



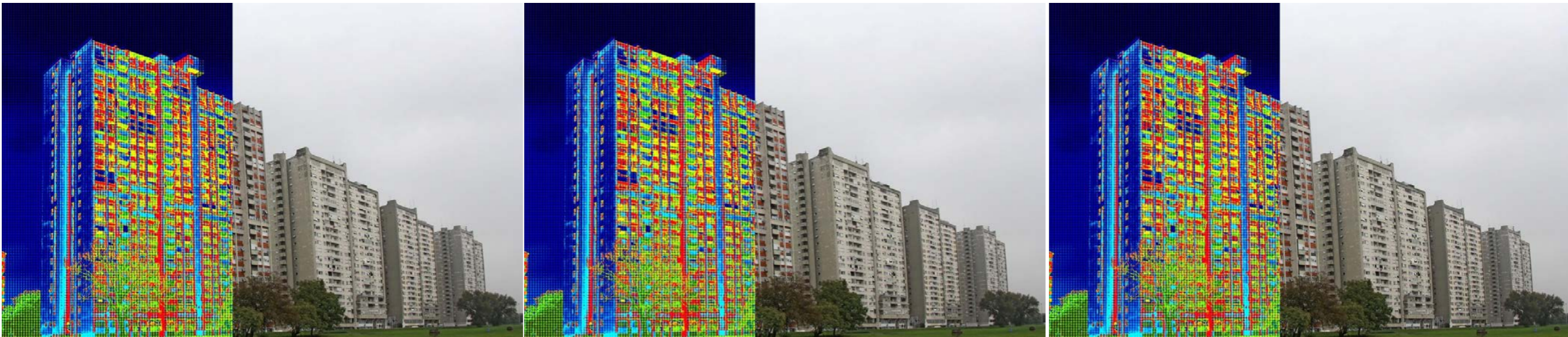
Republic of Serbia

Implementation status of EPBD in Serbia

Ministry of Construction, Transport and Infrastructure

Biljana Apostolović

Advisor in energy efficiency in buildings



6th Jun 2018

EECG meeting in Belgrade



Content

- Institutional EE framework in Serbia
- Legislative EE framework in Serbia
- Situation and Gap analysis
- Further steps in the implementation of the EPBD in Serbia
- Ongoing programs support in Serbia



Institutional EE framework

❖ Ministry of Construction, Transport and Infrastructure

Section for Energy Efficiency

- Preparation of legislative framework
- Issuing licenses to the companies
- Maintaining a registry of issued energy performance certificates
- and maintenance of registry DMS
- Cooperation with other actors

❖ Serbian Chamber of Engineers

- Training of engineers
- Certification of the engineers energy efficiency in buildings

❖ Ministry of Mining and Energy

Department for Energy Efficiency

- Preparation of legislative framework for implementation of regular inspection of heating and air-conditioning systems
- Empowerment of inspectors
- Managing Budgetary fund for EE
- Coordination and implementation of EE projects
- Cooperation with other actors, etc.

❖ Local governments

- Advisory assistance from local governments for energy efficiency
- Issuance of building and usage permits

Legislative EE framework

✓ **Law on Planning and Construction** (“Official Gazette of RS”, No. 72/09...145/16)

- Rulebook on Energy Efficiency of Buildings (“Official Gazette of RS”, No. 61/11),
- Rulebook on Conditions, Content and Manner of Issuing Energy Performance Certificate of Buildings (“Official Gazette of RS”, No. 69/12),
- Rulebook on Conditions, Programme and Manner of Passing the Professional Exam in the Field of Spatial and Urban Planning, Project Design and Execution of Works (“Official Gazette of RS”, No. 4/10, 21/10 and 14/12)
- Rulebook on Conditions and Procedure of Issuing and Revoking License for Responsible Urban Planner, Designer, Contactor and Responsible Planner (“Official Gazette of RS”, No. 116/04 and 69/06)

✓ **Law on Efficient Energy Use** (“Official Gazette of RS”, No. 25/13)

