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HOW DOES THE ROMANIAN STATE SUPPORT THE INCREASE OF ENERGY EFFICIENCY OF BUILDINGS BY USING PUBLIC FUNDS?

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Abstract:

The issue of improving the energy efficiency of buildings in Romania is one of interest, both for the state authorities and for the population. The general purpose is to encourage the production of thermal energy and domestic hot water through the use of renewable energy sources. This is part of the EU's long-term objective of decarbonising the existing and inefficient European real estate park. In order to start renovating the existing buildings on the national territory, considerable financial resources are needed which the owners should have. The Romanian state, through the Agency for Environmental Protection, comes to the support the interested persons by granting financial support within the "Green House" Programs. The present paper includes an analysis of the four "Green House" programs and the public funds used to increase the energy efficiency of the buildings.

Key words: environment fund, public money, public budget, green house

1. Introduction

With increasing urbanization, higher in developing countries, the number and size of buildings in urban areas will increase, resulting in an increased demand for electricity and other forms of energy, commonly used in buildings. Energy used in buildings (residential and commercial) represent a significant percentage of a country's total energy consumption. This percentage depends greatly on the degree of electrification, the level of urbanization, the amount of building area per capita, as well as national and local policies to promote efficiency. The energy efficiency of a building is the extent to which the energy consumption per square metre of floor area of the building measures up to established energy consumption benchmarks for that particular type of building under defined climatic conditions.[UNIDO, 2009, p.18.5] Among the benefits, likely to arise from energy efficiency investments in buildings, are: reducing energy use for space heating and/or cooling and water heating, reduced electricity use for lighting, office machinery and domestic type appliances, lower maintenance requirements, improved comfort, increase property value. [UNIDO, 2009, p. 18.6]

In April 2018, the European Council adopted a Directive on the energy performance of buildings. The European Union is committed to developing a sustainable, competitive, secure and decarbonised energy system by 2050. To meet that goal, Member States and investors need measures that aim to reach the long-term greenhouse gas emission goal and that decarbonise the building stock, which is responsible for approximately 36 % of all CO₂ emissions in the EU, by 2050. Member States should provide clear guidelines and outline measurable, targeted actions as well as promote equal access to financing. Financial mechanisms, incentives and the mobilisation of financial institutions for energy efficiency renovations in buildings should have a central role in national long-term renovation strategies and be actively promoted by Member States. [Directiva PE-4/2018] The increase of the energy efficiency can be realized in several ways, from education of buildings' users in the spiritual economy of the energy, to the interventions that are available to many persons and until the carrying out of an expertization and of an energy audit after which experts recommend a number of technical modernization solutions. In this framework, Romania has started four financing programs, available to interested persons, to increase the energy performance of buildings, the programs are under the coordination of the Environmental Protection Agency, generically entitled "The Green House".

In Romania the public expenditures for environmental protection are carried out within the programs financed from the Environmental Fund. The Administration of the Environmental Fund (AEF) functions as a specialized body of the central public administration, with legal personality, in the coordination of the Ministry of the Environment. The AEF has as its main objective the development and financing of several categories of programs for the sustainable development of Romania and which will contribute to the improvement of the environmental infrastructure. The Administration of the Environment Fund manages programs financed from national funds and is financed entirely from its own revenues. The environmental fund is a public fund and its revenues constitute public revenues, which are part of the general consolidated budget, constituted by a special law that establishes their destinations. In recent years, AEF has financed from the Environment Fund, programs that have promoted the implementation and use of renewable resources, in order to produce solar panels, wind, solar, biogas or biomass, hydro and geothermal.

