D.5.5.3. Report on financial support mechanisms

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1. Introduction to the DARLINGe project

1.1. DARLINGe objectives

15 Project Partners representing geological surveys, universities, industry, regional energy and development agencies, ministries and municipalities, assisted by 7 Associated Strategic Partners from Hungary, Slovenia, Croatia, Serbia, Bosnia and Herzegovina and Romania are working together to improve energy security and efficiency in the Danube Region by promoting sustainable utilization of the existing, however still largely untapped deep geothermal resources in the heating sector, as a main objective. The project area covers the central and south-eastern part of the Danube Region, encompassing southern Hungary (southern Transdanubia and southern part of the Great Plain), north-eastern Slovenia (Pomurska and Podravska), northern Croatia (Slavonia), the northern parts of Bosnia and Herzegovina, northern Serbia (Vojvodina) and western Romania (Crisana and Banat), altogether about 95,000 km^2.

The specific objectives of the project are:

- to increase the use of geothermal energy and help the penetration of energy efficient cascade systems (where users are sequentially linked according to their decreasing heat demand) and matching them with heat-markets
- to establish a market-replicable tool-box consisting of 3 complementary modules for sustainable management of geothermal resources (an independent indicator-based benchmark evaluation of current uses, a decision tree to help developers, and a geological risk mitigation scheme to maximize the success rate of a first geothermal well reaching the expected yield and temperature),
- to advance stakeholder cooperation (establishment of a Transnational Stakeholder Forum) to foster geothermal developments and to create a strong geothermal value chain.

As a main result the intensity of cooperation among key players of the geothermal sector in the participating six countries will increase and contribute to energy security and energy efficiency by increasing the use of geothermal energy in the heating sector, which will make the Danube Region less dependent on imported fossil fuels, also respecting the environment.

Although much of DARLINGe's approach is geoscientific (various geological and geothermal maps, models, assessment of present thermal water utilization schemes and their technical backgrounds), the project also puts emphasis on the non-technical issues impacting the development of the geothermal sector, such as regulatory frameworks and available support schemes in the partner countries.

1.2. Financing related aspects of geothermal projects

This report deals with the financing-related aspects of geothermal projects, focusing on the various support schemes available for geothermal. It is important to note that the subject of DARLINGe project is geothermal heat production based on conventional, deep geothermal wells. Thus, green electricity production, shallow geothermal projects (ground source heat pumps) and EGS projects (projects based on artificially created reservoirs in hot, dry rocks) are excluded. We have investigated solely the support schemes for conventional, deep geothermal projects for the production of green heat.

The structure of this report is the following:

In chapter 2 we summarize the relevant economic aspects of geothermal projects to understand why do they require special financial support solutions.

In chapter 3 we briefly introduce the common used financial support measure types in the renewable energy sector.

In chapter 4 we introduce the actual available support schemes in DARLINGe countries for geothermal.

In chapter 5 we introduce some best practice examples in Europe, some countries which could reach significant improvement in geothermal by creating advantageous financial and legal environments.

In chapter 6 we provide suggestions on future support schemes based on the findings from the previous chapters.

2. Economic aspects of geothermal projects

2.1. General aspects

From an economic point of view two main features define the viability of a project: costs and revenues. Costs can be divided into two types:

- CAPEX: capital investment costs
- OPEX: operational and external costs

CAPEX includes the costs of preparation works (studies, measurements, licensing, design, etc.) and all installations (wells and surface technology). District heating projects involve additional high cost for the heat distribution system: typically, several km of pipelines and the heat centers at consumers' site. A critical factor of cost efficiency is customer density. In more favorable cases existing district heating networks supplied by fossil heat plants can be connected to the new geothermal plant.

OPEX mainly include the staff and maintenance costs, taxes, electricity cost of pumping.

Revenues are coming from selling heat energy. If cascade connection of heat consumers the project can be much more economical. For example, district heating (DH) consumers can utilize the geothermal heat in 50 - 80 °C temperature range and after it a greenhouse can utilize the heat in 20-50°C range. Thus, the same thermal water can be utilized for two purposes, providing two revenue sources. Market conditions form an important factor as well: at what price can the produced heat sold, are there regulated prices, market prices, or green heat premiums?

Geothermal energy is almost independent from fossil fuel prices. However fossil fuel prices have a large indirect effect on spreading renewable energy utilization, as energy production from fossil fuels forms a benchmark at payback period calculations. Fossil energy price is a price reference. High oil price helps the spreading of renewables.

2.2. The question of Drilling Capital

Geothermal energy utilization projects are front-end-loaded, meaning that significant part of the investment must be accomplished in early phase of the project.

The key technical issue to have a successful geothermal project is the existence and availability of the reservoir with the expected parameters. With simple words: (thermal) groundwater must be found in 1-3 km deep under the ground surface having the necessary temperature, and the reservoir has to be suitable (sufficient permeability) for exploiting this hot water with a certain flow rate (and circulating the utilized cool water back through the reinjection well) on a long term without the decrease in these parameters.

The location of the reservoir and its parameters can be estimated by geoscientific methods utilizing several databases of different measurements and/or new measurements and data processing (like seismic measurements and the interpretation of their data). Based on these measures a preliminary estimation of parameters can be performed and the suggested location and depth of the wells can be planned.

However only successful drilling of the first well can eliminate the biggest risk of a geothermal project with answering the questions:

- Does the estimated reservoir really exist under the ground?
- What is the water temperature?
- What is the possible flow rate?
- (Other questions like water chemistry?)

Based on the above results a certain percentage of exploratory drillings is partly or totally unsuccessful. The success rate varies from country to country, it is in the range of 20-60%. With professional preparation higher ratio can be achieved, but unsuccessful drilling is still an important risk that must be taken into account.

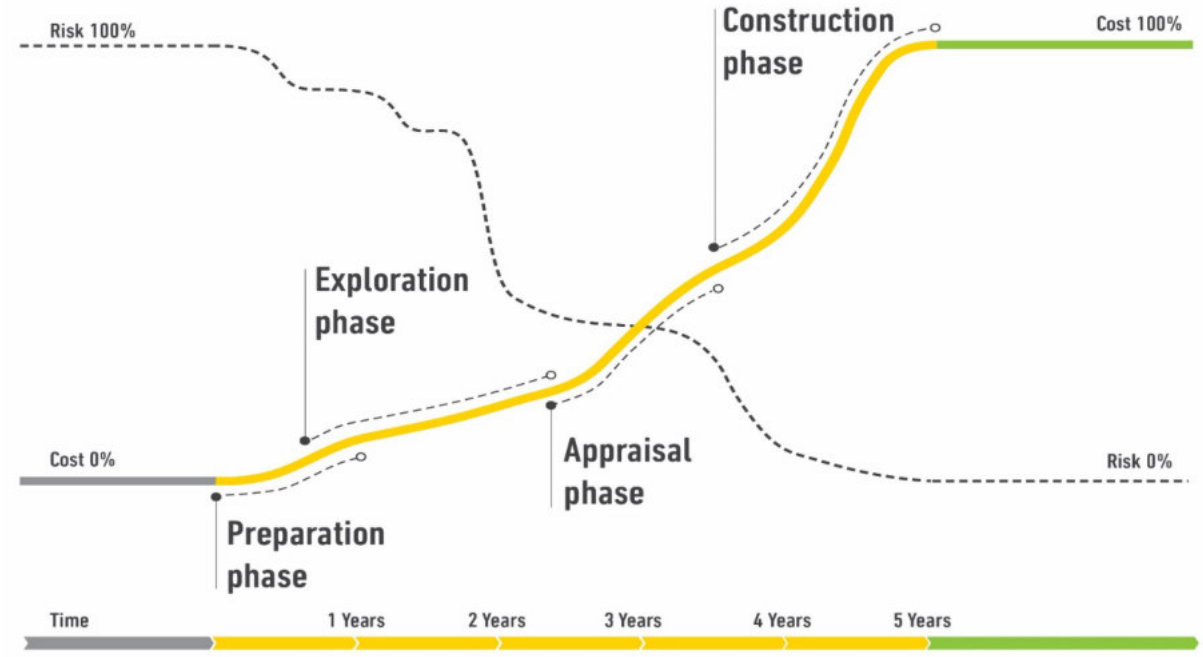


Figure 1: Variation of cumulated cost and risk level of large geothermal projects (Source: Sigurður Lárus Hólm, Mannvit Kft.)

Figure 1 shows the variation of Risk and cumulated investment Cost through the progress of a large scale geothermal project, from preparation to putting into operation. Main activities of the different phases are as follows.

Preparation phase:

- Geological & geophysical studies
- Pre-engineering, pre-feasibility, cost estimate
- Licensing, permitting, off-taker contract
- Grant application

Exploration phase:

- Drilling of the first (exploratory) well or well doublet
- Measurements and tests in the new well(s)
- Decision gate: continue the project or not, or continue with modified technical content

Appraisal phase:

- Drilling more wells to secure ca. 50% of the planned total flow rate

Construction phase:

- Drilling the remaining wells to reach the total planned flow rate
- Installation of all surface equipment: degasification system, heat exchangers, pump stations, transfer pipelines, control & automation, etc.
- Licensing for operation

The most significant characteristics can be observed in the figure:

- The biggest decrease of Risk to a moderate level is only reached at the end of the Exploration phase.
- To finish the Exploration phase a significant investment has to be put into the project. The cost of this phase varies typically from 0.5 to several million Euros. The main cost is of course the drilling cost depending on the depth as can be seen in Figure 2.

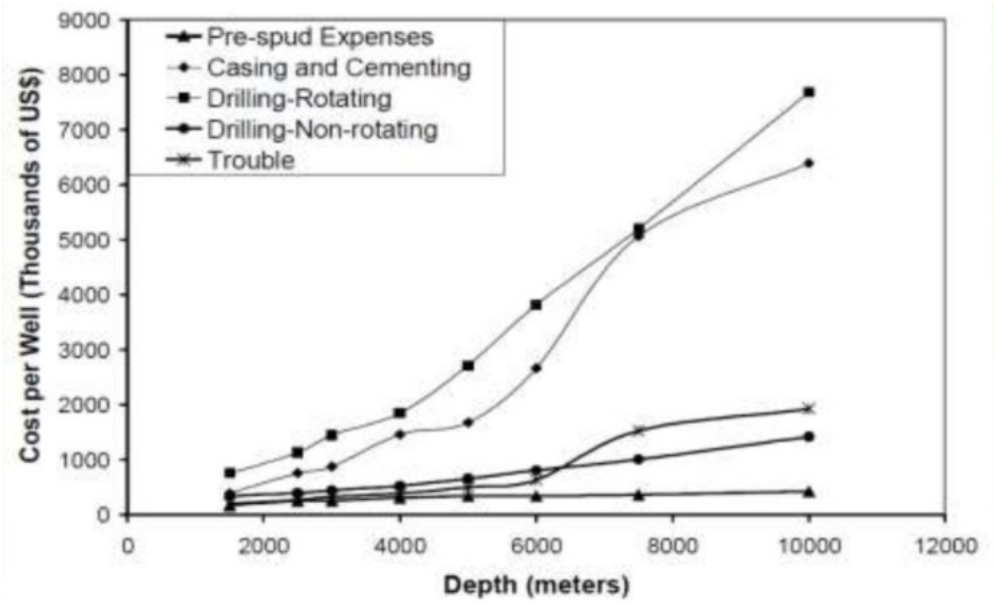


Figure 2: Variation of drilling cost vs. depth (Source: GEA 2008)

In case of smaller or medium sized projects – which are the most - 1 or 2 doublets are generally enough to cover the required flow rate thus ratio of exploration cost is even higher compared to the total project cost.

This investment must take place at a time when the project risk level is still high. **The main financial barrier of geothermal projects: who will provide the drilling capital for the first well (doublet) in a phase when the project risk is still high?**

Financial markets have shown a poor understanding of geothermal development projects and tend to overestimate resource risk. Lending institutions are unwilling to finance initial drilling and therefore equity is required to drill the first well. But it is still difficult to find equity investors willing to take on drilling/resource risk.

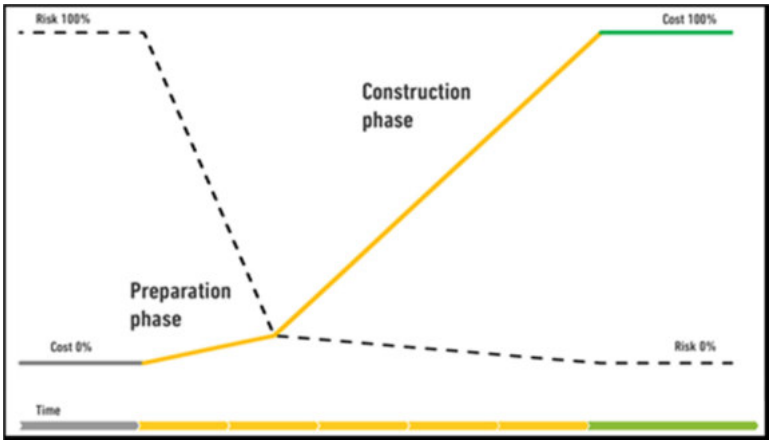


Figure 3. Variation of cumulated cost and risk level of other RES projects (Source: Sigurður Lárus Hólm, Mannvit Kft.)

As a brief comparison Figure 3 shows the same diagrams for other renewable energy projects (sun, wind, biomass, etc.) which do not have geological risk content. In these cases, almost all project risks can be eliminated in the Preparation phase before the significant part of the investment becomes necessary. In consequence, it is the explanation why the interest of investors in other renewable energy is far higher than in geothermal energy.

If drilling capital for the first well is secured by a private investor, the drilling is successful and the well proves the expected parameters, the project becomes immediately much more attractive for any kind of investors. The project becomes bankable. Different financing methods and financing players at different phases of a geothermal project are shown in Figure 4.

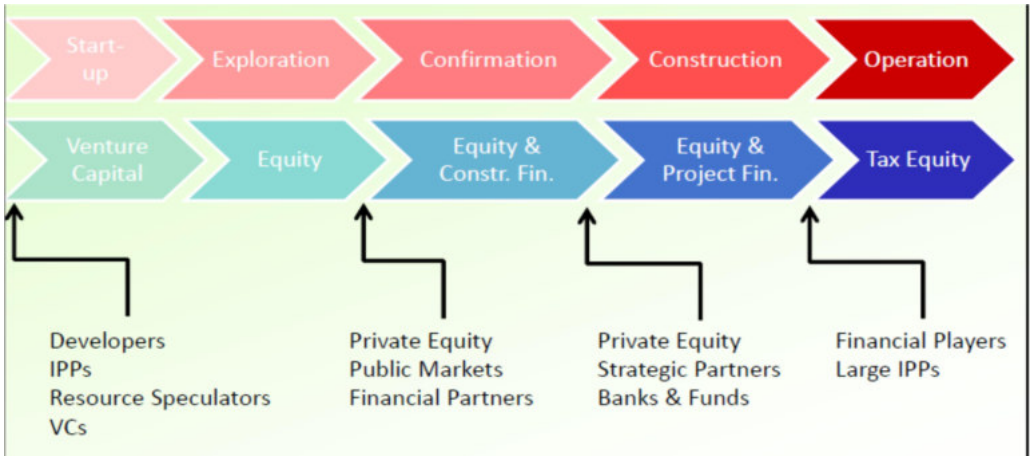


Figure 4: Financing stages of a geothermal project (Source: Non-technical barriers of geothermal development, TRANSENERGY, 2013)

3. Introduction of financial support types for renewables

There is a wide range of economic support instruments applied for geothermal projects worldwide. These schemes provide support in different project phases. For example, direct investment subsidies reduce the amount of investment necessary while feed-in-premiums (for green heat) secure the revenue during the operation period. One method of broadly classifying the support measures is the phase when they act: in the investment phase or in the operational phase of the project. Operating support has a more direct effect on energy production rate however it needs a stronger long-term commitment from the government as these kinds of subsidies are fitted for 10-20 years of operation. The purpose of different financial support mechanisms is common: increasing profitability, reducing payback period or risk mitigation. Generally, a smart combination of support schemes should be achieved with a special focus on the risk insurance system.