- Rulebook on regular inspection of boilers and other combustion chamber, as well as heating systems above 20 kW – under preparation
- Rulebook on regular inspection of air-conditioning systems above 12 kW – under preparation - under preparation
- The Rulebook on Controlling Heating Systems and Detailed Requirements for Legal Entities Authorized for Controlling Heating Systems ("Official Gazette", of RS, No. 58/16 of 22 June 2016)
- The Rulebook on Controlling Air Conditioning Systems ("Official Gazette of RS", No. 82/16 of 7 October 2016)



Legislative EE framework

Law on Planning and Construction
(Official Gazette of RS, No. 72/09 ... 145/14)

Rulebook on Energy Efficiency
(Official Gazette of RS, No. 61/11)

Rulebook on conditions, content and method of issuing certificates on energy properties of buildings
(Official Gazette of RS, No. 69/12)

Energy certification of buildings mandatory from 30.09.2012.





Central Register of Energy Passports - CREP

www.crep.gov.rs/EnergetskiPasosi.aspx

Централни Регистар Енергетских Пасоша у грађевинарству

Република Србија
• Министарство грађевинарства, саобраћаја и инфраструктуре
• Министарство рударства и енергетике

Корисничко име _____
Лозинка _____
v.0.9

Лиценцирани инжењери Овлашћене организације **Енергетски пасоши**

Енергетски пасоши

Претрага издатих пасоша

Назив објекта <input type="text"/>	Интерни број пасоша <input type="text"/>	Година изградње: Од -- Изаберите -- До -- Изаберите --	Година последње реконструкције: Од -- Изаберите -- До -- Изаберите --
Зграда је: <input type="radio"/> Нова зграда <input type="radio"/> Постојећа зграда	Општина <input type="text"/>	Адреса <input type="text"/>	
Тип објекта <input type="radio"/> Зграда <input type="radio"/> Функционална јединица	Место <input type="text"/>	Катастарска општина <input type="text"/>	Број катастарске парцеле <input type="text"/>
Изаберите категорију зграде -- Изаберите категорију зграде --	Нето површина унутар термичког омотача A_n [m ²] Од <input type="text"/> До <input type="text"/>		Енергетски разред -- Изаберите енергетску групу --

Интерни бр. Адреса Парцела Година изградње Датум уноса Тип документа

немачка сарадња
DEUTSCHE ZUSAMMENARBEIT

Спроведено од стране
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Република Србија
• Министарство грађевинарства, саобраћаја и инфраструктуре
• Министарство рударства и енергетике

Passoј и израда
Beit d.o.o. Beograd

© 2014.



Users:

- Ministry of Construction, Transport and Infrastructure
- Ministry of Mining and Energy
- EE engineers
- authorized organizations
- local governments
- interested public



Reports and tools:

- Issuing energy passports
- Large amount of data for buildings, class, required energy and CO2 emissions
- **Monitoring of EE in buildings**
- Development of quality reports for decision makers RS gov.



Database:

