



Operational programme Quality of Environment

NP Green for Households I & II

NP „Live by energy“



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SHREC online seminar: Slovak energy policies and
innovations, 20.10.2020



is a programming document of the Slovak Republic for drawing aid from the EU Structural Funds and the Cohesion Fund in the programming period 2014 - 2020 in the area of **sustainable and efficient resource use** ensuring **environmental protection**, active **adaptation to climate change** and promotion of an **energy efficient, low-carbon economy**.

To achieve the above said global objective, following three basic thematic objectives were incorporated into the **OP QE investment strategy**:

- Supporting the **shift towards a low-carbon economy** in all sectors ,
- Promoting **climate change adaptation**, risk prevention and management ,
- Preserving and **protecting the environment** and promoting **resource efficiency** .

Allocation

| Priority axis | Fund | Category of region | Thematic objective | Union support (EUR) | National counterpart (EUR) | Total funding (EUR) |
|--|------|------------------------|--|----------------------|----------------------------|----------------------|
| <i>Priority axis 1: Sustainable use of natural resources through environmental infrastructure development</i> | CF | N/A | 6. Preserving and protecting the environment and promoting resource efficiency | 1 568 013 361 | 382 720 447 | 1 950 733 808 |
| <i>Priority axis 2: Adaptation to the adverse effects of climate change with the focus on flood protection</i> | CF | N/A | 5. Promoting climate change adaptation and risk prevention and management | 293 098 900 | 51 723 336 | 344 822 236 |
| <i>Priority axis 3: Promoting risk management, emergency management and resilience to emergencies affected by climate change</i> | ERDF | Less developed regions | 5. Promoting climate change adaptation and risk prevention and management | 243 896 216 | 43 040 511 | 286 936 727 |
| <i>Priority axis 4: Energy efficient low-carbon economy in all sectors</i> | ERDF | Less developed regions | 4. Supporting the shift towards a low-carbon economy in all sectors | 876 444 601 | 234 005 191 | 1 110 449 792 |
| | | More developed regions | | 1 328 212 | 1 328 212 | 2 656 424 |
| <i>Priority axis 5: Technical assistance</i> | ERDF | Less developed regions | N/A | 74 343 500 | 13 119 442 | 87 462 942 |
| | | More developed regions | N/A | 2 656 500 | 2 656 500 | 5 313 000 |
| TOTAL | | | | 3 059 781 290 | 728 593 639 | 3 788 374 929 |

Priority axis 4 ENERGY EFFICIENT LOW-CARBON ECONOMY IN ALL SECTORS

RES

- Promoting the production and distribution of **energy derived from renewable sources**
- **NP Green for households I and II**

ENTERPRISES

- Promoting energy efficiency and renewable energy use in enterprises

BUILDINGS

- Supporting EE, smart energy management and renewable energy use in **public infrastructure**, including in **public buildings**, and in the **housing sector**

STRATEGIES

- Promoting **low-carbon strategies** for all types of territories,
- **NP Extension of energy efficiency monitoring, NP Expertly about Energy, NP Live by energy**

CHP

- Promoting the use of **high-efficiency** co-generation of heat and power based on useful heat demand

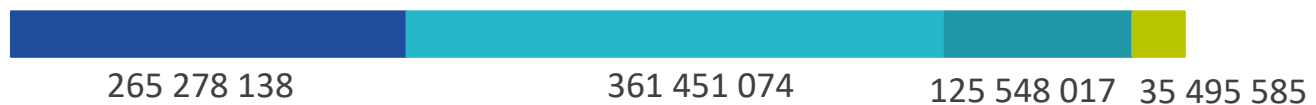
Priority axis 4

State of contracting and drawing of funds

Number of projects



EU funds (€)



■ Finished ■ In Realisation ■ Being assessed ■ Available in calls

Increase of installed capacity of RES (MW)



Annual decrease of GHG (t)



Primary energy sources savings (MWh/year)