3.1. Direct investment subsidies

The best known and most wide spread subsidy type. A certain percentage of the investment cost is provided by the subsidy program owner (state or EU), thus the private investment cost becomes lower and the profitability gets higher. Subsidies applicable for geothermal projects are mostly part of general renewable energy subsidy programs, which are supporting more RES types (wind, solar PV, solar DHW, biomass, biogas…), which are competitors of geothermal as CO_2 reduction technologies. These programs have strict rules in term of necessary documents, applicants, geographical regions, support intensity rates, amounts, cost types, duration, and other eligibility criteria. An important characteristic of direct investment subsidies that they are not repayable, except for the case of an unsuccessful project. If the first exploratory drilling becomes unsuccessful the private investor will lose not only its own capital, but he must pay back the already received subsidy (or will not receive the future subsidy). Typical intensity range is 30 – 60%, while typical amount limit is 5 – 10 MEUR.

3.2. Low interest loans

Bank loans for special purposes (e.g. renewable projects) with more favorable terms than commercial ones. Rarely, but still exists for geothermal.

3.3. Tax incentives

A subsidy type provided by governments. Typical examples are VAT reduction and other tax exceptions (e.g. company tax). VAT reduction exists in several countries for district heat, while tax exceptions are based mostly on custom government decisions.

3.4. Off-take support schemes for green heat

Theoretically there are two types: feed-in-tariff and feed-in-premium. Feed-in-tariff means that the produced energy is bought by utilities above the market price. This price is generally regulated by government decree and guaranteed for a long-term period (10-15 years) thus providing long term plannable revenue for the project. Unfortunately, feed-in-tariff does not exist in Europe for green heat, only for green electricity.

Feed-in-premium is a little different: the energy is sold at market price, but a price premium is payed by the state for the green energy sold. The value of the premium is also regulated and guaranteed, but it is often bounded to the difference between the market price of fossil fuels and renewable energy cost of the supported project. There are several examples for this financial measure in Europe regarding the support of green heat production providing long term countable revenue in the operation period of the project.

3.5. Indirect support schemes

This support type is similar to the types previously mentioned, but provides financial source for Research & Development & Innovation projects / Pilot Projects or projects on special fields.

Sometimes geothermal projects can be classified into this category if they have an additional RD&I content. In case of conventional deep geothermal projects aiming heat production there is not too much possibility for RD&I activities, only in special cases, like drilling into special geological formation. These support schemes are mainly governed directly by the EU, and not by the member states.

There is another case when the project aims geothermal development on special fields. A good example is the agricultural sector which can be subsidized in a wide range. E.g. in Hungary there are several direct investment subsidies and low interest loans available for the agricultural investors and applicable for projects containing geothermal development. A detailed overview of these support schemes is summarized in Appendix 2.

3.6. Risk insurance/mitigation funds

As detailed in chapter 2.2. geothermal projects have higher risk than other renewables. The main risk is the geological risk, which can be eliminated (big part of it) by drilling the first well (doublet). It is hard to get financing for the first well as there is a chance for unsuccessful drilling. The above-mentioned support mechanisms cannot handle this risk.

The already proven solution is the risk insurance fund. Risk insurance funds are mainly state-owned, and provide financing in case of (partly or totally) unsuccessful exploration well. Two types of risk mitigation funds have been used in the geothermal sector so far:

- post-damage guarantee
- guaranteed loan

Post-damage guarantee is similar to traditional insurance mechanisms. When the insurance event takes place, i.e. the well does not provide the estimated yield, the fund will reimburse a certain percentage of eligible costs of the drilling. Of course, the insurance service has a fee which is also proportional to the insured amount (eligible costs). It is not a financial source, but can help geothermal developers attracting external capital into the project. This instrument may cover several projects with a limited amount in the fund as grant payment takes place only in case of insurance event.

Guaranteed loan is a smart combination of financing source and risk mitigation instrument. The loan is provided for a certain period and interest rate as a conventional loan, but when the exploration risk materializes the repayment obligation is partly or fully released. The fund must pay out the loan amounts when signing the contract, so the amount has to be in the fund at the beginning.

There is another method to differentiate between risk mitigation solutions which is based on the time of appearing the risk. Short term risk (STR) means the risk that the first well(s) is not providing the expected yield and parameters. Long term risk (LTR) means the depreciation of initially good well parameters during middle/long-term operation. Long-term risk is beyond the natural depletion of the reservoir, which is a normal technical risk that can be handled by careful reservoir management.

There are good examples in Europe for these kinds of instruments. They pay the 50-85% cost of unsuccessful exploration costs. The insurance fee varies in the range of 1,5-20% of the insured costs. Of course, not all geothermal projects can be automatically insured, the project plan must path a comprehensive analysis.

Introduction of risk mitigation funds resulted big improvement in the geothermal sector in several countries of Europe (see in chapter 5.).

3.7. Support types according to market maturity

Different financial support measures have different purposes, and various pros and cons. They help in different project phases and the way of help also varies. Therefore, an appropriate combination of them can result the best achievements. The combination must be fitted to several factors, and among them the maturity of market seems the most useful parameter (Figure 5).

Market Maturity criteria	Juvenile	Intermediate	Mature
	0-6 deep geothermal wells are existing < than 3 plants are operating	6-60 deep geothermal wells are existing < than 10 plants are operating	Both geoelec & geoDH systems are developed all over the country
Level of risk	Very high	High	Medium
Conventional support schemes	Grants for seismic exploration, slimholes, and the 1st well	Feed-in tariff	Feed-in premium
Risk insurance	Public Risk insurance	Public or Private Risk insurance	Public & private Risk insurance

Figure 5: Combination of support measures depending on market maturity (Source: Philippe Dumas: Financing Geothermal projects in Europe, presentation, ERANET, 2015)

A similar approach, showing the links of various financial support schemes and market maturity is shown on Figure 6. Shifting from juvenile to mature markets support mechanisms from direct, non-repayable subsidies change to simple private risk insurance funds operating on market rates. A juvenile market must be directly subsidized and taking all risks, while in the latter case the market-priced service of a private insurance company may be enough for boosting the development.

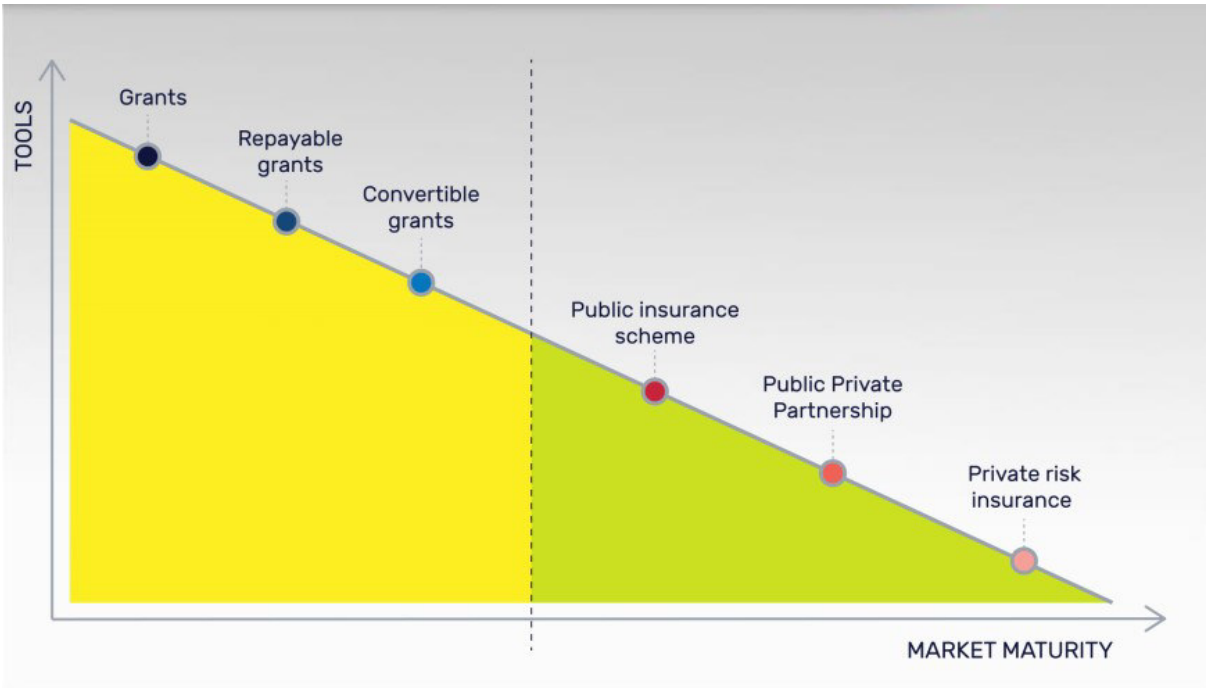
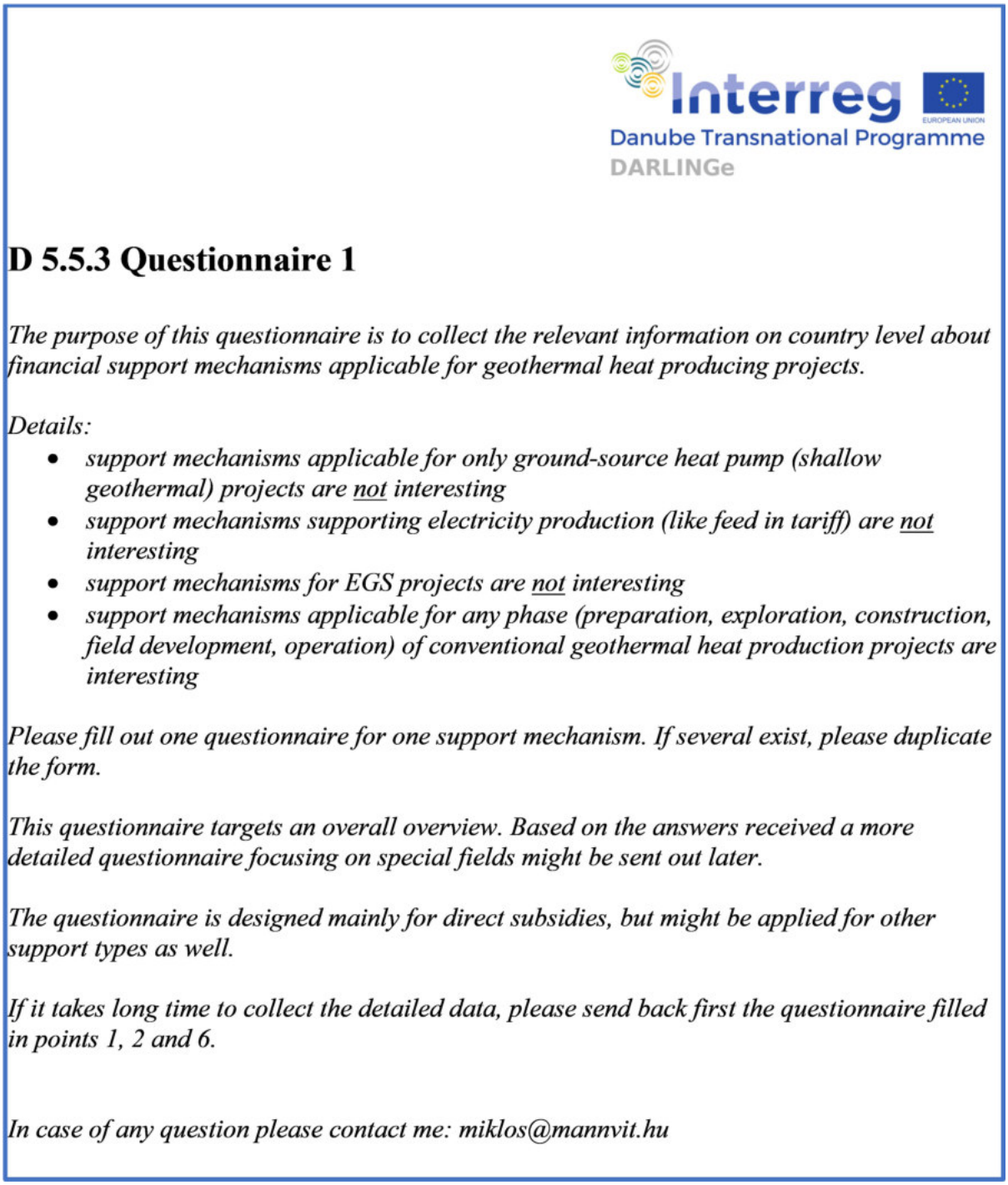


Figure 6: Financing support schemes adapted for market maturity (Source: Philippe Dumas: Financial tools to develop geothermal in Poland, presentation, Norway grants, 2017)

4. Financing support schemes in DARLINGe countries

4.1. Method of data gathering

A questionnaire was elaborated and sent out to all DARLINGe countries to be filled in with the important characteristics of the financial support measures available for geothermal in the countries. Separate tables had to be filled in for all support types/countries. The document was focusing mainly on the financial conditions and the supported project activities. The details can be seen in Figures 7 and 8.


Interreg
Danube Transnational Programme
DARLINGe

D 5.5.3 Questionnaire 1

The purpose of this questionnaire is to collect the relevant information on country level about financial support mechanisms applicable for geothermal heat producing projects.

Details:

- *support mechanisms applicable for only ground-source heat pump (shallow geothermal) projects are not interesting*
- *support mechanisms supporting electricity production (like feed in tariff) are not interesting*
- *support mechanisms for EGS projects are not interesting*
- *support mechanisms applicable for any phase (preparation, exploration, construction, field development, operation) of conventional geothermal heat production projects are interesting*

Please fill out one questionnaire for one support mechanism. If several exist, please duplicate the form.

This questionnaire targets an overall overview. Based on the answers received a more detailed questionnaire focusing on special fields might be sent out later.

The questionnaire is designed mainly for direct subsidies, but might be applied for other support types as well.

If it takes long time to collect the detailed data, please send back first the questionnaire filled in points 1, 2 and 6.

In case of any question please contact me: miklos@mannvit.hu

Figure 7: Front page of Financing Support Scheme Questionnaire of DARLINGe project

Support mechanism no. 1	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	
3. Body providing the support (program owner)	
4. Organization responsible for managing the funding process (program operator)	
5. Duration of support measure (year of introduction – year of planned stop)	
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	
7. Geographical territory limitation (e.g. region)	
8. Applicant limitation (e.g. only domestic SMEs)	
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	
10. Other relevant limitation	
11. Total budget of the program (in EUR)	
12. Budget / project (in EUR)	
13. Support intensity (%) (per type of project or per type of organization if differentiated)	
14. Other conditions you think important	
15. Approximate number of projects funded in the past 5 years	
16. Approximate number of projects planned to be funded in the next 5 years	
17. Approximate total amount of the support paid during the past 5 years	
18. Other relevant information	

Figure 8: Financing Support Scheme Questionnaire of DARLINGe project

4.2. The results

The detailed questionnaires filled in can be found in Appendix 1. Below we summarize the results, which showed common and different aspects of the existing support systems.

Different points:

- In each DARLINGe countries there are different number of support schemes (1-13).
- There are different program budgets (10 -98.000 kEUR).
- The applicability is also different (district heating, greenhouse, R&D, etc.).

Common points:

- Mainly direct investment subsidies are available (Figure 9).
- The available support schemes are mostly the part of comprehensive renewable energy utilization programmes including many other technologies (solar, biomass, heat pump, etc.) as well.
- In all cases there are strict limitations in support intensity, total budget, and time frame.