The paper began with some introductory aspects regarding the energy performance of buildings and its importance, as well as the familiarization of the reader with the AEF in Romania, then continues with a detailed presentation of the "Green House" programs (which are in progress in 2020) and the analysis of the numerical data related to them. In the end, a series of conclusions are referred with reference to these programs. The sources of documentation that have been the basis of the research include: program financing guides, AEF press releases, AEF president decisions and any data provided by AEF on its own web page. The financing guide constitutes a complex informative support, having the role of providing to applicants essential information regarding the running of a program. The research methods used in the paper are observation, analysis, rationing, synthesis, correlation. The only official information on how the analyzed programs are carried out are those transmitted in the media (as press

releases) by the Ministry of Environment and Forests and by the Administration of the Environment Fund, as well as those published on the websites www.mmediu.ro and www.afm.ro.

2. Analysis of "Green House" Programmes financed by public money in Romania

The "Green House" program aims to increase the energy efficiency of buildings both by installing solar panels or photovoltaic panels, but also by making thermal insulation. Solar panels are devices that use solar radiation to produce other resources later. Depending on the purpose for which they were created, there are two types: solar thermal panels (convert solar energy into heat and domestic water) and photovoltaic panels (convert solar energy to electricity).

The benefits of installing solar panels are important, as these devices contribute significantly to the transition to an eco-friendly lifestyle and to protection of the environment. Solar panels use solar energy, a renewable and inexhaustible resource that does not pollute the environment, as is the case of traditional fuels (coal, gas, etc.). Because it is self-produced and does not involve extra operating costs, solar energy is free, which means that the heating of the domestic water and the house will be done on a reduced budget. Solar panels are easy to install and can be placed both on the roof of houses and on open fields, depending on the needs of each one. Solar panels have a long service life (over 20 years) and do not require complicated maintenance, especially since their operation depends almost entirely on sunlight.

The initial costs of purchasing solar panels are higher than those of the traditional heating methods used by people to produce heat, but the good part is that the investment is financially supported by the Romanian state through the Environmental Fund budget.

2.1. Green house - classic (solar panels - natural / legal persons)

"The program regarding the installation of heating systems using renewable energy, including the replacement or completion of classic heating systems" is a program regarding the installation of heating systems using renewable energy, including the replacement or completion of the classic heating systems, and the beneficiaries are natural persons, on the one hand, and administrative-territorial units, public institutions, worship units, on the other hand. The purpose of the program is to improve the quality of air, water and soil by reducing the degree of pollution caused by the burning of wood and fossil fuels used to produce thermal energy. The aim is to stimulate the use of systems that use renewable, non-polluting energy sources. The Environmental Fund finance the installation of heating systems that use renewable energy, including the replacement or completion of the classic heating systems. The amount allocated to natural persons is distributed by counties according to the number of inhabitants. The financing for natural persons is granted as follows: a) up to 3,000 lei, for the installation of unpressurized solar panels; b) up to 6,000 lei, for the installation of pressurized solar panels; c) up to 8,000 lei,

for the installation of heat pumps, exclusively air-to-air heat pumps. [Order no. 1817 / 20.09.2016, art. 8]

Applicants can apply for this program if they have their domicile in Romania, they are owners of the building, they do not have debts to public budgets and they have no crimes against the environment. Prior to 2016, 6,000 lei was the grant for projects regarding the thermal energy production plant based on pellets, briquettes, wood chips, as well as any kind of debris and waste from vegetable, agricultural, forestry, forestry. [Order no. 950 / 17.06.2010, art 7] According to art. 12 of Order no. 1817/2016 in the category of eligible expenses are included: a) the purchase of heating systems that use renewable energy, including those intended to replace or supplement the classic heating systems; b) the costs of mounting and commissioning the system; c) value added tax (VAT).

According to the data on the AEF website, three financing sessions were opened for this program, namely 2010-2011, 2011-2014, 2016-2017. The amount allocated to the financing session for the projects submitted during the period 01.07.2010 - 28.01.2011 was 110,000,000 lei, according to the Disposition of the AEF president no. 161 / 31.01.2011. On June 1, 2011 a new financing session was opened with an amount of 100,000,000 lei, modified in July 2014 to the value of 134,230,589.78 lei, based on the Disposition of the President of the AEF no. 384 / 07.07.2014 Subsequently, the allocated amount was redistributed by counties according to the number of financing projects submitted by the applicants. In the session of submission opened between June 1 - July 15, 2011, a total number of 23,938 projects were submitted. 1,509 projects were accepted and 2,653 projects were rejected during analysis process, according to the press releases.