■ Finished ■ Approved ■ Left to accomplish

Monitoring system of EE

Data sources:

- **Monitoring system of EE**, operated by SIEA, collects data from various institutions and building owners and is used to demonstrate fulfillment of energy-climate goals of the Slovak Republic

Data providers:

| | |
|---|---------------|
| energy suppliers | 213 |
| energy distributors | 227 |
| state administration and municipalities | 2 621 |
| buildings owners | 11 315 |

Monitoring system of EE

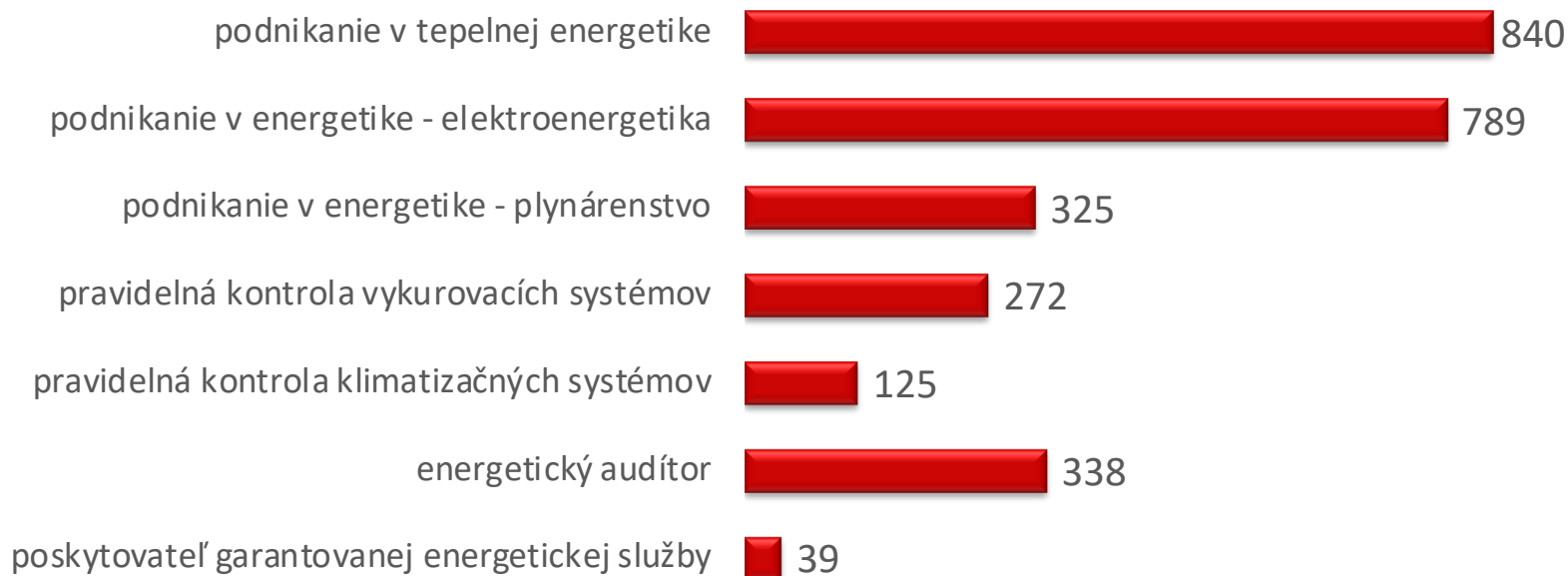
Data sources:

- Energy audits of large enterprises in last 4 years **913 audits**
- regular inspection of heating and air conditioning systems **730 reports**
- verification of the performance of heating equipment **3 900 verifications/year**
- Operation of CHP **200 assesments/year**

Education and examinations of energy specialists

SIEA provides examinations for energy specialists for the Ministry of Economy of the Slovak Republic

