative and other expenses in amounts of app. 35.000 will be spent. The rest of the money is planned to be spent in 2026 (Workshops in selected municipalities, International Conferences, Personal cost).

Unspent funds for UBZF amount to RSD 178.712,78.
 Out of this sum, RSD 170.048,90 will be used for personal costs in the next 6 months.

Unspent funds for ICMF amount to RSD 868.236,56.
 Out of this sum, RSD 613.998,42 will be used for personal costs in the next 6 months. The costs of Dissemination and Visibility until the end of 2025 are estimated to RSD 180.000 (Publishing papers in international open-access journals). SRO administrative and other expenses in amounts of app. 35.000 will be spent.

Unspent funds for AGRIF amount to RSD 538.276,92.
 Out of this sum, RSD 282.968,50 will be used for personal costs in the next 6 months. The costs of Dissemination and Visibility until the end of 2025 are estimated to RSD 90.000 (Publishing papers in international open-access journals). The rest of the money is planned to be spent in 2026 (International Conferences, Personal cost).

Date and signature

I hereby confirm that all information provided in the Project Progress Update Form is accurate. All participating Scientific Research Organisations in the Project and their authorised persons are informed on and agreed with the content of this document.

I confirm that the Project activities are implemented in accordance with the project description, contract and all other supplementary and currently valid project documents. The budgetary spending during the Project implementation is fully in line with the law, Program – Act on Goals, Implementation Procedure and Project Financing Terms and the Contract on Financing the implementation of a Science and Research Project of the Science Fund of the Republic of Serbia.

Name and last name of the Principal Investigator: Dejan Ivezic





30.7.2025

Signature (PI)

Date

- I confirm that I am authorised to sign the Project Progress Update on behalf of the project consortium.

Signature (Lead SRO)

Date

Signature (SRO3)

Date

Signature (SRO1)

Date

Signature (SRO4)

Date

Signature (SRO2)

Date