Table no. 1: Green house - classic. The situation of the financing applications of individuals

Year	Number of allowed applications	Number of rejected applications	Total analyzed applications
2010	6880	1244	8124
2011	10956	1930	12886
2012	3940	1310	5250
2014	14378	6095	20473
2015	196	131	327
2016	8321	3727	12048
Total	44671	14437	59108

Source: Centralized data by author from the lists published by AEF

By the Disposition of the AEF president no. 483 / 27.09.2016, the amount allocated to the financing session in October 2016 for the „Green House – classic (individuals)” Program was 60,000,000 lei, respectively 34,000,000 lei for economic entities. Subsequently, it was supplemented to the value of 80,000,000 lei, offering the possibility of 3,000 new beneficiaries to enter the program. [The Disposition of the AEF president no. 559 / 11.10.2016] The distribution of funds by counties was made according

to the number of inhabitants, so, to the smallest counties were allocated amounts under 900,000 lei (Covasna, Salaj, Tulcea) and to the largest counties were allocated amounts that exceed 3 million lei (Prahova, Iasi). To these, it is added Bucharest with approximately 7.5 million lei. During the session opened in 2016, 12,028 financing applications were submitted, the total amount requested to authorities being 72,439,599.49 lei. The applications were solved in 2017, and the centralized data from the lists published by AEF reflect a number of 8321 accepted projects in 2017-2018, reported to 3727 rejected projects during the same period for individuals. We can observe a total of more than 44,000 accepted applications in this program, considering that the rate of rejection of a project within the program „Green House - Classic (individuals)” is 24.4%.

The administrative-territorial units, the public institutions or the cult units can submit projects within the program for buildings owned or managed by them. Projects which belongs to economic entities involve replacing or supplementing the classic heating systems with systems that use solar energy, geothermal energy, waste's fermentation gas, sludge fermentation gas from wastewater treatment plants, biogas or pellets, briquettes, wood chop, as well as any kind of debris and vegetable, agricultural, forestry, forestry waste.

The economic entities are conditioned by the participation with their own contribution to the development of the projects. The financing is granted non-reimbursable, in the percent of 90% of the eligible expenses of the project. The percentage of eligible expenses not financed together with the ineligible expenses constitutes the own contribution of the applicant, insured from own financial sources. The financing is done in installments, within the validity period of the contract and as long as the project is carried out. The amount of financing for public institutions cannot exceed the value of 2,000,000 lei. The amount of financing for the cult units cannot exceed the value of 500,000 lei. The amount of financing in the case of administrative-territorial units cannot exceed the following values: a) 4,000,000 lei for administrative-territorial units with a number of inhabitants over 100,000; b) 3,000,000 lei for the administrative-territorial units with a number of inhabitants between 50,000 and 100,000; c) 2,000,000 lei for the administrative-territorial units with a number of inhabitants between 20,000 and 50,000; d) 1,000,000 lei for the administrative-territorial units with a number of inhabitants between 3,000 and 20,000; e) 500,000 lei for the administrative-territorial units with a number of inhabitants less than 3,000. [Order no. 1818 / 20.09.2016, art. 10]

In the case of economic entities, the eligible expenses are stricter, the legislative regulations specifying only examples of ineligible expenses (eg expenses related to issuing agreements, notices and authorizations, bank expenses, operating costs of the installations, etc.) Between 2009 and 2010, 213 financing contracts were signed for economic entities, in a total value of 160,010,547 lei, of which 212 contracts worth 159,690,643 lei were completed between 2010 and 2016, and one project is in progress. It is run by the municipality of Tg Jiu, has the value of 319,904 lei and aims to complete the classic hot water system with one based on solar energy at several kindergartens and nurseries in the city.