Number of professionally qualified persons



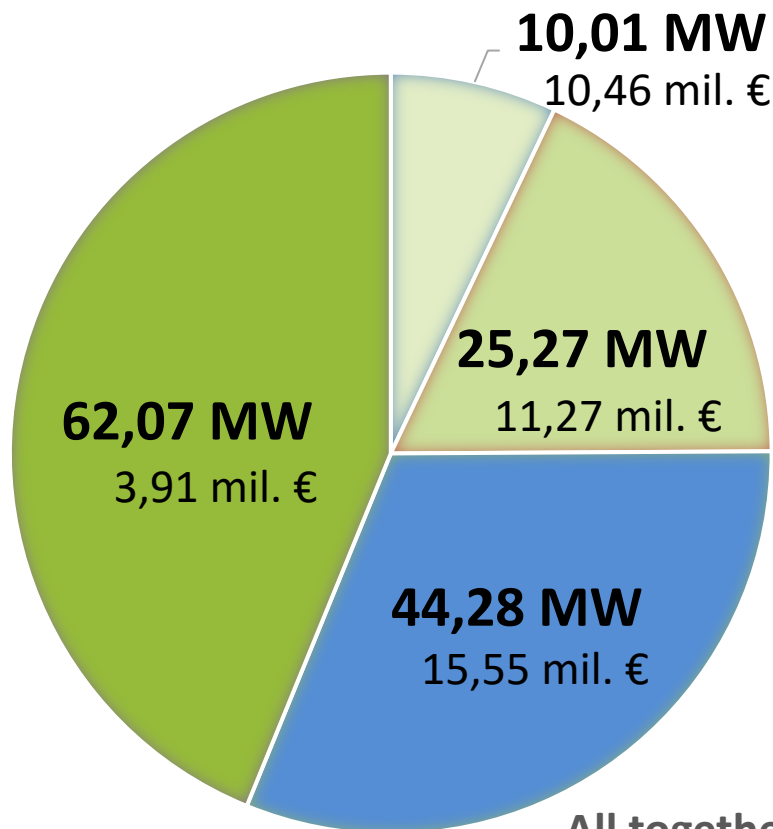
Green for Households

Green for Households

- **Project duration:** 2015 – 2018
- **Financing:** Operation programme **Quality of Environment**
Priority axis 4: Energy efficient low-carbon economy in all sectors
- **Budget:** 45 mil. €
- **Goal:** activity is focused on promotion of small-scale facilities for family and residential houses increasing installed power for **at least 55 MW**

Green for Households

Total installed power of equipment **141,63MW**



- Photovoltaic panel - 3673 vouchers
- Solar thermal panel - 6973 vouchers
- Heat pump - 5242 vouchers
- Biomass boiler - 2613 vouchers

All together 18 501 small-scale facilities - 41,19 mil. €

Green for Households II



Zelená domácnostiam II

Podpora využívania obnoviteľných zdrojov energie v domácnostiach

EURÓPSKA ÚNIA
Európsky fond
regionálneho rozvoja



Domácnosti

Zhotovitelia

Zariadenia

Hľadať



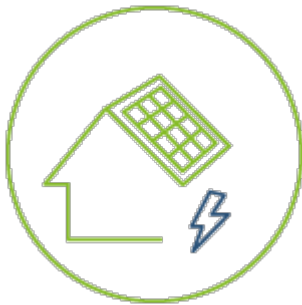
Zelená domácnostiam II

V rámci pokračovania národného projektu bude do roku 2023 podporených 21 000 inštalácií.