	Direct investment subsidy	Low interest loan	Taxincentive	Off-take tariff	Indirect support scheme	Risk insurance fund
Bosnia & Herzegovina	4	1				
Croatia	1					
Hungary	2				(11)	
Romania	2					
Serbia	2	3				
Slovenia	3	1				

Figure 9: Financial support types in DARLINGe countries

5. Best Practices in Europe

There are existing good examples in several European countries for financing support schemes successfully fostering the spreading of geothermal projects.

5.1. The Netherlands

In the last 8 years the Dutch government has developed 4 important measures to encourage geothermal projects.

Netherlands Oil and Gas portal (NLOG) has been created as a **public database** of all subsurface data (e.g. well logs, geophysical surveys) of the country. The data is coming from different sources: oil and gas industry, scientific research, mining. The mining law obliges all parties operating under a mining permit to share the data gained with a public body called TNO. TNO is owned by the government and makes the data available not immediately, but 5 years after receiving them. Based on the detailed data already available it is possible to prepare 90% certainty cost estimate (P90) for the thermal output of new wells. It reduces significantly exploration risks and makes the investment more attractive for financing institutions.

A state-owned **risk mitigation fund** has also been established for exploration risk mitigation in 2009 by the Ministry of Economic Affairs. It is a post-damage guarantee scheme. The fund reimburses up to 85% of well costs (drilling and test costs) if the thermal output of the new wells is under the P90 estimate. The upper limit is 7.2 MEUR. Both public and private developers can apply. The fee payable for the fund is 7% of well costs. The fund is not created for producing profit, however a small profit ratio is reached. Additional coverage is also possible by commercial insurance companies, but the project owner must bear himself at least 5% of the risk. Subsidized costs cannot be covered by the fund.

The fund is dedicated to projects for geothermal heat production with one or two wells, all of them deeper than 500m. Of course, not automatically all applicant can participate in the risk mitigation program, the projects must pass a complex professional due diligence process. The applicant must submit a technical report containing geological analysis as well, furthermore he must submit legal and financial feasibility study. The applications are evaluated in the sequence of receipt in the frames of tender periods.

If the guarantee is approved the developer must start the drilling in 6 months, complete it in 1 year and start the utilization of geothermal energy in 2 years from the approval date of the guarantee. The project developer also has reporting and disclosure obligations.

The beforementioned instruments help the exploration phase of the project, but there is also a support scheme for the operation phase. The Stimulation of Sustainable Energy Production (SDE+) program has a defined amount for each year to subsidy the cheapest forms of renewable energy produced. Geothermal heat is included since 2012. The program pays the difference between fossil fuel cost and renewable fuel cost as a **feed-in premium**. There are different premium tariffs adjusted for different geothermal technologies depending on the depth of wells and heat/power production. Geothermal heat is among the cheapest renewable energy types in the country and it received 3,9 billion EUR in 2016 for ca. 100 TWh heat energy. In 2016 54 geothermal projects participated in the SDE+ program.

The fourth support pillar is Energy Innovation funding. The Dutch government introduced two public **RD&D support schemes** applicable for geothermal.

Demonstration of Energy Innovations (DEI) is supporting innovative demo projects with max. 6 MEUR/project cost. The total budget for 2016 was 35 MEUR for the two calls: spring and autumn. The purpose of the scheme is to have a positive effect on the economy and sustainability of the country. There is a wide technical range of already supported geothermal projects, like geothermal directional drilling, reuse of existing natural gas wells for geothermal, drilling 4000m deep geothermal doublet into Triassic bedrocks.

Demonstration of Renewable Energy Innovations (Hernieuwbare Energie = HE) is supporting innovative demo projects and industrial R&D. The project cost limit is also 6 MEUR, the total budget for 2016 was 50 MEUR. The purpose of the scheme is to establish more renewable energy production capacities before 2023 producing renewable energy at a lower cost level. For example, innovative drilling technology pilot project has been subsidized.

The measures mentioned above have proofed their raison d'etre as it is shown on Figures 10, 11 and 12.

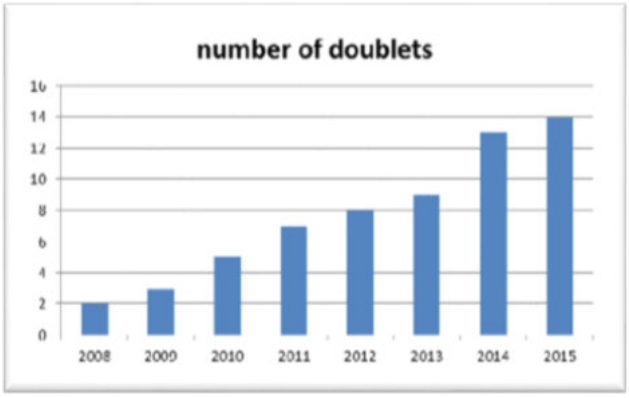


Figure 10: Number of geothermal doublets in The Netherlands (Source: Netherlands Enterprise Agency, Paul Ramsak; NL Country Update, EGC2016)

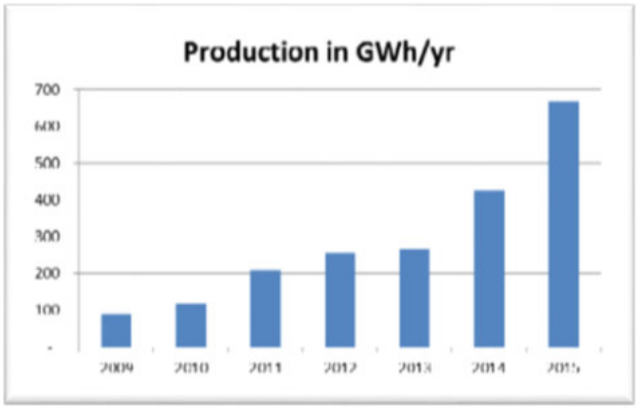


Figure 11: Production of thermal energy from geothermal in The Netherlands (Source: Netherlands Enterprise Agency, Paul Ramsak; NL Country Update, EGC2016)

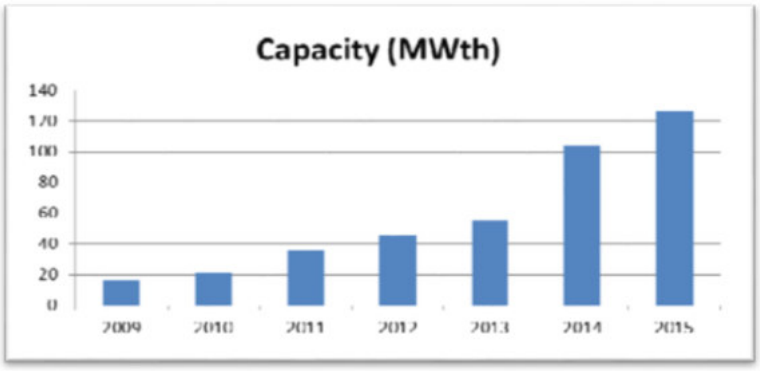


Figure 12: Installed geothermal capacity in The Netherlands (Source: Netherlands Enterprise Agency, Paul Ramsak; NL Country Update, EGC2016)

5.2. France

France also developed several financial support schemes applied for geothermal projects.

One of the first steps of a project is preparing a feasibility study. The French Environment and Energy Management Agency (ADEME) dedicates **grants for feasibility studies** of deep geothermal projects. These grants can cover the costs up to 50% and up to 300 kEUR. There is a separate grant, which can cover the cost of an external professional consultant of the project owner up to 30% and up to 100 kEUR of the cost of the feasibility study.

A **complex risk mitigation system** is also operating in the country. The French system consists of two parts.

STR = Short Term Risk

The first scheme is similar to the Dutch one. It mitigates the risk during the drilling phase by reimbursing a portion of drilling costs in case of partial or total unsuccess. Figure 13 shows an example how to define failure/success in a concrete case. Reimbursement can be up to 90% of eligible costs, however other subsidies must be subtracted from the effective supported costs (drilling and test costs) and the program also differentiates among more or less favorable regions. The fee payable for the fund is only 1.5% of well costs. The fund is financed by the state and ADEME (French Environment and Energy Management Agency).

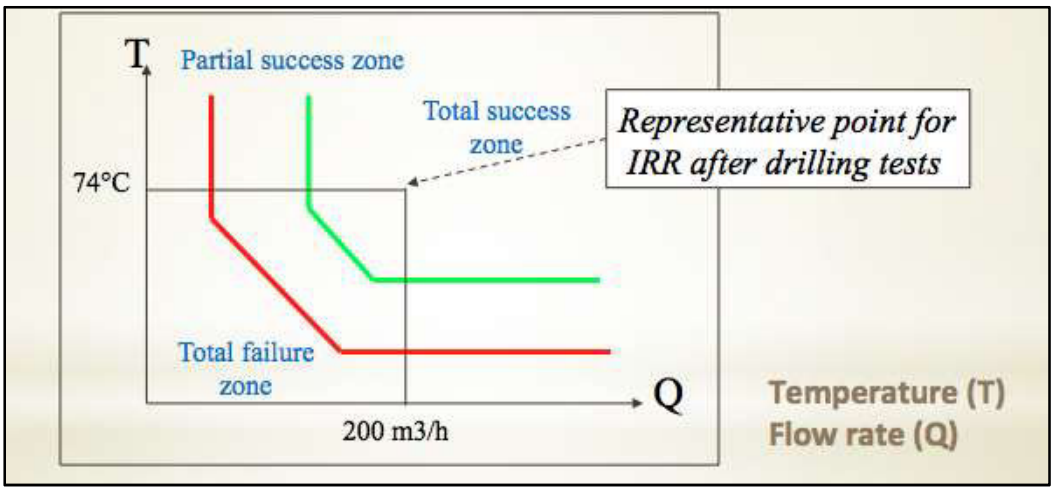


Figure 13: Example for defining exploration success/failure (Source: Manual for implementing sustainable support schemes, GEODH, 2014)

LTR = Long Term Risk

When the doublet is ready, and the technical parameters are proven there is still a chance to suffer some kind of failure, or simply deviation from the business plan due to unexpected technical/geological reasons. Two types of risk can be differentiated: (1) decrease in temperature and/or flow rate, (2) serious corrosion and/or scaling. The purpose of LTR insurance is to secure the long-term profitability of the project till the amortization of the equipment. The reimbursement amount strongly depends on the consequences of the failure and the measures to remedy it. The fee payable to the fund is 3.2% of covered costs for the first 15 years and annual 10-12 kEUR for the second 10 years. The fund is financed by the state and ADEME.

The Heat Fund (Le Fonds Chaleur)

The Heat Fund is a financial support scheme created by the French State in 2009 for fostering the production of heat energy from renewables or from waste heat utilization. Several technologies are supported, like biomass, solar, deep geothermal, shallow geothermal with heat pump combination, biogas, establishing district heating networks, waste heat recovery. In the period of 2009-2014 1.4 billion EUR subsidy helped boosting over 3000 renewable heat projects producing 67 PJ heat energy/year. Private and public bodies also can apply, but in case of geothermal it is necessary to be insured by the risk mitigation system introduced previously.

The aid is provided by grants for investment and/or per kWh produced. The aim is to ensure renewable heat price to be min. 5% lower than fossil heat price (natural gas is the benchmark) making the renewable energy production to be competitive. Each project is analyzed case by case by ADEME to determine the level of subsidy. The maximum intensity of subsidy is 30%, but in case of deep geothermal the average is rather around 18%. Geothermal projects are managed on regional level by ADEME delegation and Regional Council.

In order to ensure geothermal heat production for at least 2 years grants are divided into 3 parts:

- 50% of the total grant amount is payed after signature of the subsidy contract
- 30% of the total grant amount is payed after completion of installation
- 20% of the total grant amount is payed after two years of operation (after checking production rate, and the amount will be affected by the real production)

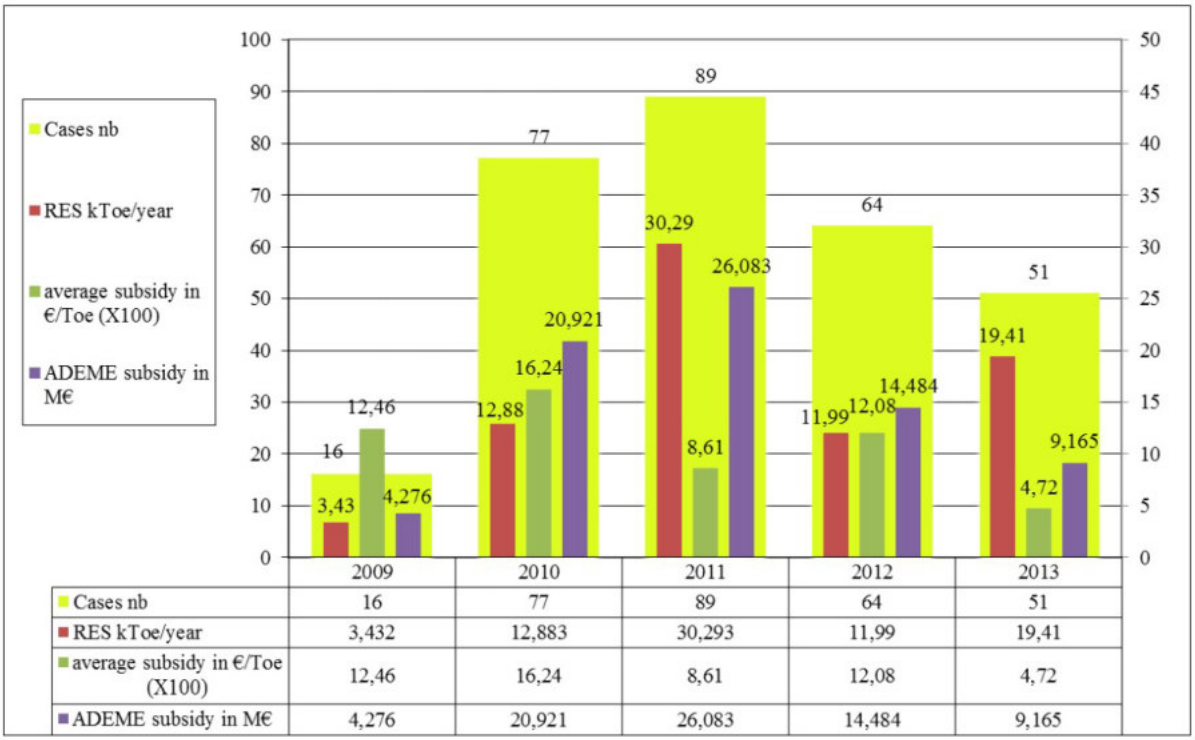
In the deep geothermal category several project types can be supported:

- New doublet and new district heating network
- Capacity increase of an existing geothermal and DH system by drilling a new doublet
- Rehabilitation of an existing system
- New well for reinjection in an aquifer in case of running operation
- Utilization of abandoned oil/gas wells for geothermal

The fund can finance feasibility studies, thermal response test, shallow and deep drilling, geophysics, pumping, testing, etc... on the energy production side.

On the distribution side it can finance pumping, controls, pipelines, trenches, civil work, road construction, heat exchangers etc.

Figure 14 shows the evolution of geothermal energy projects from 2009 to 2013 through the Renewable Heat Fund.



	2009	2010	2011	2012	2013
Cases nb	16	77	89	64	51
RES kToe/year	3,432	12,883	30,293	11,99	19,41
average subsidy in €/Toe (X100)	12,46	16,24	8,61	12,08	4,72
ADEME subsidy in M€	4,276	20,921	26,083	14,484	9,165

Figure 14: Evolution of geothermal energy projects from 2009 to 2013 through the Renewable Heat Fund (Source: ADEME: Norbert Bommensatt, Astrid Cardona Maestro, Philippe Laplaige: French Financial Incentives to Promote Geothermal Heat, Proceedings World Geothermal Congress, 2015)

VAT reduction

The French government has decreased the VAT rate of district heating utilizing renewable energy sources (more than 60% in an average) from 19.6% to 5.5%. This reduced rate is valid for both the availability fee and energy fee as an indirect support of utilizing renewable energy sources, including geothermal.