1. Energy passport register
2. The database of these organizations
3. Engineer's database 381

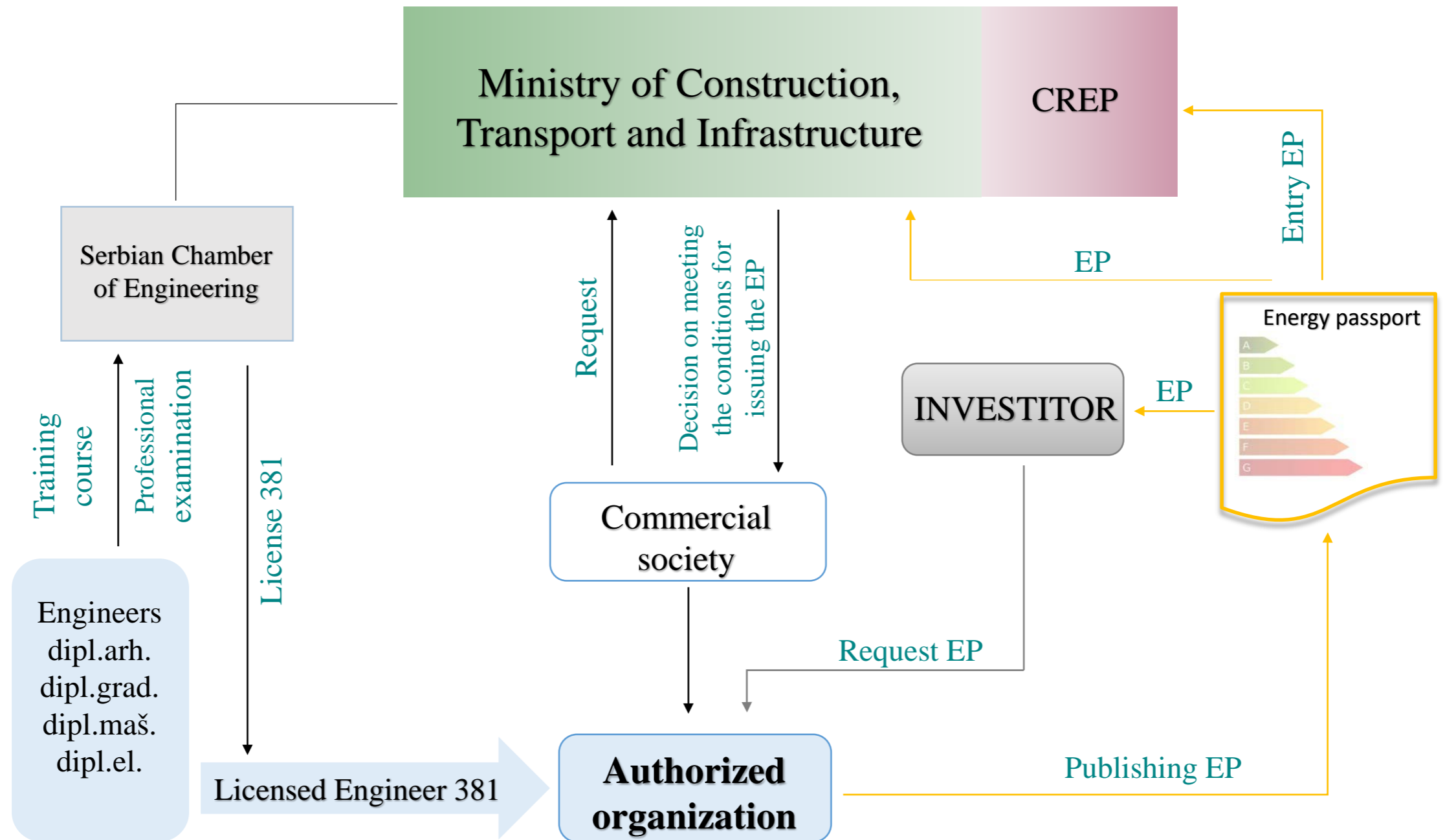


Data exchange:

- Cadaster
- Serbian Chamber of Engineers



Procedure for issuing an Energy Passport





Statistics of EPC

- 179 authorized organizations for issuing EPC
- 1,700 licenced engineers for energy efficiency
- 2,500 issued EPC that are handed over to the MoCTI
- 644 issued EPC in the CREP system

Република Србија
МИНИСТАРСТВО ГРАЂЕВИНАРСТВА,
САОБРАЋАЈА И ИНФРАСТРУКТУРЕ
Број: 35-00-00365/2017-08
Датум: 07.07.2017. године
Немањина 22-26, Београд