- **Project duration:** 2019 – 2023
- **Financing:** Operation programme **Quality of Environment**
Priority axis 4: Energy efficient low-carbon economy in all sectors
Specific objective 4. 1. 1. Construction of small-scale plants for use of RES
- **Budget:** 48 mil. €
- **Goal:** activity is focused on promotion of small-scale facilities for family and residential houses increasing installed power by at least 140 MW

Green for households II – supported small scale plants

Support is provided for owners of family houses:



Photovoltaic
panels



Solar thermal
panels



Heat pumps



Biomass
boilers

Green for households II – supported small scale plants

Support is provided for owners of residential houses:



**Solar thermal
panels**



**Biomass
boilers**

Green for households II – supported small scale plants

National project Green for Households II

- **List of eligible small scale plants-** at the moment is registered 2 664 types of small scale plants

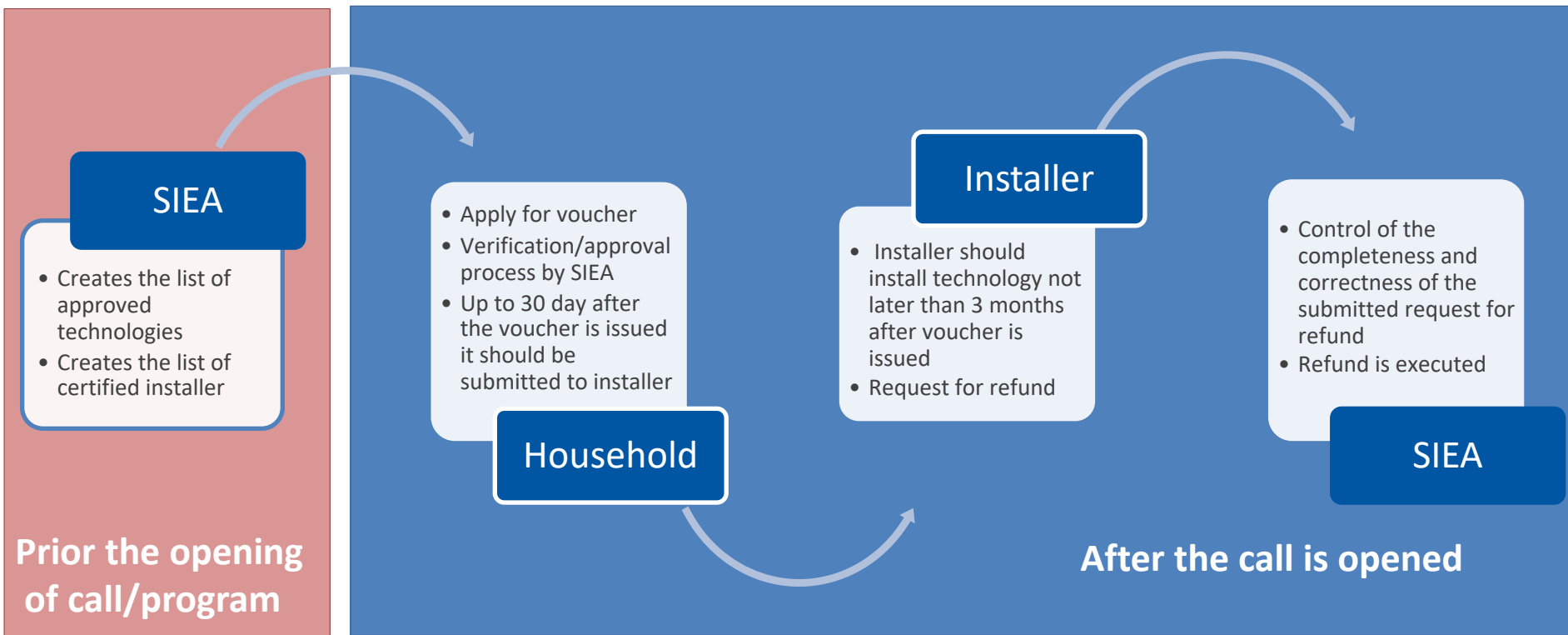
1002 heat pumps,
540 biomass boilers,
863 photovoltaic panels,
259 solar thermal panels,
registration is still going on.