5.3. Iceland

In Iceland, Government institutions offered drilling insurance and funded geothermal exploration and initial plant development in Reykjavik. Gradually these measures were extended to smaller towns, ever further away from the geologically 'active' areas which run through the middle of the island. Eventually geothermal heating became the norm.

In the seventies the government of Iceland developed a **fund for mitigation of geological risk** in geothermal energy development projects. Prior to that time, beginning in the 1930s, the Icelandic government conducted all exploration. Now the grant is available for both public heat supply and heating for individual homes.

Loans provided were up to 60% of the exploration cost and exploration drilling. Interest rates were normal commercial rates (6%), the time period was up to 10 years. The loan was fully or partially granted if the project was unsuccessful or only partially successful. The government set aside 20-30% of the total fund to cover payment for failed projects and on average about 20% of

the projects failed. As can be seen on Figures 15 and 16, geothermal energy utilization started to rise significantly in the 1970s and is still increasing.

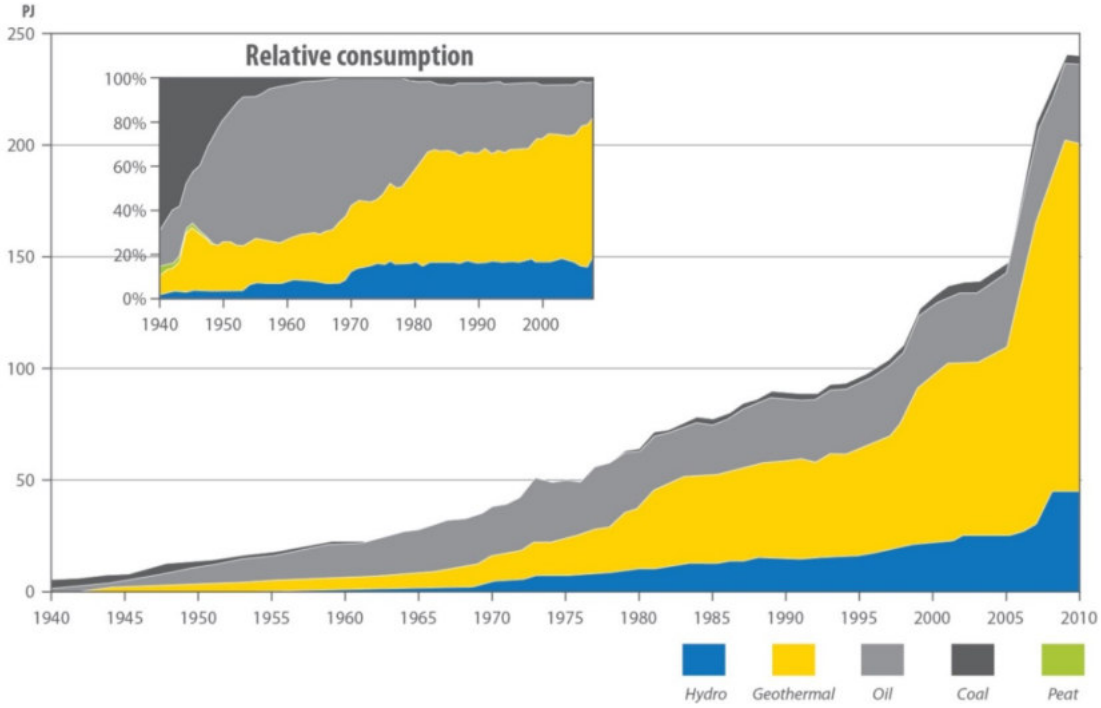


Figure 15: Primary energy use in Iceland (Source: Árni Magnússon, Mannvit Kft.: Hungary in the lead, presentation, 2015)

With 99% of households in Iceland enjoying geothermal district heating today the fund is primarily providing a risk guarantee for exploration of geothermal reservoirs in rural areas, financing of small scale geothermal district energy systems, small scale exploration activities and distribution systems. There is a requirement that the loan should come from a commercial source rather than directly from the fund or the government. The risk insurance provided covers both reservoir risk and drilling / geological risk. The amount of the risk insurance available remains at 60% of the project cost. The remaining 40% could be from in-kind personal costs or equity. The loan can be suspended for a period if a delay in the exploration program should be required.

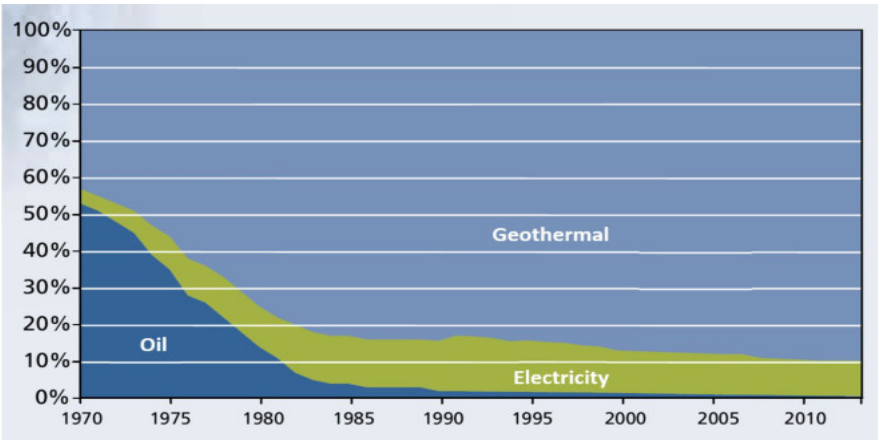


Figure 16: Relative energy consumption for heat generation in Iceland (Source: Árni Magnússon, Mannvit Kft.: Hungary in the lead, presentation, 2015)

Applicants must submit a project description and a technical, legal and financial feasibility study, which contains:

- statements of recognized geoscientists about the expected yield
- cost estimate of the facility including the planned number of connected consumers
- financial feasibility calculations by the Fund's official calculation model

A loan can be granted only if the project helps decreasing the public cost of home heating. Both the National Energy Authority and the National Energy Council participate in the evaluation of the applications, but the final decision is on the Minister of Industry and Commerce.

5.4. Germany

The German Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU) has introduced several financial support schemes in cooperation with Kredintaltstalt für Wiederaufbau (Reconstruction Loan Corporation, KfW) applicable for geothermal projects. A big group of the measures is called Market Incentive Programme (**MAP**) including several modules tailored for specific purposes. MAP contains 2 modules applicable for deep geothermal.

KfW offers **loans with redemption grants** for deep geothermal projects. This financing can cover up to 100% of eligible costs in the phase of drilling, plant design or plant construction. The upper limit of the loan is 10 MEUR/project, but there are limits for redemption grants as well:

- 2 MEUR for construction and expansion of heat plants
- 5 MEUR for drilling costs of one doublet
- 2.5 MEUR for additional expenses (above plans) of deep drilling of one doublet
- 1.5 MEUR for district heating infrastructures

The grants are applied via the respective principal banks and awarded by KfW. Applicants can be municipalities, municipality owned companies, small and medium sized private companies, large enterprises, and also private persons using the energy to cover their own needs.

A **risk mitigation instrument** is also introduced for exploration drilling. Practically it is a loan with indemnification clause provided by KfW for up to 80% of eligible drilling costs, including the investment for stimulation measures in case of necessity. The maximum amount of the loan is 16 MEUR for the first doublet of the project. In the case that exploration is unsuccessful, namely the planned yield cannot be produced, the loan is not repayable. Above the normal loan interest these loans contain extra costs for the productivity risk. In return the investor receives expert assessment for the project and technical support before and during the drilling phase. Of course, the application must pass strict and comprehensive audits: the exploration risk is evaluated by independent experts and the economic feasibility is examined before securing the loan.

BMU has introduced **R&D subsidy** for demonstration projects that influence existing or planned operations. KfW provides bullet loans with interest subsidies and in special cases investment subsidies. The intensity of the bullet loans can be up to 70% of eligible costs without an absolute limit. The investment subsidy in special cases can have maximum 30% support intensity.

It is not a financial support type but important to mention the German Renewable Energy Heat Act (**EEWaermeG**), which obliges building developers to cover a certain percentage of the energy needs (heating and domestic hot water) from renewable sources. The minimum percentage for each renewable type is adjusted, but no particular technology is favored. The

minimum ratio can be fulfilled by combining different technologies as well. The obligations are valid for new buildings on a country level, but German federal states can also oblige the owners of existing buildings to use RES. For example, Baden-Wuerttemberg requires min. 10% utilization of renewables in case of heating system replacement.

The effect of the above instruments is demonstrated on Figure 17.

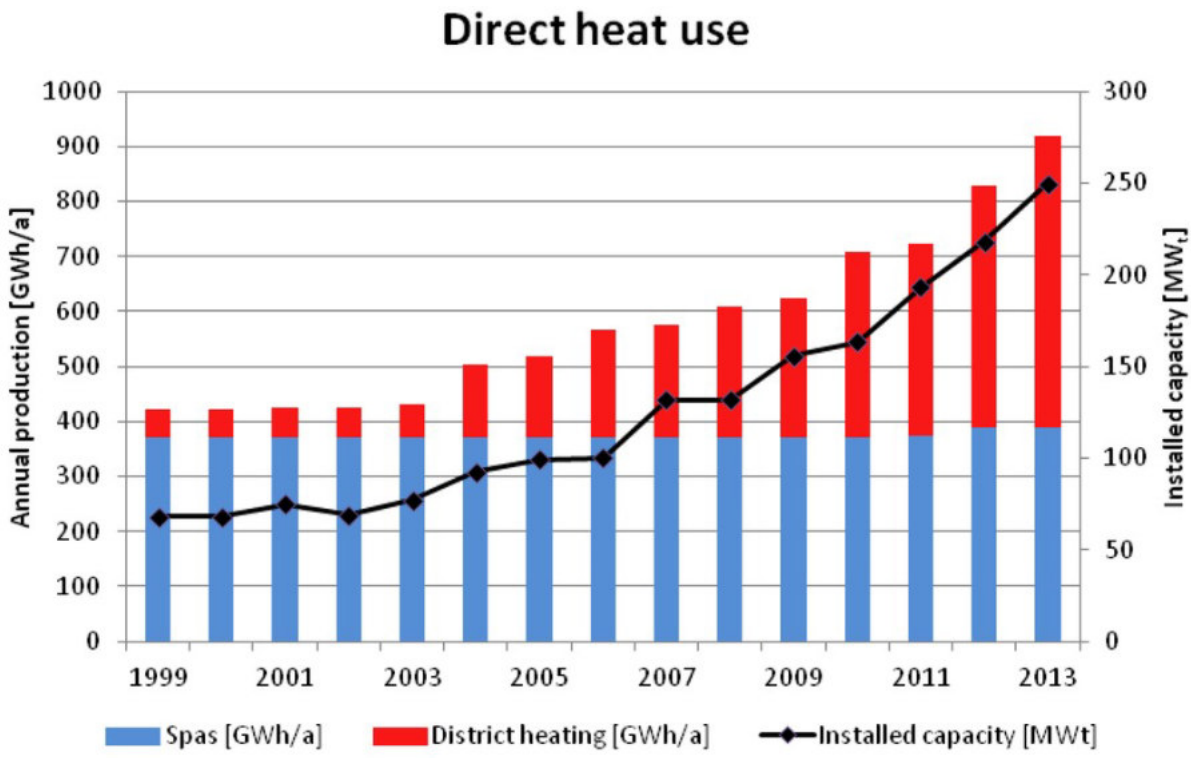


Figure 17: Development of direct geothermal heat use in Germany (Source: Thorsten Agemar, Josef Weber and Rüdiger Schulz: Deep Geothermal Energy Production in Germany, Energies 2014, http://www.mdpi.com/1996-1073/7/7/4397/htm)

5.5. Switzerland

Switzerland is a special case according to its renewable energy support system. The support measures are financed from the RPC Fund (the compensatory feed-in tariff fund). The fund is fed by all electricity consumers who pays a tax on each consumed kWh. This fact implicates two features of the support system:

- As only electricity consumers pay the source the support schemes are constructed for renewable electricity. Combined heat and power generation is also supported, but pure heating energy production is not.
- As the above-mentioned tax is a fixed rate/kWh and the annual electricity consumption of the country is also limited thus the renewable budget is strictly limited.

Despite these characteristics we briefly introduce one of Switzerland's financial support measures: the Geothermal Guarantee Program as an adaptable solution for direct heat utilization deep geothermal projects. (The other measure is the feed-in tariff for renewable electricity.)

This scheme is a **risk mitigation fund** providing a post-damage guarantee. Up to 50% subsurface exploration cost may be reimbursed if the project fails to find a geothermal resource.

Eligible costs include drilling and test costs for one or even several wells. The Geothermal Guarantee Program is managed by Swissgrid (the national Society of Electricity Network) and OFEN (Federal Office for Energy). The project developer has to submit Swissgrid a project description and technical, legal and financial feasibility study as a minimum. In the preparation process Switzerland appoints a »god-parent« helping the project developer. S/he does not have executive rights but rather check and evaluation function. The planned projects must fulfill minimum efficiency requirements as can be seen in Figure 18.

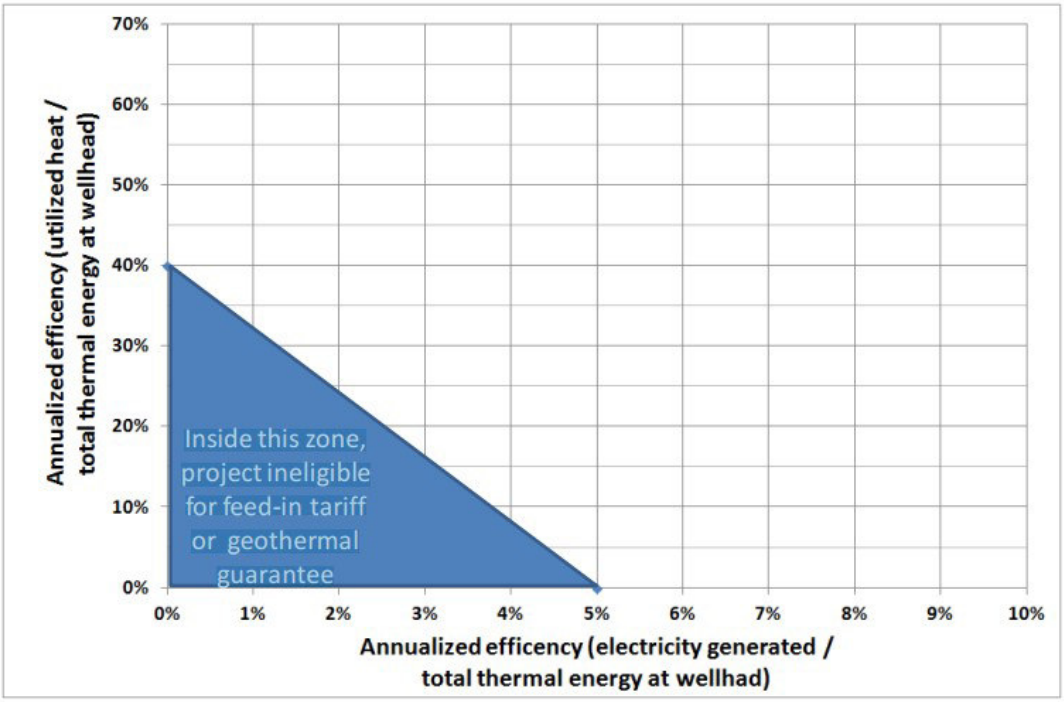


Figure 18: Minimum efficiency requirements for application (Source: Gunter Siddiqi and Rudolf Minder: Switzerland's Geothermal Guarantee Program, Proceedings World Geothermal Congress, 2015)

The classification of success, partial failure or total failure is based on a combination of key parameters (flow rate, temperature, water chemistry).