А На основу члана 4. **стаб** 6. Закона о планирању и изградњи („Службени гласник РС”, бр. 72/09, 81/09-исправка, 64/10-УС, 24/11, 121/12, 42/13-УС, 50/13-УС, 98/13-УС, 132/14 и 145/14), члана 6. Закона о министарствима („Службени гласник РС”, бр. 44/14, 14/15, 54/15 и 96/15, др. Закон и 62/17), члана 23. **стаб** 2. Закона о државној управи („Службени гласник РС”, бр. 79/05, 101/07, 95/10 и 99/14) и овлашћења Министра садржаног у решењу бр. 031-01-44/2016-02 од 06.10.2016. године, а решавајући по захтеву, који је поднео MOD ARHITEKT DOO STUDIO ZA PROJEKTOVANJE, NOVI SAD, матични број 20708620, из Новог Сада, Бранислава Бороте 7, за издавање решења о испуњености услова за издавање сертификата о енергетским својствима објекта, министар доноси

В

Р Е Ш Е Њ Е

С I Утврђује се да MOD ARHITEKT DOO STUDIO ZA PROJEKTOVANJE, NOVI SAD, матични број 20708620, из Новог Сада, Бранислава Бороте 7, **ИСПУЊАВА УСЛОВЕ** за издавање сертификата о енергетским својствима објекта високоградње.

Д II **ОБАВЕЗУЈЕ СЕ** MOD ARHITEKT DOO STUDIO ZA PROJEKTOVANJE, NOVI SAD да, у року од 15 дана од дана издавања сертификата о енергетским својствима објекта високоградње - енергетског пасоша, достави један примерак издатог енергетског пасоша министарству надлежном за послове грађевинарства.

Е **Образложење**
MOD ARHITEKT DOO STUDIO ZA PROJEKTOVANJE, NOVI SAD, поднео је овом министарству, дана 07.06.2017. године, захтев за издавање решења о испуњености услова за издавање сертификата о енергетским својствима објекта.

Ф Уз захтев за издавање решења о испуњености услова за издавање сертификата о енергетским својствима објекта, сходно члану 4. **стаб** 2. Правилника о условима, садржини и начину издавања сертификата о енергетским својствима зграда („Службени гласник РС”, бр. 69/12), приложена је следећа документација:

Г

1. Оверену копију Решења о регистрацији природног субјекта за MOD ARHITEKT DOO STUDIO ZA PROJEKTOVANJE, NOVI SAD, од 02.02.2011. године, који је издала Агенција за привредне регистре;
2. Списак запослених лица која имају лиценце одговорних инжењера за енергетску ефикасност зграда;

ВИШЕПОРОДИЧНА ЗГРАДА У ГРАДСКОМ БЛОКУ
(извод из Енергетског пасоша)

ЗГРАДА	<input type="checkbox"/> нова <input checked="" type="checkbox"/> постојећа
Категорија зграде	4. Зграда са готовим становама
Место, адреса:	-
Катастарски број:	-
Власник/инжењер/грађевинарски занатлија:	-
Имењак:	-
Година изградње:	1946-1960
Година реконструкције/ енергетски санитет:	-
Нето површина A_n , m^2 :	659 m^2

Пројекат	U _{g,ext} [W/m ²]	U _{g,int} [W/m ²]
	A+	≤ 15
A	≤ 25	
B	≤ 30	
C	≤ 100	
D	≤ 150	
E	≤ 200	
F	≤ 250	
G	≥ 250	

Позив о лицу које је издало енергетски пасош

Овлашћена организација:
Полног овлашћеног лица
Полног организације:
М.П.
(потпис)

Одговорни инжењер:
Полног и печат
Одговорног инжењера ЕЕ:
М.П.
(потпис)

Број пасоша:
Датум издавања/ре-издавања:



THE LAW ON HOUSING AND MAINTENANCE OF BUILDINGS

(Official Gazette of the Republic of Serbia, 104/2016)

- Parts of the building and ownership housing community (status of a legal entity)
- Rights and obligations of owners of special parts
- **Building management-** professional managers
- **Maintenance of buildings**
- **Residential support-social housing**
- **Advisory assistance from local governments** for energy efficiency
- Supervision of the Law implementation