- **List of eligible contractors**

Totally registered contractors 1023

Green for households II – support

The mechanism of providing support:



Green for households II – support

The mechanism of providing support

Application of the principle of preference:

When issuing vouchers, preference is given to a **higher financial contribution** for applications for issuance of vouchers for heat production:

a) in family houses, where the implementation of measures to reduce energy consumption will be demonstrated;

b) in areas where a DH system is not established,

If one of the conditions is met, **the value of the voucher will be increased by 10%**

If both conditions are met, **the value of the voucher will be increased by 25%**

Green for households II – support

| Type of the household/device | | Rates and maximum values of the contribution when applying the preference | |
|------------------------------|--------------------|---|------------|
| | | a) measures implemented | |
| | | and also | |
| | | b) no DHS in area | |
| | | Rate €/kW | max. value |
| Family house | Photovoltaic panel | 500 €/kW* | 1 500 €* |
| | Solar heat panel | 500€/kW | 1 750 € |
| | Biomass boiler | 100 €/kW | 1 500 € |
| | Heat pump | 340 €/kW | 3 400 € |

* Preference does not applies.

Green to households II – support

| Type of the household/device | | Rates and maximum values of the contribution when applying the preference | |
|------------------------------|------------------|---|-------------------------|
| | | a) measures implemented | |
| | | and also | |
| | | b) no DHS in area | |
| | | Rate €/kW | max. value |
| Residential house | Solar heat panel | 440 €/kW | Max. 1 kW per 1 flat |
| | Biomass boiler | 88 €/kW | Max. 7 kW per 1 flat |

Green for households II – support

Issued vouchers in 2019

Contribution to the fulfillment of the Green to Households project goal - EUR per kW

How much does one installed kW cost?

| Photovoltaic panel | Solar heat panel | Heat pump | Biomass boiler | average |
|--------------------|------------------|-----------|----------------|-----------------|
| 451,58 € | 442,73 € | 308,54 € | 65,20 € | 236,72 € |

What is the average value of vouchers

| Photovoltaic panel | Solar heat panel | Heat pump | Biomass boiler | average |
|--------------------|------------------|-----------|----------------|----------------|
| 1 400 € | 1 659 € | 2 945 € | 1 485 € | 1 872 € |

Data from 4.2.2020

Green for Households in the year 2020

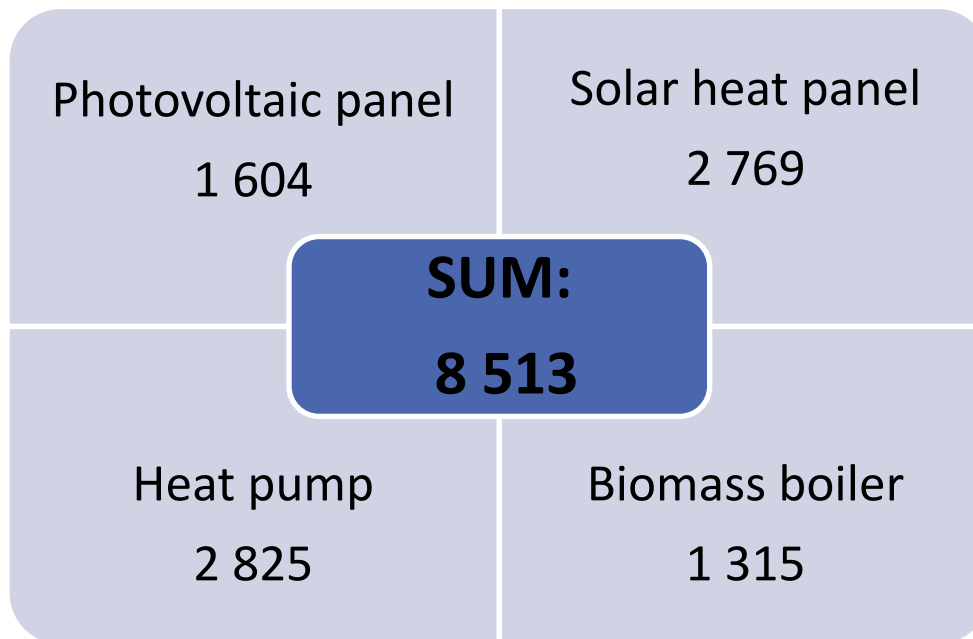
The method of issuing vouchers was changed