Two deep geothermal projects have applied and have received guarantee yet by 8.8 and 24.1 MCHF.

6. Summary and recommendations

Establishing renewable heat production capacities has always higher relative investment cost compared to the same capacity on fossil base. This is a competitive disadvantage all renewable technologies suffer, and highlights why financial support measures are necessary if we want a progress in RES utilization.

Utilization of deep geothermal energy for heat production (and even for electricity production) is even more demanding, because the relative investment costs (which are the up-front costs of the whole project) are higher than for other renewable technologies (biomass, solar energy,

heat pumps, etc.). It forms stronger motivation of introducing proper financial support schemes dedicated exclusively for deep geothermal energy projects.

However, the ultimate biggest competitive disadvantage of deep geothermal projects is the geological risk, mainly the short-term risk as described in chapter 2.1. The challenge is that there are very few investors intend to put several million Euros into a project having a not negligible chance of complete failing. This condition is unacceptable for investors. Commercial risk insurance companies rarely offer instruments for this purpose and they are overestimating the resource risk, thus strongly overpricing their services.

The European experience is in line with the above. Those countries could reach significant progress in deep geothermal energy utilization which were able to overcome the two main barriers, namely (1) mitigate the resource risk and (2) compensate the high up-front costs. The only practically working way of resource risk mitigation is to establish a state-owned fund, it is the ultimate precondition of progress in the geothermal sector. A post-damage guarantee may overcome barrier (1), while a guaranteed loan may also partly overcome barrier (2). However, for barrier (2) there are several other viable solutions: direct investment subsidies, low interest loans. Nevertheless, some kind of financial support has to be maintained during the operation phase of the project too, to ensure continuous economic motivation of the project owner to maintain the production. Feed-in premium may be the best instrument to ensure the long-term profitability of the project by providing a balance compared to fossil fuels. It is important to note that the smart combination of support schemes have one economical purpose: attracting private investors into project financing. The support measures have to be constructed in a way to motivate project developers and operators to work according to the good professional practice. Thus, a certain ratio of own contribution and own risk have to be left at the project owner in every case.

The overview of the available support schemes in the DARLINGe countries showed, that the most common type is the direct investment subsidy (public funding), which is compensating the high up-front costs of the projects to a certain extent. No geological risk mitigation is existing in any of the countries, therefore the other major barrier for geothermal developments is still existing. There are no schemes either that would support the projects in their operational phase and (e.g. feed-in-premium) assist their market penetration.

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Appendix 1 – Filled in questionnaires of DARLINGe countries

Bosnia and Herzegovina

Support mechanism no. 1	
1. Type (please underline)	• Direct investment subsidy, fund • **Low interest loan** • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	Local language: Revolving fond English: Revolving fund
3. Body providing the support (program owner)	Fund for Environmental Protection of Federation of B&H
4. Organization responsible for managing the funding process (program operator)	Fund for Environmental Protection of FB&H
5. Duration of support measure (year of introduction – year of planned stop)	2015 -
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	Through the loan, the Revolving Fund finances the following projects, programs and activities for the purpose of investing in improving energy efficiency on: a) Residential facilities b) Non-residential facilities c) Industrial processes d) Existing sources of heat and primary distributive systems e) Renewable energy sources as energy efficiency measures
7. Geographical territory limitation (e.g. region)	Federation of Bosnia and Herzegovina
8. Applicant limitation (e.g. only domestic SMEs)	Applicants (legal entity and physical person) can be from Federation of Bosnia and Herzegovina only and investment can be in the Federation of B&H only
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	No
10. Other relevant limitation	Repayment period of the loan: up to 7 years including grace period; Grace period: 6 to 12 months.
11. Total budget of the program (in EUR)	-

12. Budget / project (in EUR)	Minimum amount of Loan per Project is 2.564,10 EUR and the maximum indebtedness per Project may be 127.822,97 EUR
13. Support intensity (%) (per type of project or per type of organization if differentiated)	
14. Other conditions you think important	The conditions of obtaining a loan are regulated by Rulebooks: 1) Rulebook on distribution of funds from the Revolving Fund for energy efficiency projects (Official Gazette of the Federation of Bosnia and Herzegovina, No. 10/17); 2) Rulebook on conditions and methods of granting loans, credits and other funds of the Fund ("Official Gazette of the Federation of Bosnia and Herzegovina", No. 75/10).
15. Approximate number of projects funded in the past 5 years	One in geothermal energy
16. Approximate number of projects planned to be funded in the next 5 years	The Plan is not yet public
17. Approximate total amount of the support paid during the past 5 years	76.693,78 EUR
18. Other relevant information	

*Contact person: Jasmina Kafedžić, phone: 00387 33 723 081

Support mechanism no. 2	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): **incentive (grants)**
2. Full name of support measure (on local language and English translation)	Local language: Sredstva za zaštitu okoliša English: Incentives for environmental protection
3. Body providing the support (program owner)	Government of Tuzla Canton
4. Organization responsible for managing the funding process (program operator)	Ministry of Physical Planning and Environmental Protection (Tuzla Canton)*
5. Duration of support measure (year of introduction – year of planned stop)	2009 -
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	Projects that contribute to the protection of the environment

7. Geographical territory limitation (e.g. region)	Tuzla Canton
8. Applicant limitation (e.g. only domestic SMEs)	Grants are awarded to legal subjects: Municipalities in Canton Tuzla, City of Tuzla and other levels of authority, non-profit organizations (associations and UNDP), public and private companies, public institutions in the field of education (schools and the University of Tuzla), health facilities, police stations and courts.
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	Yes, in consortium with local entity???? So far, requests from foreign entities have not yet been, so this is not entirely clear.
10. Other relevant limitation	Funds (grant) may invest the projects on the territory of Tuzla Canton only.
11. Total budget of the program (in EUR)	1.942.909,15 EUR in 2017
12. Budget / project (in EUR)	The maximum grant amount per project in 2017: - Municipalities in Canton Tuzla and City of Tuzla: 102.258,4 EUR, - Non-profit organizations: a) 20.451,7 EUR, - Associations: 2.556,5 EUR (associations are required to co-finance 30% of the project) , - Public company: 25.564,6 EUR, - Private companies: 15.338,7 EUR, - Users of public facilities: 102.281,9 EUR.
13. Support intensity (%) (per type of project or per type of organization if differentiated)	**Co-financing foreign projects:** - Non-profit organizations: 30 % of total approved amount of foreign project. - Associations: max. 15.338,7 EUR
14. Other conditions you think important	Grants are awarded through a public tender. One institution/organization/company/association/user can nominate only one project per tender
15. Approximate number of projects funded in the past 5 years	0 (in geothermal energy)
16. Approximate number of projects planned to be funded in the next 5 years	The plan is adopted annually after the Government of Tuzla Canton adopts a decision on the allocation of funds for environmental protection
17. Approximate total amount of the support paid during the past 5 years	0,00 EUR (in geothermal energy)
18. Other relevant information	Grants are awarded on the basis of Decree on determining the conditions, criteria and procedures for the allocation of the assigned revenue from the environmental fees of the Ministry of Physical Planning and Environmental Protection no. 12/1-14-2988/16 of 2 February 2016 and 22 September 2016. According to this

	Decree shall be allocated grants in 2017. A new decision is made every year

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Support mechanism no. 3	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): **incentive (grants)**
2. Full name of support measure (on local language and English translation)	Local language: Poticaj za očuvanje okoliša English: Incentives for environmental protection
3. Body providing the support (program owner)	Government of Posavina Canton
4. Organization responsible for managing the funding process (program operator)	Ministry of Traffic, Environment, Tourism and Environmental Protection (Posavina Canton)*
5. Duration of support measure (year of introduction – year of planned stop)	Continually
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	Projects that contribute to the protection of the environment
7. Geographical territory limitation (e.g. region)	Posavina Canton
8. Applicant limitation (e.g. only domestic SMEs)	
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	No information
10. Other relevant limitation	Funds may be invested only in the territory of Posavina Canton
11. Total budget of the program (in EUR)	10.225,83-51.129,19 EUR/year
12. Budget / project (in EUR)	The amount of funding per project determines the Ministry of Traffic, Environment, Tourism and Environmental Protection (Posavina Canton)
13. Support intensity (%) (per type of project or per type of organization if differentiated)	-
14. Other conditions you think important	-
15. Approximate number of projects funded in the past 5 years	0 (in geothermal energy)
16. Approximate number of projects planned to	The plan is adopted annually after the

be funded in the next 5 years	Government of Posavina Canton adopts a decision on the allocation of funds for environmental protection
17. Approximate total amount of the support paid during the past 5 years	0,00 EUR (in geothermal energy)
18. Other relevant information	

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Support mechanism no. 4	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): **Loan with a grant for up to 10% of the loan amount for users from private sector and up to 15% for public sector**
2. Full name of support measure (on local language and English translation)	Local language: WeBSEFF II- kreditna linija za održivu energiju za Zapadni Balkan English: The EU/EBRD Western Balkans Sustainable Energy Credit Line Facility II (WeBSEFF II)
3. Body providing the support (program owner)	European Bank for Reconstruction and Development (EBRD)
4. Organization responsible for managing the funding process (program operator)	In Bosnia and Herzegovina: UniCredit Bank* Raiffeisen BANK**
5. Duration of support measure (year of introduction – year of planned stop)	2013 -
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	**Private Sector** - Investments into commercial energy efficiency - Stand-alone small scale renewable energy investments - Building Sector energy efficiency investments **Public Sector** - Energy efficiency (EE) and renewable energy investments (RE)
7. Geographical territory limitation (e.g. region)	Bosnia and Herzegovina, Serbia, Montenegro, FYR Macedonia
8. Applicant limitation (e.g. only domestic SMEs)	**Private Sector** - Private companies, sole proprietors and other private legal entities incorporated in line with B&H laws; **Public Sector**

	- Municipalities, public or private companies, headquartered in B&H, providing public services and directly responsible for project implementation; - Energy Service Company (ESCO) implementing energy efficiency investment projects in co-operation with one or more municipalities or public/private companies headquartered in Bosnia and Herzegovina.
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	Yes, if are registered under laws of Bosnia and Herzegovina and operating in accordance with the domestic legislation
10. Other relevant limitation	Technical eligibility criteria for investments in renewable energy sources: - Maximum installed capacity for small hydro power plants: 10MW, in accordance with a positive EET, - Maximum installed capacity for wind turbines: 10 MW, in accordance with the positive EET, - Maximum installed capacity for solar photovoltaic power plants: 0.5 MW (not eligible for stimulation), - Maximum installed capacity for all other technologies: 50 MW (including geothermal heat pump), - They must be financially viable, - The period of return of funds is less than 15 years.
11. Total budget of the program (in EUR)	75 million
12. Budget / project (in EUR)	Loan Amount: - **Private Sector:** max 2.000 000 EUR - **Public Sector:** max 2.500 000 EUR
13. Support intensity (%) (per type of project or per type of organization if differentiated)	Incentive amount is defined as a percentage of the Loan, as follows: - **Private Sector:** 5% to 10% - **Public Sector:** 10% to 15 %
14. Other conditions you think important	- Repayment period maximum 120 months, including maximum one-year grace period; - Repayment method in monthly/quarterly/semi-annual installments, depending on client's requirements.
15. Approximate number of projects funded in the past 5 years	Total number of project (energy efficiency and renewable energy) in B&H since 2013 (start of credit line): **30** Total number of energy efficiency project in B&H since 2013: **7** Total number of geothermal project in B&H

	since 2013: **2**
16. Approximate number of projects planned to be funded in the next 5 years	
17. Approximate total amount of the support paid during the past 5 years	Total (EE and RE) in B&H: 11.731.367,00 EUR (from 2013)*** EE: 6.970.429,00 EUR RE: 4.760.938,00 EUR (in geothermal -51.602,00 EUR****)
18. Other relevant information	**Consultancy Support:** - Identification of eligible projects and providing support for their preparation in order to meet the existing requirements; - Project technical and financial viability assessment; - Producing Rational Energy Utilization Plan or Energy Audits, for each eligible project, where necessary; - After project completion, the delegated Verification Consultant checks if EBRD Credit Line goals have been met, i.e. if the project is completed in line with the relevant Rational Energy Utilization Plan or Energy Audit, based on which the project becomes eligible for receiving the respective incentive payments.

* https://www.unicredit.ba/en/korporativni_klijenti/finansiranje/kreditne_linije.html

** https://raiffeisenbank.ba/bhs/menu/view/31#p4

***http://www.webseff.com/index.php?option=com_content&view=article&id=169:project-map&catid=7:other&Itemid=337&lang=en

****Introduction of a geothermal heat pump (GHP) system in Vitez

Support mechanism no. 5	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify**): Stimulative measures for production from renewable energy sources**
2. Full name of support measure (on local language and English translation)	Support measures based on **Law on Renewable energy sources and efficient cogeneration**
3. Body providing the support (program owner)	**Government of the Republic of Srpska**
4. Organization responsible for managing the funding process (program operator)	**System Operator of Renewables Production Stimulation**
5. Duration of support measure (year of	**2013-**

introduction – year of planned stop)	
6. Supported project / activity **types** (e.g. production of heat from renewables, drilling activities, etc.)	**Production of heat from renewables**
7. Geographical territory limitation (e.g. region)	**Republic of Srpska (RS)**
8. Applicant limitation (e.g. only domestic SMEs)	**Domestic companies**
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	**Yes, but company deal with energy production in RS must be registered in the RS.**
10. Other relevant limitation	
11. Total budgetof the program (in EUR)	
12. Budget / project (in EUR)	
13. Support intensity (%) (per type of project or per type of organization if differentiated)	
14. Other conditions you think important	
15. Approximate number of projects funded in the past 5 years	
16. Approximate number of projects planned to be funded in the next 5 years	
17. Approximate total amount of the support paid during the past 5 years	
18. Other relevant information	

Croatia

Support mechanism no. 1	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	One off subsidy for large investments
3. Body providing the support (program owner)	Environmental Protection and Energy Efficiency Fund (EPEEF)
4. Organization responsible for managing the funding process (program operator)	Environmental Protection and Energy Efficiency Fund (EPEEF)
5. Duration of support measure (year of	This support is given once at the beginning.

introduction – year of planned stop)	
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	Production of heat from renewables
7. Geographical territory limitation (e.g. region)	Whole country
8. Applicant limitation (e.g. only domestic SMEs)	Only domestic
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	Only when they are with domestic applicant
10. Other relevant limitation	
11. Total budget of the program (in EUR)	Up to 27.000,00 EUR
12. Budget / project (in EUR)	Depends – very variable, not the same for each year
13. Support intensity (%) (per type of project or per type of organization if differentiated)	Very low
14. Other conditions you think important	Application to tender under Funds terms and conditions
15. Approximate number of projects funded in the past 5 years	n.a.
16. Approximate number of projects planned to be funded in the next 5 years	n.a.
17. Approximate total amount of the support paid during the past 5 years	n.a.
18. Other relevant information	

Hungary

Support mechanism no. 1	
1. Type (please underline)	• <u>Direct investment subsidy, fund</u> • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	Helyi hő és hűtési igény kielégítése megújuló energiaforrásokkal (KEHOP 5.3.2-17) Covering local heating and cooling energy need by renewables
3. Body providing the support (program owner)	Cohesion Fund and Budget of Hungary