Table no. 2: Projects “Green house - classic (economic entities)” after the year of completion

Year of completion of projects	Number of contracts completed	Value of projects (lei)
2010	48	35.850.039,50
2011	111	83.278.160,78
2012	37	26.315.420,46
2013	11	10.388.267,55
2014	2	1.129.294,24
2015	2	1.760.467,90
2016	1	968.992,50
Total	212	159.690.642,93

Source: Centralized data by author from information published by AEF

According to the number of projects submitted to the AEF, the counties with the largest number of projects were: Constanța with 24 projects completed in the amount of 15.3 million lei, Iași with 22 projects completed in the amount of 11.8 million lei and Vrancea with 16 projects amounting to 5.2 million lei. By taking into consideration the amount financed, the following counties attracted the most funds in this program: Constanța 15.3 million lei, Neamț 19.9 million lei, Dolj 12.4 million lei, Iași 11.8 million lei and Dâmbovița 9.8 million lei. Among the counties that submitted and finalized a single project are: Covasna 0.25 million lei, Brașov 0.45 million lei, Teleorman 0.56 million lei, Ialomița 0.6 million lei, Botoșani 0.75 million lei and Timiș 1.37 million lei. Also in these counties it can be found the lowest values attracted by economic entities. To these are added 8 counties that have completed two projects funded in this program, namely: Arad, Brăila, Calarași, Harghita, Hunedoara, Salaj, Suceava, Vâlcea.

The beneficiaries of the program, both natural and legal persons, are obliged to maintain the investment made within the program for a period of at least 1 year from the expiry of contract date.

Table no. 3: Projects of the Program “Green House – classic (economic entities) - by type of territorial administrative unit

Type of territorial administrative unit	Financed value lei)	Number of projects	Share in total financing (%)
County consils	33.884.317,22	21	21
Communes	56.959.679,87	114	36
Towns	22.693.795,60	32	14
Municipalities	41.675.662,20	40	26
Bucharest	4.477.188,04	5	3
Total	159.690.642,93	212,00	100

Source: Centralized data by author from information published by AEF

From centralized data it can be observed that the most numerous projects have been submitted by the communes, 114 projects with a value approaching 60 million lei and represent over 1/3 of the total funds. On the next position we find the Romanian municipalities, with 40 projects with a value of 41.6 million lei and a share of ¼ of the total financing. The figures show that about ½ of the county councils in Romania had interest for this program, and the country's capital obtained 4.5 million lei to finance 5 projects.

2.2. Green house - plus (insulations - natural / legal persons)

Improving the energy efficiency of the existing buildings is essential, not only to achieve national energy efficiency goals in the medium term, but also to meet the long-term goals of the climate change strategy and move to a competitive economy with low-emission of carbon until 2050. [MDRAP, 2014, p.3] The strategy for mobilizing investments in the renovation of residential and commercial buildings, both public and private, existing at national level, is elaborated in accordance with the requirements of Article 4 of the Directive 2012/27 / EU on energy efficiency. The quality requirements of a building are the following: strength and stability, safety in operation, fire safety, hygiene, human health, restoration and protection of the environment, thermal insulation, waterproofing and energy saving, noise protection. [Cazan G., 2014] The increase of the energy efficiency can be realized in several ways, from educating the users of the building in the spirit of the energy economy, to the interventions that are within the reach of many and to carrying out an expertise and an energy audit which will result in experts recommend a number of technical modernization solutions. Based on these considerations, the „Green House – plus” program was developed.

2.2.1. The program on performing construction operations for energy efficiency, beneficiaries legal entities

The purpose of the program is to improve the quality of the environment by reducing the energy consumption used in buildings, energy efficiency by stimulating the use of organic-natural insulation materials, green roof systems, plant walls, BMS consumption optimization systems and LED-based lighting systems. The objective of the program is to increase the number of energy-certified buildings whose performance improves with at least one class of energy efficiency as compared to the existing one. The amount of financing is up to a maximum of 500,000 lei per project, related to the eligible expenses. [Order no. 2228 / 21.11.2016, art. 8] The grant is granted up to 90% of the eligible costs of the project. The percentage of eligible expenses not funded, as well as the ineligible expenses of the project, constitutes the own contribution of the applicant, insured from own financial sources. The financing is done in stages, in maximum 3 installments, within the validity period of the contract for financing and as the project is carried out.