Reservoir of voucher applications

- Budgets / **sizes of reservoirs** are specified for each type of devices individually and for different period of time (as needed, for 6 months or 1 year).
- **The household will register the application for the voucher only once**, it will have continuously updated information about the expected date of issue of the voucher and will wait for its issuance. Applications from the reservoir will be processed in order of registration (FIFO).
- New vouchers **will be issued continuously** (as soon as the existed vouchers are refunded)
- the registered applications **will be possible to edit**

Green to Households II

Number of paid vouchers by the device:



Data valid for 24.09.2020

NATIONAL PROJECT „LIVE BY ENERGY“



NATIONAL PROJECT „LIVE BY ENERGY“


Odborné energetické poradenstvo

INTRODUCTION OF THE PROJECT

Continuation of the project „Support for education and guidance on the effective use of energy and renewable energy sources, including better information for the general public“ (2010 – 2015).

FINANCING:

- Operational programme: **Quality of Environment**
- Priority axis 4: **Energy efficient low-carbon economy in all sectors**
- Grant: **31 928 607,24 EUR**
- 4.4.1 D *Raising awareness of low-carbon measures, particularly energy efficiency and RES use, counselling, information campaigns, professional seminars, conferences and activities for children and youth.*



OBJECTIVE OF THE PROJECT

- **Main objective** is to increase the level and quality of public knowledge in energy efficiency, energy savings and renewable energy sources.
- **The project aim** is to provide expert energy advice especially for households, public sector, students and entrepreneurs.

MAIN ACTIVITIES

- Professional energy consultancy in the regions.
- Publications and printed materials.
- Conferences and seminars.
- Fairs and exhibitions.
- Free energy consultancy at festivals and sport events.
- Site consultations and presentations in cities and municipalities.
- Publicity of the project through media.
- Website.
- Raising awareness of use of renewable energy and energy savings among children and youth.

COUNSELLING CENTRES

5 counselling centres:

Bratislava - Trenčín – Banská Bystrica – Košice – Žilina

Providing advices:

- in person
- by e-mail
- via free helpline



0800 199 399



CONFERENCES AND SEMINARS

Thematic conferences and seminars for the general public and experts.



- More than 70 thematic conferences and seminars.
- More than 5.000 participants.

FAIRS AND EXHIBITIONS

- Our consultants participate in many exhibitions and provide expert advice, organize lectures and conferences such as:

CONECO/ RACIOENERGIA
AQUATHERM
SOLARIS
ELO SYS
OBNOVITEĽNÉ ZDROJE ENERGIE
KVETENA
DOMEXPO
ABC STAVEBNÍCTVA
TATRA*EXPO
ENERGETICKÝ MANAŽMENT
AGROKOMPLEX etc.



FAIRS AND EXHIBITIONS

Festival GRAPE – Piešťany Festival POHODA – Trenčín

- The consultants provided consultations to the general public on current topics related to savings, realization of measures on residential and family houses, the utilization of renewable energy and potential funding from the financial mechanisms for domestic householders.
- At the exposition were demonstrated practical trainings for the use of renewable energy sources and energy savings. For the youngest participants, we prepared various games on the theme of renewable energy sources.



SITE CONSULTATIONS IN CITIES

80 On -SITE CONSULTATIONS AND PRESENTATIONS IN CITIES AND MUNICIPALITIES

- Experts advised to householders how to save energy and utilize renewable sources in their homes.
- During each site visit our experts provided **individual consultations** and **expert advices at special seminars**.
- Visitors had opportunity to directly **monitor** the production of electricity in the **mobile „green house“** through **photovoltaic panels** and **wind turbines**.