4. Organization responsible for managing the funding process (program operator)	Ministry of National Development and EEEOP Control Authority
5. Duration of support measure (year of introduction – year of planned stop)	2017.05.15 – 2019.04.17
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	Establishing new DH (DC) systems or modifying existing ones for utilizing renewables
7. Geographical territory limitation (e.g. region)	Hungary
8. Applicant limitation (e.g. only domestic SMEs)	Existing or future **District Heat Service and District Heat Producer companies**
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	By establishing subsidiary company in Hungary
10. Other relevant limitation	Having DH Service and DH Producer licenses
11. Total budget of the program (in EUR)	44 MEUR
12. Budget / project (in EUR)	70 – 8300 kEUR
13. Support intensity (%) (per type of project or per type of organization if differentiated)	45 - 60
14. Other conditions you think important	max. 930 EUR/kW
15. Approximate number of projects funded in the past 5 years	n.a.
16. Approximate number of projects planned to be funded in the next 5 years	6 - 100
17. Approximate total amount of the support paid during the past 5 years	n.a.
18. Other relevant information	

Support mechanism no. 2	
1. Type (please underline)	• <u>Direct investment subsidy, fund</u> • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	Állami tulajdonú sportlétesítmények energetikai fejlesztése (KEHOP-5.2.12.) HVAC development of state-owned sport buildings (EEEOP)
3. Body providing the support (program owner)	Cohesion Fund and Budget of Hungary
4. Organization responsible for managing the	Ministry of National Development and EEEOP

funding process (program operator)	Control Authority
5. Duration of support measure (year of introduction – year of planned stop)	2017.05.02 – 2018.02.15
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	Establishing RES utilization systems for **state-owned sport buildings** and energy efficiency improvement of the buildings
7. Geographical territory limitation (e.g. region)	Hungary
8. Applicant limitation (e.g. only domestic SMEs)	State-owned companies
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	No
10. Other relevant limitation	
11. Total budget of the program (in EUR)	33 MEUR
12. Budget / project (in EUR)	0,33 - 1,25 MEUR (in case of RES project)
13. Support intensity (%) (per type of project or per type of organization if differentiated)	Max. 100%
14. Other conditions you think important	
15. Approximate number of projects funded in the past 5 years	n.a.
16. Approximate number of projects planned to be funded in the next 5 years	Max 100
17. Approximate total amount of the support paid during the past 5 years	n.a.
18. Other relevant information	

Romania

Support mechanism no. 1	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	**Hotararea de Guvern HG 216/2017, valabila din data de 14 aprilie 2017** **Schema de ajutor de stat având ca obiectiv sprijinirea investiţiilor destinate promovării producţiei de energie din surse regenerabile**

	mai puţin exploatate (biomasă, biogaz, geotermal) Government Decision HG 216/2017, valid since 14 April 2017 Scheme of state aid for suporting the investments targeted at promoting energy production from less exploited renewable sources (biomass, buigaz, geothermal)
3. Body providing the support (program owner)	85% European Regional Development Fund 15% national cofinancing from the State budget (ensured by the budget of the Ministry of Regional Development, Public Administration and European Funds and from the local budget, according to the Financial Plan of POIM)
4. Organization responsible for managing the funding process (program operator)	**Ministerul Fondurilor Europene, în calitate de Autoritate de Management a Programului Operaţional Infrastructură Mare - POIM.** Ministry of European Funds, as Management Authority for Big Infrastructures Operational Programme POIM
5. Duration of support measure (year of introduction – year of planned stop)	2017- 2020
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	One of the following: -making/modernizing production capacities for electric and/or thermic energy exclusively from biomass and biogas; -making/modernizing production capacities for **thermic energy exclusively from geothermal water**
7. Geographical territory limitation (e.g. region)	Funding is applicable to all regions of the country excepting Bucharest-Ilfov
8. Applicant limitation (e.g. only domestic SMEs)	No, any enterprise with juridic personality, legallty constituted according to the specific legislation of the Member State where they have the nationality.
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	Yes (see above). For Romanian and foreign entities, the object of activity must be the production of electric and/thermic energy, the entity must be financially viable, without debts, or in the state of bankruptcy etc.
10. Other relevant limitation	The project did not benefit during the last 5 years of financing from public funds, except for preliminary studies: feasibility, geo-topographic

	analysis, technical design, execution details.
11. Total budget of the program (in EUR)	Total 100,630,588 EUR distributed on years: -2017: 20,126,18 EUR -2018: 30,189,176 EUR -2019: 40,252,235 EUR -2020: 10,063,059 EUR
12. Budget / project (in EUR)	Max 15,000,000 EUR for an investment project
13. Support intensity (%) (per type of project or per type of organization if differentiated)	45% of eligible costs, calculated according to specific rules (Regulation . 651/2014, Art. 41). The sum can increase with 15% in the case of assisted zones which fulfill art. 107 of the Treaty on the Functioning of the European Union. These sums can be furthermore increased with 20% in case of small and micro-entreprises and with 10% in case of medium enterprises. The rest is covered by the beneficiary and no other public funds are allowed.
14. Other conditions you think important	
15. Approximate number of projects funded in the past 5 years	N/A, it started in 2017
16. Approximate number of projects planned to be funded in the next 5 years	Estimated 40 projects
17. Approximate total amount of the support paid during the past 5 years	N/A
18. Other relevant information	

Support mechanism no. 2	
1. Type (please underline)	• <u>Direct investment subsidy, fund</u> • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	**Hotararea de Guvern HG 807/2014, valabila de la 30.09.2014, actualizata la 17 mai 2016** **pentru instituirea unor scheme de ajutor de stat având ca obiectiv stimularea investițiilor cu impact major în economie** Government Decision HG 807/2014, valid from

	30 September 2014, updated on 17 May 2016 for settling state aid schemes for stimulating high impact economic investments
3. Body providing the support (program owner)	Programul "Ajutoare de stat pentru finanțarea proiectelor pentru investiții". Programme "State Aid for financing investment projects".
4. Organization responsible for managing the funding process (program operator)	Ministry of Public Finances, in its budget "General Actions".
5. Duration of support measure (year of introduction – year of planned stop)	2014-2020
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	All sectors of economy with some exceptions (fishing and aquaculture, raw production, closing of uncompetitive coal mines, siderurgy, shipyards, transport, **energy and related infrastructure**).
7. Geographical territory limitation (e.g. region)	All regions in the country can apply, being differently financed, reported to **eligible costs**, to **maximum**: -Bucharest Region (NUTS3 RO 321): **15%** (2014-2017), **10%** (2018-2020); -West Region (NUTS 2 RO 42) and Ilfov (NUTS 3 RO 322): **35%** (2014-2020); -North-West, Centre, North-East, South-East, South-Muntenia, South-West Oltenia: **50%** (2014-2020).
8. Applicant limitation (e.g. only domestic SMEs)	Not to nationality, financial viability required.
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	Yes, if they are registered, and make already **an initial investment in Romania**, in any sector compatible with the sectors of activity of the programme. They have not closed an identical or similar activity in the European Economic Area in the last 2 years prior to the filing of the application for funding agreement.
10. Other relevant limitation	To be considered **initial investment**, of a total value (without VAT) of **minimum 10 million EUR.**
11. Total budget of the program (in EUR)	925 million EUR (145 million EUR each year)
12. Budget / project (in EUR)	The **maximum** amount of financing **eligible costs** for a project depends on region:

	-Bucharest Region (NUTS3 RO 321): **11.25 mil. EUR** (2014-2017), **7.5 mil. EUR** (2018-2020); -West Region (NUTS 2 RO 42) and Ilfov (NUTS 3 RO 322): **26.25 mil EUR** (2014-2020); -North-West, Centre, North-East, South-East, South-Muntenia, South-West Oltenia: **37.5 mil. EUR** (2014-2020).
13. Support intensity (%) (per type of project or per type of organization if differentiated)	Between 50% and 10% of eligible costs, depending of the region and specific years of the programme (see geographical limitation)
14. Other conditions you think important	To be eligible, the costs of the intangible assets may not exceed 50% of the total eligible costs of the investment.
15. Approximate number of projects funded in the past 5 years	1 project that had as ouput the greatest spa in Europe *Therme București* by drilling a new well and exploiting **geothermal water** for recreation purpose. Total cost 50 million EUR, of which 6.6 million EUR (13%) financed from the State. The project belongs to Wund Group, part of the A-HEAT chain having the headquarters in Vienna. Together with this, another 9 projects were financed in 2014, total amount 100 million EUR.
16. Approximate number of projects planned to be funded in the next 5 years	Estimated 150 projects for the entire period
17. Approximate total amount of the support paid during the past 5 years	N/A
18. Other relevant information	The project should generate a quantifiable multiplier effect in the economy by engaging other related investments and developing local suppliers of products and services.

Serbia

Support mechanism no. 1	
1. Type (please underline)	• Direct investment subsidy, <u>fund</u> • <u>Low interest loan</u> • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….

2. Full name of support measure (on local language and English translation)	Fond za razvoj Republike Srbije (Službeni glasnik RS br. 36/2009, 88/2010, 119/2012, 5/2015) Fund for Development of the Republic of Serbia ("Official Gazette of the RS", 88/10) – among goals of the Fund is stimulation of energy efficiency
3. Body providing the support (program owner)	Government of the Republic of Serbia
4. Organization responsible for managing the funding process (program operator)	Fund for Development of the Republic of Serbia
5. Duration of support measure (year of introduction – year of planned stop)	Year of Fund constitution is 2009. There is no time duration limits.
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	Supporting financial measures in aim for sustainable economic growth and prosperity, among goals focused on energy efficiency increasing and use of RES
7. Geographical territory limitation (e.g. region)	Territory of the Republic of Serbia
8. Applicant limitation (e.g. only domestic SMEs)	Yes, only business entities and business entities with less than 40% share of public capital
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	No
10. Other relevant limitation	Business entity must be liquid in past two years for the moment of applying for a loan.
11. Total budget of the program (in EUR)	Fund budget is defined by the government of the Republic of Serbia on the yearly base.
12. Budget / project (in EUR)	In 2017. 587 loans are approved in total amount of around 30 MEur. Loans will used in all kind of project for economy development, not just in field of RES.
13. Support intensity (%) (per type of project or per type of organization if differentiated)	Support intensity depends from type of loan. Ten different loans and guarantees are existing.
14. Other conditions you think important	*Payback period for investment loans for legal entities* is 10 years with one-year grace period. Interest rate may vary from 1.5% do 3%. *Payback period for fixed working capital for legal entities* is 4 years with nine-month grace period. Interest rate may vary from 1.5% do 3%. *Payback period for investment loans for private entities* is from 5 to 7 years with one-year grace period. *Payback period for fixed working capital for private entities* is 5 years with nine-month grace period.
15. Approximate number of projects funded in	2 500 projects

the past 5 years	
16. Approximate number of projects planned to be funded in the next 5 years	Based on statistical rating, in for coming years 3 000 projects can be supported by Found.
17. Approximate total amount of the support paid during the past 5 years	Over 100 MEur.
18. Other relevant information	

Support mechanism no. 2	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	Budžetski fond za unapređenje energetske efikasnosti Republike Srbije ("Službeni glasnik RS", broj 92/13) The Budget Fund for improving the energy efficiency ("Official Gazette of the RS", 92/13)
3. Body providing the support (program owner)	Government of the Republic of Serbia
4. Organization responsible for managing the funding process (program operator)	Government of the Republic of Serbia
5. Duration of support measure (year of introduction – year of planned stop)	Year of Fund constitution is 2013. Fund became operative in 2014. There are no time duration limits.
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	Fund supporting projects focused on: increase energy efficiency in building sector, use RES for own needs and cogeneration
7. Geographical territory limitation (e.g. region)	Territory of the Republic of Serbia
8. Applicant limitation (e.g. only domestic SMEs)	Local governmental bodies and individuals as well
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	No
10. Other relevant limitation	
11. Total budget of the program (in EUR)	Fund budget for 2017 is 1.3 MEur.
12. Budget / project (in EUR)	Depends on the project, there is no limitation per project
13. Support intensity (%) (per type of project or per type of organization if differentiated)	- up to 100%, for project that coming from local governmental body located devastated areas - up to 70%, for project that coming from other governmental bodies

	- 20% of project value for Projects for increasing energy efficiency in public lighting sector
14. Other conditions you think important	One project per year, per local government unit can be approved. Financial subsidy can be defined as non-refundable grant
15. Approximate number of projects funded in the past 5 years	30
16. Approximate number of projects planned to be funded in the next 5 years	N/A
17. Approximate total amount of the support paid during the past 5 years	Approximate 3 MEur.
18. Other relevant information	Agreement between Fund and UNDP for donations

Support mechanism no. 3	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	Fund for Development of the Autonomous Province of Vojvodina Fond za razvoj Autonomne Pokrajine Vojvodine
3. Body providing the support (program owner)	Autonomous Province of Vojvodina
4. Organization responsible for managing the funding process (program operator)	Autonomous Province of Vojvodina (78.11%) Government of the Republic of Serbia (21.89%)
5. Duration of support measure (year of introduction – year of planned stop)	Year of Fund constitution is 2013. There is no time duration limits.
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	Fund supporting projects and programmes for sustainable development and economy prosperity accordance to European Union principles
7. Geographical territory limitation (e.g. region)	Yes, territory of the Autonomous Province of Vojvodina
8. Applicant limitation (e.g. only domestic SMEs)	No limitation
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	No
10. Other relevant limitation	

11. Total budget of the program (in EUR)	Fund budget for 2017 is 40 KEur
12. Budget / project (in EUR)	
13. Support intensity (%) (per type of project or per type of organization if differentiated)	Support intensity depends from type of loan. Nine different loans and guarantees are existing.
14. Other conditions you think important	
15. Approximate number of projects funded in the past 5 years	N/A
16. Approximate number of projects planned to be funded in the next 5 years	N/A
17. Approximate total amount of the support paid during the past 5 years	N/A
18. Other relevant information	The Development Fund of the Autonomous Province of Vojvodina is involved in FP7 program FRACTALS

Support mechanism no. 4	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	Bespovratna podsticajna sredstva za sufinansiranje realizacije projekata korišćenja raspoloživih hidrotermalnih resursa izrada novih istražno-eksploatacionih bušotina Financing of projects of local self-government, public utility companies and public companies pursuant to published tenders - Non-refundable incentives to co-finance the implementation of projects for the use of hydrothermal resources - drilling of new exploitation wells
3. Body providing the support (program owner)	Provincial Secretariat for Energy, Construction and Transport
4. Organization responsible for managing the funding process (program operator)	Provincial Secretariat for Energy, Construction and Transport
5. Duration of support measure (year of introduction – year of planned stop)	Duration of support measure is variable and is defined by contract. Not over two years.
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	Drilling activities

7. Geographical territory limitation (e.g. region)	Yes, region
8. Applicant limitation (e.g. only domestic SMEs)	Yes, only local public bodies (cities and municipalities)
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	No
10. Other relevant limitation	In application time applicant must have active exploration license. Applicant must have evidence that rest of amount for project realization is secured.
11. Total budget of the program (in EUR)	around 2 million euro
12. Budget / project (in EUR)	around 1 million euro
13. Support intensity (%) (per type of project or per type of organization if differentiated)	100%
14. Other conditions you think important	
15. Approximate number of projects funded in the past 5 years	Two
16. Approximate number of projects planned to be funded in the next 5 years	Total funding amount is relevant and depends maximum funding amount per project. Total founding amount is defined by yearly budget of funding body. Number of projects depends on application number.
17. Approximate total amount of the support paid during the past 5 years	2 million euro
18. Other relevant information	

Support mechanism no. 5	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify) Interest loan
2. Full name of support measure (on local language and English translation)	Evropska Banka za rekonstrukciju i razvoj European Bank for Reconstruction and Development (EBRD)
3. Body providing the support (program owner)	EBRD
4. Organization responsible for managing the funding process (program operator)	EBRD
5. Duration of support measure (year of introduction – year of planned stop)	In Serbia EBRD started in 2001.