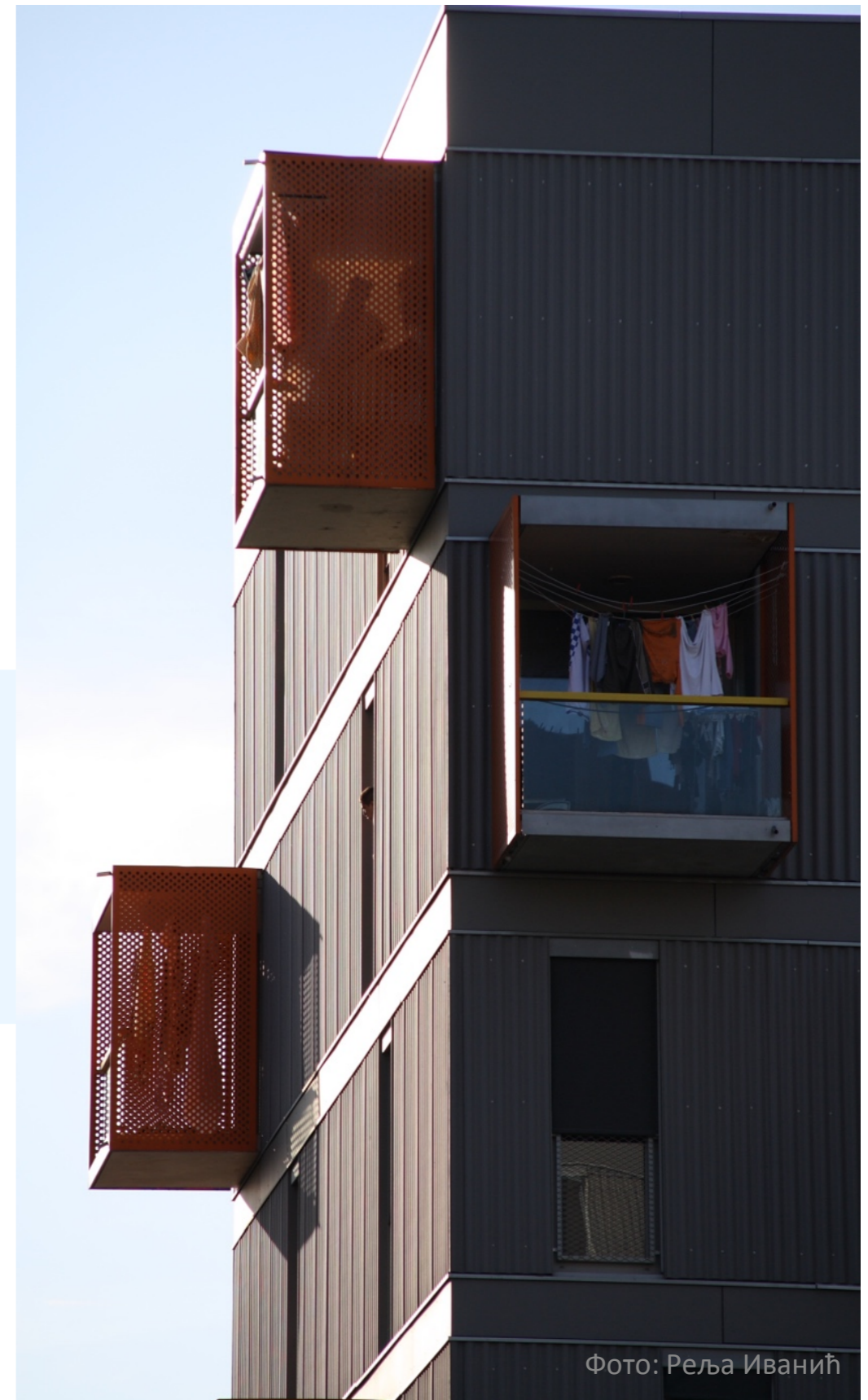


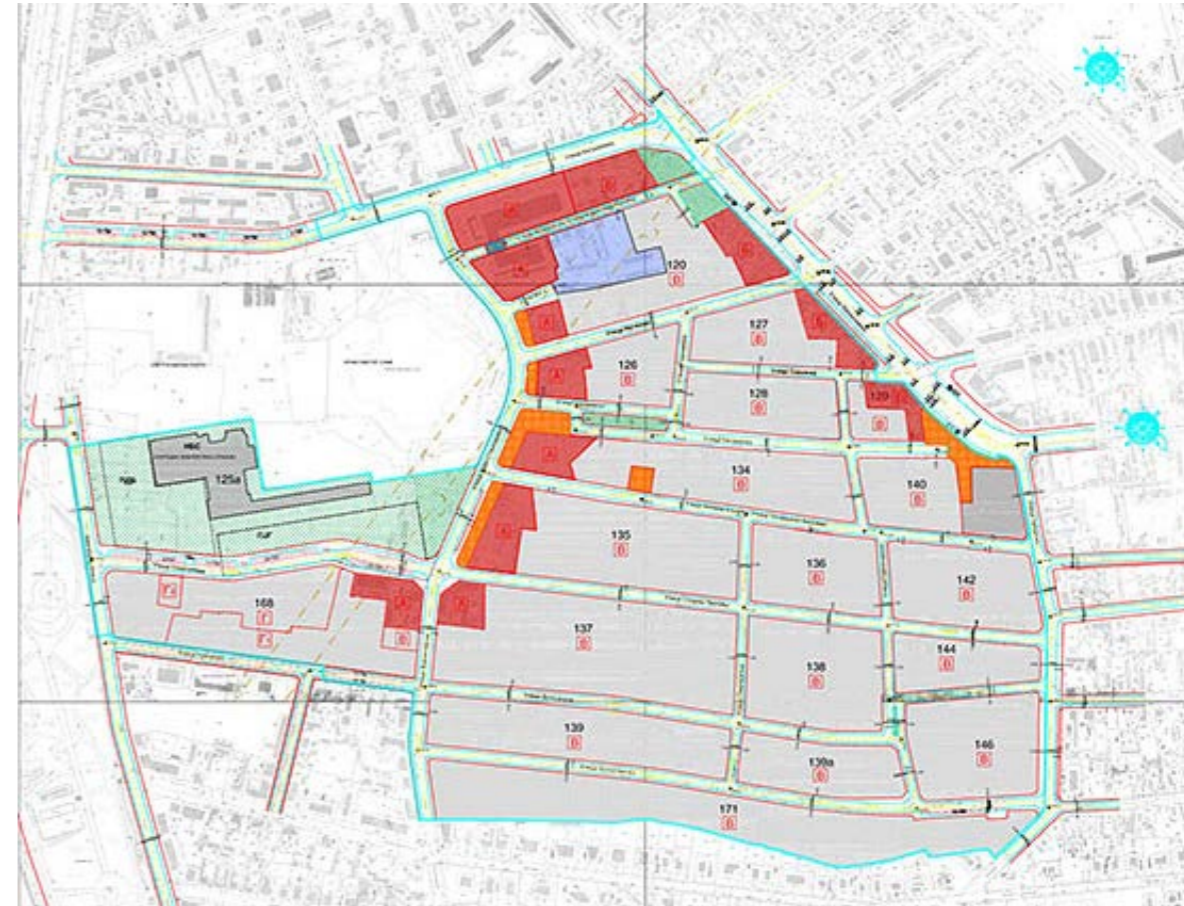
Фото: Реља Иванић



SUSTAINABLE DEVELOPMENT AS A PUBLIC INTEREST OF THE REPUBLIC OF SERBIA

IMPROVEMENT OF CONDITIONS OF THE BUILDING

- ✓ The local government may decide to prescribe the obligation to maintain the external appearance of the building (façade) while prescribing different degrees of **obligation to maintain the outlook of the building, depending on the urban zone or the block** where the building is located.
- ✓ The local government may make a decision envisaging non-refundable **co-financing of activities on investment maintenance** and improvement of the properties of the building in order to **achieve public interest**.
- ✓ The local government **provides funds in the budget** for participation in the projects of financing these activities and makes a decision stipulating the procedure for allocation of funds.