In the „Green House – Plus (legal entities)” Program can participate the administrative-territorial units, public institutions and non-governmental organizations. In the category of eligible buildings are included: educational units and educational institutions, medical-sanitary units and hospitals, buildings for the old people, social

canteens, night shelters, child placement centers, etc. According to the financing guide, in the category of eligible expenses there are: the expenses foreseen for the investment according to the feasibility study (insulation materials, systems of grass roof, systems of efficiency of consumption (BMS), replacement of the classic bulbs with LED bulbs within the limit of 1% of the value of the expenses for the basic investment; the expenses with the installation of the systems, the execution, the verification and the tests, the value added tax (VAT); the expenses with consultancy, feasibility studies, the technical project, within the limit of 8% of the expenses for the basic investment.

2.2.2. The program on performing construction operations for energy efficiency, beneficiaries of natural persons

The purpose of the program is to improve the quality of the environment by reducing the energy consumption used in buildings, energy efficiency by stimulating the use of insulation materials of organic-natural origin. The objectives of the program are to increase the number of energy-certified homes in class A for homes of maximum P + 2E under construction and with a higher class for existing homes. The financing is granted in the form of an energy efficiency premium of up to 40,000 lei, related to the eligible expenses, but not more than 120 lei / sqm isolated and finished, for the isolation of the houses in the construction phase and for the isolation of the existing houses. [Order no. 2425 / 23.12.2016, art. 8] Any differences until the full coverage of the costs and ineligible expenses are supported by the beneficiary from his own sources. The project on the isolation of an existing home must use a thermosystem of organic-natural materials and compatible finishes for walls or roof based on a project made by an architect. Individual dwellings with a usable area of less than 50 square meters and buildings with A class energy are not eligible. Thermal insulation of the exterior walls and interior insulation of the roof for housing are financed under the program. The non-reimbursable financing covers expenses with the materials used to insulate new buildings or renovation, including VAT and labor services.

There is no information on on-going or completed projects on the AEF website, nor file submission sessions, which is why this program may fall into the category of failed programs.

2.3. Green house - photovoltaic panels (natural persons)

“The Program regarding the installation of photovoltaic panel systems for the production of electricity, in order to cover the consumption needs and the delivery of the surplus in the national network” is a new program, started in September 2019 and is generically called the Green House - Photovoltaic. By this program is funded expenses with acquisitions of photovoltaic panels with minimum installed power of 3kWp (the system of photovoltaic panels, inverter, connections, electrical panel); expenses related to the installation and commissioning of the photovoltaic panel system (15% of the costs of electrical equipment and installations);

VAT related to eligible expenses. The financing is granted up to 90% of the total amount of eligible expenses, but not more than 20,000 lei.

The program is intended for individuals with domicile in Romania, who own the building on which the system of photovoltaic panels is located, conditioned by the absence of debts to the state and local budget. The registration in the program is done by means of installers validated by AEF, which reserves the requested amounts from the funds distributed by geographical regions. The project implementation is carried out within 8 months from the signing of the grant agreement, and the maintenance and operation of the investment is monitored for 6 years by the AEF.