6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	EBRD supporting projects that: have good prospects of being profitable have significant equity contributions in cash or in kind from the project sponsor would benefit the local economy satisfy the EBRD's environmental standards as well as those of the host country
7. Geographical territory limitation (e.g. region)	No
8. Applicant limitation (e.g. only domestic SMEs)	No
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	Yes
10. Other relevant limitation	n.a.
11. Total budget of the program (in EUR)	n.a.
12. Budget / project (in EUR)	n.a.
13. Support intensity (%) (per type of project or per type of organization if differentiated)	EBRD investments in private sector projects can range from €5 million - €250 million. The EBRD funds up to 35% of the total project cost for a greenfield project or 35% of the long-term capitalization of an established company. Typical private sector projects are based on at least one-third equity investment.
14. Other conditions you think important	Repayment is in equal, semi-annual instalments. For large infrastructure operations maturities may be considered up to 15 years. The EBRD supports local commercial banks, which in turn provide loans to SMEs and municipalities.
15. Approximate number of projects funded in the past 5 years	n.a.
16. Approximate number of projects planned to be funded in the next 5 years	n.a.
17. Approximate total amount of the support paid during the past 5 years	n.a.
18. Other relevant information	214 projects are supported from 2001 to the date €4,538 million of cumulative EBRD investment

Slovenia

Support mechanism no. 1	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	**Javni razpis za sofinanciranje daljinskega ogrevanja na obnovljive vire energije za obdobje 2017 do 2020 (oznaka: JR DO OVE 2017), v okviru Operativnega programa za izvajanje Evropske kohezijske politike v obdobju 2014–2020, prednostne osi Trajnostna raba in proizvodnja energije ter pametna omrežja, prednostne naložbe Spodbujanje proizvodnje in distribucije energije, ki izvira iz obnovljivih virov** Public tender for the co-financing of district heating for renewable energy for 2017-2020 (code: JR TO REV 2017), within the Operational Program for the implementation of the European Cohesion Policy for the period 2014-2020, priority axis Sustainable use and energy production and smart grids, Priority investment Promoting the production and distribution of energy originating from renewable sources
3. Body providing the support (program owner)	European Union Cohesion fund
4. Organization responsible for managing the funding process (program operator)	Ministry for Infrastructure of Republic of Slovenia
5. Duration of support measure (year of introduction – year of planned stop)	2017 – 2020
6. Supported project / activity types	Production of heat from renewables – new district heating systems up to 10 MW and microsystems up to 1 MW and enlargement of existing ones.
7. Geographical territory limitation (e.g. region)	Slovenia
8. Applicant limitation (e.g. only domestic SMEs)	Companies and sole proprietors according to the Companies Act and cooperatives according to the Cooperatives Act
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	The foreign entities have to establish a branch in Slovenia which will act according to

	Companies Act.
10. Other relevant limitation	State aid rules ''de minimis'' must be considered
11. Total budget of the program (in EUR)	8.000.000
12. Budget / project (in EUR)	Minimum 400.000 EUR
13. Support intensity (%) (per type of project or per type of organization if differentiated)	35 % for big enterprises 45 % for medium enterprises 55 % for small and micro enterprises
14. Other conditions you think important	
15. Approximate number of projects funded in the past 5 years	?
16. Approximate number of projects planned to be funded in the next 5 years	NA
17. Approximate total amount of the support paid during the past 5 years	?
18. Other relevant information	http://www.energetika-portal.si/javne-objave/objava/r/javni-razpis-za-sofinanciranje-daljinskega-ogrevanja-na-obnovljive-vire-energije-1137/

Support mechanism no. 2	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	Ugodni krediti za okoljske naložbe gospodarskih družb in drugih pravnih oseb ter samostojnih podjetnikov« Favorable loans for environmental investments of companies and other legal entities and sole traders
3. Body providing the support (program owner)	Eko sklad – Slovenski okoljski javni sklad Eco Fund – Slovenian Environmental Public Fund
4. Organization responsible for managing the funding process (program operator)	Eco Fund – Slovenian Environmental Public Fund
5. Duration of support measure (year of introduction – year of planned stop)	On going

6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	the construction of the distribution system for district heating and / or cooling, i.e. distribution network, connections to customers, control systems…
7. Geographical territory limitation (e.g. region)	Slovenia
8. Applicant limitation (e.g. only domestic SMEs)	Companies and sole proprietors according to the Companies Act and cooperatives according to the Cooperatives Act
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	The foreign entities have to establish a branch in Slovenia which will act according to Companies Act.
10. Other relevant limitation	State aid rules ''de minimis'' must be considered
11. Total budget of the program (in EUR)	5.000.000
12. Budget / project (in EUR)	25.000 – 2.000.000
13. Support intensity (%) (per type of project or per type of organization if differentiated)	Up to 85 % per project after project validation
14. Other conditions you think important	The investment that is the subject of the loan application must not be completed at the time of submission of the application.
15. Approximate number of projects funded in the past 5 years	None
16. Approximate number of projects planned to be funded in the next 5 years	NA
17. Approximate total amount of the support paid during the past 5 years	None
18. Other relevant information	Interest rate - 3-month EURIBOR + at least 1,3 % for period of loan repayment up to 15 years https://www.ekosklad.si/razpisi/prikazi/tenderID=75

Support mechanism no. 3	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity) • Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	ERA-NET Cofund Actions – GEOTHERMICA (Izvedba demonstracijskega projekta reinjekcijske vrtine v peskih in slabo sprijetih peščenjakih v Pomurju

	ERA-NET Cofund Actions - GEOTHERMICA (Execution of the demonstration project of the rejection hole in the sand and badly faded sandstones in the Pomurje region)
3. Body providing the support (program owner)	Ministry of Environment and Spatial Planning of Republic of Slovenia – Climate Change Fund
4. Organization responsible for managing the funding process (program operator)	Ministry for Infrastructure of Republic of Slovenia
5. Duration of support measure (year of introduction – year of planned stop)	2018 - 2019
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	Demonstration project of reinjection well with guidelines
7. Geographical territory limitation (e.g. region)	Slovenia
8. Applicant limitation (e.g. only domestic SMEs)	Companies and sole proprietors according to the Companies Act and cooperatives according to the Cooperatives Act
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	The international consortium has to be established from at least two participating countries from GEOTHERMICA consortium.
10. Other relevant limitation	State aid rules ''de minimis'' must be considered
11. Total budget of the program (in EUR)	700.000
12. Budget / project (in EUR)	700.000
13. Support intensity (%) (per type of project or per type of organization if differentiated)	Up to 50%
14. Other conditions you think important	
15. Approximate number of projects funded in the past 5 years	0
16. Approximate number of projects planned to be funded in the next 5 years	1
17. Approximate total amount of the support paid during the past 5 years	0
18. Other relevant information	http://www.geothermica.eu/

Support mechanism no. 4	
1. Type (please underline)	• Direct investment subsidy, fund • Low interest loan • Tax incentive (e.g. VAT reduction) • Off-take tariff for green heat energy (not electricity)

	• Risk insurance system (for geological / drilling risk) • Other (please specify): …….
2. Full name of support measure (on local language and English translation)	Program razvoja podeželja 2014 -2020 - podukrep Podpora za naložbe v kmetijska gospodarstva (podukrep 4.1) - 8. JR za leto 2017 za naložbe kmetijskih gospodarstev v lastno primarno pridelavo kmetijskih proizvodov Rural Development program 2014-2020 -submeasure Support for investments in agricultural holdings (submeasure 4.1) 8. Public call for 2017 for the investments of agricultural holdings for own primary production of agricultural products
3. Body providing the support (program owner)	European Agricultural Fund for Rural Development
4. Organization responsible for managing the funding process (program operator)	Ministry of Agriculture, Forestry and Food of Republic of Slovenia
5. Duration of support measure (year of introduction – year of planned stop)	Ongoing instrument
6. Supported project / activity types (e.g. production of heat from renewables, drilling activities, etc.)	- purchase and installation of greenhouses and associated equipment, - introduction of RES, investments in increasing efficient energy use, and encouraging the provision and use of renewable energy sources (RES) (e.g. investments in energy-efficient heating systems, investments in reducing heat loss when constructing buildings by using materials with better thermal conductivity, purchasing energy-efficient equipment, investments in the production of electricity and thermal energy, investments in the production of biogas by using organic waste
7. Geographical territory limitation (e.g. region)	Slovenia
8. Applicant limitation (e.g. only domestic SMEs)	Applicant must have unique Slovenian farm identification number KMG-MID.
9. Can foreign entities participate? If yes, how? (e.g. in consortium with local entity)	No
10. Other relevant limitation	
11. Total budget of the program (in EUR)	98.600.000 (75% EU – 25% Slovenian participation)
12. Budget / project (in EUR)	Investors are limited up to the amount allocated to the investor for the entire programming period, amounting to 500,000 euros for farms and micro-enterprises, and 1,750,000 for small, medium, and large enterprises
13. Support intensity (%) (per type of	The public support rate is 30% of the value of the

project or per type of organization if differentiated)	eligible costs of investment and is increased by: • 5 percentage points for investments in areas with natural and other special restrictions referred to in Article 33 of Regulation (EU) No 1305/2013 if the beneficiary has at least 50% of agricultural land in use in these areas; • 5 percentage points for investments related to activities under Article 29 and/or 30 of Regulation (EU) No 1305/2013 if the beneficiary has at least 50% of agricultural land in use included in these two measures; • 10 percentage points for investments of social enterprises; • 10 percentage points for investments related to activities under Article 33 of Regulation (EU) No 1305/2013; • 10 percentage points for investments in problem areas; • 15 percentage points for activities receiving support within the EIP in the field of agricultural productivity and sustainability; • 15 percentage points for collective investments, and • 20 percentage points for investments of young farmers. The support rates referred to in the previous point may be added together, but may not exceed 50% of eligible costs of the investment. Geothermal boreholes are mainly supported in terms of energy production (e.g. greenhouse heating). Within the cost catalog, we have from this perspective the following maximum recognized values for the construction of the geothermal power plant: OBJECTS OR PLACES AND PURCHASE OF EQUIPMENT FOR PRODUCTION OF GEOTHERMAL ENERGY: - construction and installation works and related equipment geothermal well from 300 to 800 m depth - 600.00 EUR/m geothermal well over 800 m 1,000.00 EUR/m

14. Other conditions you think important	The support for generating energy from renewable energy sources is supported under this submeasure exclusively for implementation of primary generation of products as per Annex I of the Treaty on an agricultural holding (own use). When generating energy from renewable energy sources, the sale of electric energy in the network is permitted as own use if the total annual quantity of sold energy from renewable energy sources on an agricultural holding does not exceed the average annual needs for electric energy of the agricultural holding.
15. Approximate number of projects funded in the past 5 years	8 (the number for deep geothermal is not known)
16. Approximate number of projects planned to be funded in the next 5 years	NA
17. Approximate total amount of the support paid during the past 5 years	173.938,00 EUR (the amount for deep geothermal is not known)
18. Other relevant information	http://www.mkgp.gov.si/en/

Appendix 2 - Funding opportunities for thermal wells for agricultural use in Hungary

In most cases, agricultural producers do not have enough capital to implement investments of a scale similar to the establishment of a complete thermal water production system. However, they do have the possibility to acquire additional capital from external sources. Tenders and loan facilities depend on numerous conditions, such as the farmer's available capital to be used as own contribution during the investment, the compliance of the financial situation with the credit institution's requirements, as well as the type of the farming activity. The majority of grants can be applied for by farmers performing a strictly specified range of activities.

1. Description of different subsidies

1.1. State and EU subsidies

Without being exhaustive, we will highlight some of the currently available tenders elaborated based on the following set of criteria:

- Application deadline
- Grant intensity (the percentage of eligible costs to be covered from the grant)
- Eligible applicants
- Eligible projects
- Applicable amounts and support rates

Modernization of horticulture – establishment of plastic and glass greenhouses, improvement of their efficiency with the possibility of using geothermal energy
Code: VP2-4.1.3.1-16
Application deadline: March 2018.
Grant intensity: 50%
Eligible applicants

- Farmers meeting the following criteria:
  - Available appropriate plant size (EUR 6,000 SO – exchange rate: HUF 275.25 /1 EUR).
  - They can certify the plant size from agricultural activity based on their "area" aid application.
  - They are engaged in livestock farming (for the calculation of the plant size basis, the average number of animals recorded in the Hungarian Integrated Identification and Registration System must be taken into account).
  - In case they are young farmers, they can certify that at least 50% of their total income is derived from agricultural activity.

The application can also be submitted as a consortium.

- Producer groups, producer organizations are eligible for support in case their individual members meet the criteria specified for farmers.

Eligible projects

The current call offers a wide range of possibilities for use. The relevant ones can be found under the point discussing the application of technologies using a renewable

energy source for cold stores, cold storages, mushroom growing facilities and composting plants:

- The use of geothermal energy:
  - Drilling of a new production well/system.
  - Renewal of existing thermal wells unused for heat utilization or damaged, and of dry hydrocarbon wells, and their transformation into production wells
  - Purchase of technologies for the treatment of used thermal water and projects for their placements. Related accessories, equipment, apparatus, creation of a cooling pond, including the equipment of reinjection wells, and the purchase of facilities for operation.
  - Modernization of the equipment for geothermal energy supply, purchase of new equipment.
  - Efficiency increase of the current geothermal heat utilization system (buffer tank cascade system, heat pump accessories, construction of pipelines).
  - Installation of water meters.
- *Applicable amounts and support rates*
  The current grant is a non-reimbursable financial support.
  The applicable amount of the non-reimbursable grant is:
  HUF 500 million in case of an individual project, and maximum HUF 1 billion in case of a collective project.
  In case of projects supported within the current call, the maximum amount of the advance that can be requested for ex-post funded activities is 50% of the grant.

Modernization of horticulture – mushroom growing houses – establishment of cold stores, modernization of existing mushroom growing houses – cold stores

Code: VP2-4.1.3.4-16
Application deadline: March 2018.
Grant intensity: 50%
Eligible applicants

- Farmers meeting the following criteria:
  - Available appropriate plant size (EUR 6,000 SO – exchange rate: HUF 275.25 /1 EUR).
  - They can certify the plant size from agricultural activity based on their "area" aid application.
  - They are engaged in livestock farming (for the calculation of the plant size basis, the average number of animals recorded in the Hungarian Integrated Identification and Registration System must be taken into account).
  - In case they are young farmers, they can certify that at least 50% of their total income is derived from agricultural activity.
- The application can also be submitted as a consortium.
- Producer groups, producer organizations are eligible for support in case: their individual members meet the criteria specified for farmers.

Eligible projects

The current call offers a wide range of possibilities for use. The relevant ones can be found under the point discussing the application of technologies using a renewable energy source for cold stores, cold storages, mushroom growing facilities, and composting plants:

- The use of geothermal energy:
  - Drilling of a new production well/system.
  - Renewal of existing thermal wells unused for heat utilization or damaged, and of dry hydrocarbon wells, and their transformation into production wells
  - Purchase of technologies for the treatment of used thermal water and projects for their placements. Related accessories, equipment, apparatus, creation of a cooling pond, including the equipment of reinjection wells, and the purchase of facilities for operation.
  - Modernization of the equipment for geothermal energy supply, purchase of new equipment.
  - Efficiency increase of the current geothermal heat utilization system (buffer tank cascade system, heat pump accessories, construction of pipelines).
  - Installation of water meters.

Applicable amounts and support rates

The current grant is a non-reimbursable financial support.
The applicable amount of the non-reimbursable grant is:
HUF 500 million in case of an individual project, and maximum HUF 1 billion in case of a collective project.
In case of projects supported within the current call, the maximum amount of the advance that can be requested for ex-post funded activities is 50% of the grant.