Situation and Gap analysis (I)

Gaps	Proposed solution
No obligation for uploading EPC in central digital register (CREP)	Uploading data in central digital register is mandatory. Issuing an EPC through central register exclusively.
No quality control system in process of issuing EPC.	An independent quality control system should be established; preferred by a government body Controlling system should the quality of input data, results and recommendations given on EPC (as specified in the EPBD)
No penalties for issuing a false EPC or uploading incorrect data or results.	Penalty system should be established.
No obligation for technical control of documentation proceeding EPC (Elaborate of EE)	Technical control of Elaborate of energy efficiency of buildings should be mandatory. This control should not only check input data, but also results and recommendations. A small percentage of the EPC should be recalculated to check the quality (including an onsite visit), As suggested in the EPBD methodology
Energy classes in EPC are related to final energy needs for heating only.	Long term activity: Final goal is that energy class should be related with all energy types in building (heating, cooling, ventilation, lightning, support systems, RES)
Energy classes are not related to heating system type and performance	Short time activity: Heating system performance should be related with energy class of building – primary energy.



Situation and Gap analysis (II)

Gaps	Proposed solution
RES (solar, wind, geothermal, etc.) are not related to energy class of building.	Short time activity: RES should be related to be related with energy class of building– primary energy.
No national software, or approved software on a national level, which can be used in calculation procedures for Elaborate of energy efficiency of buildings	Long term activity: Developing national software suitable for all steps in calculation process proceeding issuing EPC, which is considering all types of energy in buildings, after adopted changes in calculation methodology. Short term activity: Defining propositions which commercial software can be used, in order to be approved as a valid for calculation process, under current methodology.
Insufficient climate data (solar radiation, HDD) for different location in Serbia	Various climate data about location in Serbia should be included, based on official data.
No precise instruction for exposing EPC regarding public sector.	Instructions for exposing of EPC should be defined and mandatory. Proposal: First page by side of the front door (main entrance), whole EPC in the lobby of building.
Only first page of EPC is visible for guest users in central digital register (CREP)	All pages (whole EPC) should be visible in CREP, because it is a public document.

System of Building Certification in Serbia Situation and Gap Analysis
Dr Maja Todorović, Dr Aleksandar Rajčić, GIZ 2016



Further steps in the implementation of the EPBD in Serbia

Implementation of the **EPBD Directive**:

- **improvement of the methodology** for calculating the energy efficiency of the building; calculation of the required energy for heating, cooling, ventilation, sanitary hot water and lighting
- **new concepts, norms, standards according to EPBD**
- **software** for calculating energy performance
- defining the **cost-optimal levels**, as well as a comparative methodology for calculating the improvement of the energy efficiency of the building
- definition of buildings with almost zero energy consumption **nZEB**
- application of **renewable energy sources**
- independence of experts working to **check the quality of the passport**
- typology of non-residential buildings - **public buildings**
- **improvement of the database** and definition of monitoring, verification and forecasting of energy efficiency improvement of buildings through **CREP**
- **Long-term strategy** for mobilising investments in the renovation of the national stock (EED 2012/27/EU)



Ongoing programs support in Serbia (I)

■ REEP Plus

- ✓ Call REEP Plus programme (EBRD, ECS) 2016
- ✓ Formalized cooperation and adopted **Terms of Reference** Dec. 2017
- ✓ **Finalisation of Scoping Report** is ongoing...

Implementation of the **EPBD** through the amendments of Rulebooks:

1. National calculation method
2. Cost-optimal methodology for residential building
3. Minimum requirements for energy performances
4. Certificates on energy performances of buildings

Participants:

Consultants team of REEP Plus

Technical working group of MoCTI



Ongoing programs support in Serbia (II)

- Serbian-German development cooperation Project
„Energy efficiency in public buildings“ implemented by GIZ

Implementation of the **EPBD** and **EED**:

1. Typology of buildings
2. Cost-optimal analysis for non-residential buildings for setting of minimum energy performance requirements
3. Long-term strategy for mobilising investment in the renovation of the national stock



Thank you for your attention!

Biljana Apostolović

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