Table no. 4: The amounts allocated to the regions within the Green House - Photovoltaic Program

No.	Geographical region	Counties	Allocated value (lei)	Share (%)
1	Bucuresti - Ilfov	Bucuresti, Ilfov	80.000.000	14,9
2	Nord Est	Bacău, Botoșani, Iași, Neamț, Suceava și Vaslui	81.980.000	15,3
3	Sud Est	Brăila, Buzău, Constanța, Galați, Vrancea și Tulcea	68.300.000	12,7
4	Sud Muntenia	Argeș, Călărași, Dâmbovița, Giurgiu, Ialomița, Prahova și Teleorman	72.880.000	13,6
5	Sud Vest	Dolj, Gorj, Mehedinți, Olt și Vâlcea	53.240.000	9,9
6	Vest	Arad, Caraș-Severin, Hunedoara și Timiș	52.200.000	9,7
7	Nord Vest	Bihor, Bistrița-Năsăud, Cluj, Sălaj, Satu Mare și Maramureș	65.540.000	12,2
8	Centru	Alba, Brașov, Covasna, Harghita, Mureș și Sibiu	62.880.000	11,7

Source: Disposition of the President of the Administration of Environmental Fund, no. 562/06.09. 2019

The AEF has allocated 537,020,000 lei for this program, at national level, and validated a number of 242 photovoltaic panel installers (legal entities), with which it signed financing contracts in 2019. The large number of legal persons (installers) enrolled in the program reflects their interest. From the above table it can be observed that the largest amounts were distributed to the North-East region (15.3%) and the Bucharest capital (14.9%), respectively, approximately 80 million lei for each region. In contrast, the West and South-West regions received by distribution amounts up to 30 million lei, values are smaller as compared to the regions mentioned above.

In the computer application of the „Green House – Photovoltaic” Program were registered 13,271 applications on 10.09.2019, according to data provided to the AEF press. An overview of them is shown in the table below:

Table no. 5: Statistical data on the Green House Photovoltaic Program

Apeal	Submitted projects	Total funds	Reserved funds	Available funds
Region RO11 – North – West	3.293	65.540.000	65.539.999.6	0.4
Region RO12 – Centre	3.150	62.880.000	62.879.614	386
Region RO21 - North-East	4.116	81.980.000	81.989.648.56	-9.648.56
Region RO22 – South-East	3.425	68.300.000	68.296.543	3457

Apeal	Submitted projects	Total funds	Reserved funds	Available funds
Region RO31 – South	3.716	72.880.000	72.879.999,8	0,2
Region RO32 - Bucharest-Ilfov	3.094	80.000.000	61.578.180,33	18.421.819,67
Region RO41 - South-West Oltenia	2.710	53.240.000	53.239.737	263
Region RO42 - West	2.643	52.200.000	52.199.999,87	0,13

Source: <https://fotovoltaiace.afm.ro/#/login>

Among the 8 geographical regions there are two regions with two opposite situations, in the conditions in which in the other 6 regions the funds made available to the beneficiaries within the program have been fully reserved. A first exception is the Bucharest-Ilfov region where the value of the remaining available amounts is over 18 million lei, which means a reservation rate of only 76%. The second exception is the North-East region, where the value of the reserved amounts exceeds the value of the allocated amounts with over 9,000 lei, which means a 100% reservation rate. It remains to be seen how much of the reserved amounts will be spent on projects.

2.4. Green house - photovoltaic panels in isolated households (local authorities)

“The program regarding the installation of photovoltaic systems for isolated households not connected to the electricity distribution network” is similar to the previous program, the difference is in the category of eligible applicants and the type of household to which it is addressed. The purpose of the program is to increase energy efficiency, improve air quality and reduce greenhouse gas emissions by producing electricity from renewable sources at homes located at least 2 km from the national electricity distribution network and by reducing the use conventional fuels. The object of the program is to finance the purchase and installation of photovoltaic panel systems that use renewable, non-polluting energy sources. The amount allocated to the financing session for 2019 is 230 million lei, according to the Disposition of the AEF president no. 237/04.04.2019. The non-reimbursable financing granted by AEF is 100% of the value of the eligible expenses, but not more than 25,000 lei including VAT, for each photovoltaic system that serves a household. The financing is granted in installments, within the validity period of the financing contract and as the project is implemented.

The program is addressed to the administrative-territorial units that are included in the list of potential beneficiaries for which financing applications can be submitted, the number of households and the amounts allocated to them, are published on the AEF website.