PUBLICATIONS & PRINTED MATERIALS

- Within the project we prepared and **issued printed materials** on topics how to save energy and utilize renewable energy sources.
- Based on high demand and success we prepared and reprinted brochure with energy experiments called „Rady tety Ety“ for schools to be used during educational process.

**WE ISSUED MORE
THAN 40 DIFFERENT
TYPES OF PRINTS**

PUBLICATIONS & PRINTED MATERIALS

S energiou efektívne

Ako v domácnosti znížiť spotrebu tepla na vykurovanie a ohrev vody



EUROPSKA ÚNIA
Európsky fond
regionálneho rozvoja

OP KŽP
Operačný program
Kvalita životného prostredia

SIEA

S energiou efektívne

Ako znížiť spotrebu elektriny v domácnosti



EUROPSKA ÚNIA
Európsky fond
regionálneho rozvoja

OP KŽP
Operačný program
Kvalita životného prostredia

SIEA

S energiou efektívne

Rozpočítavanie tepla a teplej vody v bytových domoch



EUROPSKA ÚNIA
Európsky fond
regionálneho rozvoja

OP KŽP
Operačný program
Kvalita životného prostredia

SIEA

S energiou efektívne

Zatepľovanie a výmena okien v bytových domoch



EUROPSKA ÚNIA
Európsky fond
regionálneho rozvoja

OP KŽP
Operačný program
Kvalita životného prostredia

SIEA

S energiou efektívne

Ako vybrať solárny kolektor



EUROPSKA ÚNIA
Európsky fond
regionálneho rozvoja

OP KŽP
Operačný program
Kvalita životného prostredia

SIEA

S energiou efektívne

Ako vybrať tepelné čerpadlo



EUROPSKA ÚNIA
Európsky fond
regionálneho rozvoja

OP KŽP
Operačný program
Kvalita životného prostredia

SIEA

S energiou efektívne

Ako vybrať zdroj na biomasu



EUROPSKA ÚNIA
Európsky fond
regionálneho rozvoja

OP KŽP
Operačný program
Kvalita životného prostredia

SIEA

S energiou efektívne

Ako vybrať kondenzačný kotol



EUROPSKA ÚNIA
Európsky fond
regionálneho rozvoja

OP KŽP
Operačný program
Kvalita životného prostredia

SIEA

PUBLICITY OF THE PROJECT

- Project activities have been published in dozens of articles in newspapers, the local print titles and in specialized magazines.
- Our consultants and energy experts provide advice and recommendations in national TVs and Radios e.g. Markiza, TA3, Slovak Television, Slovak Radio.



WEBSITE zitenergiou.sk

- Within the project were prepared two energy calculators dedicated to verify the suitability of investments in solar collectors and identifying the costs for heating for different types of heating equipment.
- Calculators are available on website zitenergiou.sk or ekalkulacky.sk.

The screenshot shows the website interface for SIEA (Slovenská inovačná a energetická agentúra). The main navigation bar includes categories like 'Štrukturálne fondy', 'Podporné programy', 'Zelená domácnostiam', 'Bezplatné poradenstvo', 'Odborne o energii a skúšky', 'Vzdelávanie a skúšky', 'Monitorovací systém', 'Energetické analýzy', 'Medzinárodné projekty', and 'Inovácie'. A search bar is present with the text 'Hľadať'. Below the navigation, there is a breadcrumb trail: 'SIEA > Bezplatné poradenstvo > Bezplatné poradenstvo pre domácnosti'. The main content area is titled 'Bezplatné poradenstvo pre domácnosti' and contains text about energy audits, legislative obligations, and support programs. A sidebar on the left lists various services like 'Domácnosti', 'Podnikatelia', 'Verejný sektor', etc. A sidebar on the right provides contact information, including a toll-free number '0800 199 399' and office hours.

Thank you for attention

Stanislav Laktiš

Slovenská inovačná a energetická agentúra

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