The analysis of the annex shows that in 2019, in Romania, there are still several thousand homes not connected to the national electricity system. The centralized figures on the AEF website, the section Green House - photovoltaic isolated households, indicate a grant for 7,136 isolated households with a total value of 178,800,000 lei, respectively 25,000 lei for each household.

This program is a multiannual program, an on-going program in 2020. The AEF opened for the first time the submission session from April to July 2019. This period was

extended successively until October, then until December, and subsequently until January 2020, based on the disposition of the President of the Administration of Environmental Fund, no. 679 of 11.12.2019. Moreover, the AEF has twice modified in 2019 the grid of project verification. There is no information on the number of applications, on approved projects, in progress or completed. All these indicate a major disinterest for this program, respectively a lack of interest of the territorial administrative units where there are isolated households.

Figure no. 1: Date regarding isolated households in Romania

Source: Data centralized from the annex to the AEF Disposition no. 237 / 04.04.2019

3. Conclusions

All the analyzed programs are well-intentioned and they aim to protect the environment and an increase of life quality and the quality of interior comfort of buildings. But, from the analysis of the “Green House” programs that are on-going in 2020, a simple general conclusion results: there is a shortage in the information made available to the public, which generates sometimes ambiguity and disinterest, except for the details that characterizes the development of a program. The available information is evasive and incomplete and does not refer to the cost of the actual implementation and to the amounts actually transferred through the treasury accounts. The only financial values can be found in the payment statements regarding the environmental programs and projects funded by the AEF in 2014, 2015 and 2016. For 2017 there is no financial information regarding the payments, and for the years 2018, 2019 and 2020 there are partial and irrelevant budgetary executions at the entire budget year. From these payment situations published by AEF we can see the share of payments for the Green House program in total payments, respectively 11.8% in 2016 (28.3 million lei), 7.09% in 2015 (26.6 million lei) and 0.9% in 2014 (3.7 million lei). It should be noted that the annual budgets of the Environmental Fund include annual estimates regarding the amounts allocated to the Green House program.

It should be clearly stated that the programs are blocked until the implementation, some programs are totally uninterested for the entities to which they are intended. Moreover, on the AEF website there is no information regarding ongoing or completed projects, nor sessions for submitting files for financing thermal insulation. The same situation can be found in the case of the program aimed at mounting photovoltaic panels on isolated households. All these indicate a major disinterest in this program, respectively a lack of interest in the territorial administrative units where there are isolated households. The only programs, which seem to be functional and of interest to the population, are those aimed at installing solar thermal and photovoltaic panels on buildings owned by natural or legal persons.

Another important aspect is that there is no information about applicants who have not fulfilled their obligations and about sanctions applied as a result of their actions, but it remains only the general idea that they still have ongoing projects (for example, how many houses have been completed within the Green House program), concrete are lists with people who submit projects, but not with the ones completed. Another negative aspect is the lack of information regarding the factual checks, in the field. In the last 4 annual reports published by the AEF (2015 - 2018) there is no information on the checks in this program. In the Report on the use of the Environmental Fund in 2018, it is mentioned in a paragraph that there were field visits within the Green House - Classic Program to a number of 24 people in Giurgiu county, after which they identified 3 natural persons who did not installed (at the time of the visit) the panels financed by the AEF.

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Order no. 1818 of September 20, 2016 for the approval of the Financing Guide for the Program on the installation of heating systems using renewable energy, including the replacement or completion of the classic heating systems, beneficiaries of administrative-territorial units, public institutions and units of worship

Order no. 2228 of November 21, 2016 for the approval of the Financing Guide for the Program on carrying out works for energy efficiency, beneficiaries of legal entities

Order no. 2425 of December 23, 2016 for the approval of the Financing Guide for the Program on carrying out works for energy efficiency, beneficiaries of natural persons

Order no. 950 of June 17, 2010 for the approval of the Financing Guide for the Program on the installation of heating systems using renewable energy, including the replacement or completion of the classic heating systems.

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