Business start-up aid for young farmers

Code: VP2-6.1.1-16
Application deadline: 28.02.2019.
Grant intensity: 100%
Eligible applicants

- Natural person, in case he/she meets the following criteria:
  - He/she is a private entrepreneur exercising an agricultural activity as main activity, who has been exercising the agricultural activity as a private entrepreneur for a period not longer than 12 months before the submission of the grant application.
  - He/she is at least 18 and maximum 40 years old at the time of the submission of the grant application.
  - He/she has recognized agricultural expertise
  - At the time of the submission of the grant application, he/she is the exclusive owner of a production potential (plant size) with a value of at least 6,000 SO, but of maximum 25,000 SO (see: according to the projects presented earlier).
- Legal entity, in case it meets the following criteria:
  - It has been exercising an agricultural activity as main activity for a period not longer than 12 months before the submission of the grant application.

- The exclusive owner and managing director of the legal entity has been exercising an agricultural activity as main activity as a private entrepreneur or as owner and managing director of a legal entity exercising an agricultural activity as main activity.
- The exclusive owner and managing director of the legal entity is at least 18 and maximum 40 years old.
- The exclusive owner and managing director of the legal entity has recognized agricultural expertise.
- At the time of the submission of the application, the legal entity is the exclusive owner of a production potential with a value of at least 6,000 SO, and the legal entity and the exclusive owner and managing director of the legal entity are together the owners of a production potential with a value of maximum 25,000 SO (see: according to the projects presented earlier).

Eligible projects

Support of a newly created agricultural undertaking:

Implementation of commitments specified in, strongly related to and connected with the business plan.

Furthermore, the utilization area of the grant is not specified, thus it can be used for the construction of thermal wells or the modernization of heating systems as well.

Applicable amounts and support rates

Within the current call, the grant is a lump sum.

Applicable amounts

HUF equivalent to EUR 40,000, in the form of a lump sum, in two instalments, for 5 years:

- With the submission of the first payment application, the grant is 75% of the total amount.
- The remaining 25% of the grant can be planned and applied for depending on the performance of commitments specified in the call for tenders and the business plan, at the earliest after 36 months from the first application, but at latest until the last day of the 54th month from the start of the operation period.

Support with combined loan products of building energy efficiency developments realized with the use of renewable energy

Code: GINOP-4.1.1-8.4.4-16

Application deadline: 18th March 2019.

Grant intensity: 45%

Eligible applicants

Micro-, small- and medium-sized enterprises can submit their grant applications in case they meet the following criteria:

- They have a closed business year (supported by a report/PIT declaration for the whole year – 365 days), not counting the pre-incorporation period.
- Their annual average statistical number of staff was minimum 1 person in the last completed business year prior to the submission of the grant applications.
- They are business associations with legal entity, private entrepreneurs, sole proprietorships with double-entry bookkeeping and a seat in Hungary, or companies with double-entry bookkeeping with a seat in the European Economic Area and a branch in Hungary:

According to the business form code:

- 113 Private limited-liability company
- 114 Limited company
- 116 General partnership
- 117 Limited partnership
- 226 Branch establishment of foreign enterprise
- 228 Sole proprietorship
- 231 Private entrepreneur

According to the legal form:

- aa, companies with double-entry bookkeeping;
- ab, private entrepreneurs, sole proprietorships subject to PIT.

Within the current call, the grant application cannot be submitted as a consortium.

Eligible projects

Investment targeting the improvement of energy efficiency with the use of renewable energy: modernization of heating systems, replacement of doors and windows etc.
Within the current call, the submitted project proposals must combine the improvement of energy efficiency with the use of a renewable energy source.

Specifications regarding the complex project proposal:

- In case of submitted grant applications, the proportion of the project part – activity – for the improvement of energy efficiency must reach at least 50% of the total eligible costs of the project.
- The proportion of the project part – activity – for the use of renewable energy must reach at least 10% of the total eligible costs of the project.
- The combinations must comply with the different projects.

Applicable amounts and support rates

The amount of the applicable reimbursable and non-reimbursable grant is: minimum HUF 3 million, maximum HUF 50 million.
The amount of the applicable loan must exceed the amount of the non-reimbursable support.
The amount of the non-reimbursable support can reach maximum 45% of the total eligible costs.

Conditions of the reimbursable grant:

- Interest: 2%/year
- There can be late payment fees or contract amendment fees initiated by the beneficiary.
- The loan's duration is maximum 10 years from the conclusion of the contract, which includes the eventual grace and commitment period.
- Commitment period: Maximum 12 months from the physical ending of the project, but not more than maximum 24 months from the conclusion of the loan contract.
- Grace period: Maximum 12 months from the end of the commitment period, or maximum 24 months from the conclusion of the contract.

Value enhancement of agricultural products and promoting resource efficiency in processing

Code: VP3-4.2.1-15
Application deadline: Currently suspended, but may be opened at a later date
Grant intensity: 40% in the Central Hungarian region and 50% in other regions.

Eligible applicants

Grant application can be submitted by applicants meeting the following criteria and specified under TEÁOR (Hungarian NACE) codes 10 and 11 (except for TEÁOR 1020, TEÁOR 109 and TEÁOR 1102) exercising development activities.

1. **Farmers are eligible for the grant, in case:**
   a. at least 50% of their total income from the last completed business year prior to the submission of the grant support – or from the one before, in case they do not have relevant data - is derived from agricultural activity;
   b. their activity supported with the grant involves the processing of a product listed in Annex 1.
2. **A non-farm micro- and small-sized enterprise is eligible for the grant, in case:**
   a. it has a completed business year prior to the submission of support applications
   b. its activity supported with the grant involves the processing of a product listed in Annex 1.
   c. it produces only products listed in Annex 1 with its activity supported with the grant.

Within the current call, the grant application can be submitted as a consortium.

3. **Within the current call, the grant application can be submitted as a collective investment.**
   A collective project is a project implemented jointly by at least five beneficiaries, who are legally and economically independent of each other. A project implemented by a producer group, a producer organization, a cooperation functioning with the membership of farmers or a social cooperative is regarded as a collective project.

Eligible projects

Application of technologies using renewable energy sources

The target area includes activities with the objective to cover economic-production processes and energy demands within plant facilities by producing renewable energy. The production capacity of the equipment using the renewable energy source should be able to satisfy the annual average heat and electricity consumption of the plant/plant part. Its sale into the electricity network is authorized, but the annual quantity of electricity supplied into the network cannot exceed the plant's annual energy consumption.

- Meeting the heating/cooling energy demands partially or completely with renewable energy sources (installation of systems based on solar panels, solid biomass or heat pumps, use of geothermal energy etc.);
- Meeting the domestic hot water demands partially or completely with renewable energy sources (installation of systems based on solar panels, solid biomass or heat pumps, use of geothermal energy etc.);
- Meeting the direct energy demands of the economic-production process partially or completely with renewable energy sources (installation of systems based on solar panels, solid biomass or heat pumps, use of geothermal energy etc.);
- Production of electricity production (biogas production, creation of a solar-panel system etc.).

Applicable amounts and support rates
The grant within this call is a non-reimbursable financial support.
The applicable amount of the non-reimbursable grant is HUF 500 million in case of an individual project, and maximum HUF 1.5 billion in case of a collective project.
The maximum amount of the grant is 40% of the total eligible costs in the Central Hungarian Region and 50% of the total eligible costs in other regions.
The maximum amount of the advance that can be requested for ex-post funded activities is 50% of the grant.

1.2. Loans

In case the farmer does not have enough capital from own resources to cover the costs for the creation of the thermal well, another option beside application is to take a loan from a financial institution. These resources are always reimbursable and contain various interest rates. There are loans that can be used in combination with different applications. These can be used in cases, when capital must be ensured to finance the own contribution to the project, allowing the applicant to obtain the grant. Different institutions offer different types of loans for farmers. We will outline a few loans to describe the possibilities, without being exhaustive.

1.2.1 OTP Bank

OTP Agricultural and Entrepreneurial Overdraft Facility
Eligible applicants
- Undertakings with available farming data for at least one full, completed year and a cash account at a credit institution for at least one year.
- Resident enterprises
- Those meeting the definition of SME's according to Decree No. XXXIV of 2004 on Small- and Medium-Sized Enterprises.
- Undertakings with activities related to suppliers, customers, employees, owners or to rural areas in any other way. Rural area refers to the whole territory of Hungary, except for Budapest and the towns with county ranks.

Advantages
- Available without real estate collateral
- Loan interest paid only after the drawn amount
- Automatic and flexible possibility to use loans
- Used to cover unexpected expenses
- Revolving, the reimbursed amount can be reused
- Easy to repay

Conditions
- Loan purpose: No specific purpose
- Loan amount: minimum HUF 500,000, maximum HUF 100,000,000
- Currency: HUF, EUR
- Maturity: maximum 1 year. The loan can be extended after one year in case of a positive credit scoring.

- Loan interest, administration fee, fee for setting the credit limit based on individual assessment.
- Collateral: Surety of a private person and of the Hungarian Rural Credit Guarantee Foundation, debit transfer based on letter of authorization for foreign bank accounts, fulfilment of the obligatory account turnover.

Agricultural Széchenyi Card

Eligible applicants

- Undertakings with one of the following activities as main or ancillary activity according to TEÁOR'08: One of codes No. 011, 012, 013, 014, 015, 016, 017, 02, 10, 11, 12, 462, 463, 03 or 102.
- Available farming data for at least one full, completed year.
- Resident enterprise.
- Meeting the definition of SME's according to Decree No. XXXIV of 2004 on Small- and Medium-Sized Enterprises.

Advantages

- State aid connected to it
- No specific purpose
- Flexible, revolving structure, the reimbursed amount can be used again within the maturity period.
- It provides support to overcome temporary financial problems.
- Up to a loan amount of HUF 25 million, non-cash collateral is not required.

Conditions

- Loan purpose: Agricultural overdraft facility with no specific purpose
- Loan amount: minimum HUF 500,000, maximum HUF 50 million
- Can be requested in HUF.
- Maturity: Maximum 1 year, the loan can be renewed after 1 year
- Loan interest, administration fee, fee for setting the credit limit based on individual assessment.
- Collateral: Surety of a private person and of the Hungarian Rural Credit Guarantee Foundation, debit transfer based on letter of authorization for foreign bank accounts, fulfilment of the obligatory account turnover. Real estate collateral is required for loans of HUF 25 million and above.

Green Card loan

Eligible applicants

- Agricultural undertakings and licensed traditional small-scale producers registered at the Agricultural and Rural Development Agency, who are eligible for the basic payment, as well as for the greening component and the young farmer grant.

Advantages

- They can get in advance the sums of the basic payment of 2018 under the SAPS scheme, of the greening component and of the young farmer grants as well.
- In case next year a grant pre-financing is necessary besides borrowing the two-year Green Card loan, the Green Card loan can be requested, only to pre-fund the grant for the year 2019, so the applicants will not be left without sources of funding in these years.
- Extremely high loan amount, lump sum financing.
- Non-cash collateral is not required.
- The loan is paid from the grant.

The amount of pre-financing

Payment entitlement	Amount of pre-financing for the year 2018
Basic payment under SAPS scheme and greening	HUF 115,200 Ft/ha*
Young farmer grant for maximum 90 hectares	HUF 34,400 Ft/ha*

*depending on the result of customer rating

Conditions

- Loan purpose: Loan with no specific purpose for pre-financing of grants
- Loan amount: minimum HUF 1 million, maximum HUF 300 million.
- Can be requested in HUF.
- Maturity: Adjusted to the expected arrival of the grant, the loan expires on 30th June 2019.
- Loan interest, administration fee, commitment period, fee for setting the credit limit based on individual assessment.
- Collateral: Registration account to receive the grants, debit transfer based on letter of authorization.

Pre-financing of agricultural direct grants

Eligible applicants

- Private and corporate enterprises and licensed traditional small-scale producers eligible for the grant, who are registered at the Agricultural and Rural Development Agency.

Advantages

- Most agricultural direct grants can be pre-financed.
- Non-cash collateral or institutional surety is not required, the collateral is the registration account at the Agricultural and Rural Development Agency (MVH).
- Loan with no specific purpose, allowing a greater flexibility for your decisions.
- In case the grant is not paid until the loan's expiry, the bank loan is prolonged free of charge.

Conditions

- Loan type: Working capital loan
- Loan amount: minimum HUF 1 million. The maximum loan amount depends on the customer rating and can reach 50-80% of the grant amount of the current year.
- Currency: HUF
- Collateral: Registration account to receive the grant, which is a separated account with blocked debiting, debit transfer based on letter of authorization.
- Maturity: Adjusted to the payment of the grant.
- Credit interest rate: 3 months BUBOR + 2.99%
  Annual administration fee 1.00-1.5%
- Fee for setting the credit limit: 1.00%, minimum HUF 30,000, maximum HUF 100,000
- Loan payment: On the last banking day of the quarter.
- Capital repayment: in a single instalment at the expiry of the loan.

1.2.2 Hungarian Development Bank (MFB)

New Hungary Agricultural Development Loan Program

Eligible applicants

Micro-, small- and medium sized (SME's) enterprises with a seat in Hungary or in the EEA and a branch in Hungary, and undertakings other than SME's, as an additional project loan, operating in the form of:

- Individual undertaking
- Business association
- Cooperative
- European company.

Advantages

- Can be requested at highly preferential rates and a long-term maturity
- Can be used to certain grants as an additional resource
- Start-ups can be financed as well
- Licensed traditional small-scale producers without a business license can use it too

Financed investments

- Investment into primary production of agricultural products
- Assistance for the activities of young agricultural producers
- Additional project loan
- Agricultural resource loan

Conditions

- Maturity: maximum 15 years
- Loan amount: minimum amount of HUF 1-5 million, maximum amount HUF 50-1000 million.
- Own contribution: The amount of own contribution is at least 15% of the investment's net costs, or in case the undertaking is not entitled to reclaim VAT, of the investment's gross costs. The own contribution can be fully covered from own resources, or from own resources and non-reimbursable state aid.
- Currency: The loan is available in HUN.

1.2.3 Bank of Hungarian Savings Cooperatives Co. Ltd.

Farmer Loan – Farmer Card

Eligible applicants

- Micro-, small- and medium-sized enterprises considered as SME's related to the agricultural sector, business associations, individual entrepreneurs, cooperatives, producers organizations (PO's), licensed traditional small-scale agricultural producers including family farmers (family farms) and agricultural small farmers.

Conditions

- Overdraft facility from HUF 1 million to HUF 15 million, in rates increasing by HUF 1 million
- Maturity: from 91 days to 3 years
- Loan currency: HUF
- Credit interest rate: 1-month BUBOR + a credit spread of 4.5% / year
- Administration fee: 0.8% / year
- One-time reduced guarantee fee

Beside the described credit facilities, almost every financial institution in Hungary offers a variety of investment loans. These are loans with no specific purpose, thus they can be used for financing the establishment of thermal water systems.

2. References

1. The difficulties related to the use of thermal water in agriculture – Hungarian Chamber of Agriculture, 2015 (Termálvíz hasznosításának nehézségei a mezőgazdaságban – Nemzeti Agrárgazdasági Kamara – 2015)
2. Calls for tenders
https://www.palyazat.gov.hu/videkfejlesztesi_tamogatasok
VP3-4.2.1-15 - Modernization of horticulture – establishment of plastic and glass greenhouses, improvement of their efficiency with the possibility of using geothermal energy
VP2-4.1.3.4-16 - Modernization of horticulture – mushroom growing houses – establishment of cold stores, modernization of existing mushroom growing houses – cold stores
VP2-6.1.1-16 - Business startup aid for young farmers
VP3-4.2.1-15 - Value enhancement of agricultural products and promoting resource efficiency in processing
GINOP-4.1.1-8.4.4-16 - Support with combined loan products of building energy efficiency developments realized with the use of renewable energy
3. Loans:
https://www.otpagrar.hu/Hiteltermekek/Folyoszamlahitel
OTP Bank Overdraft Facilities
https://www.otpagrar.hu/Hiteltermekek/AgrarSzechenyiKartya
OTP Bank Agricultural Széchenyi Card
https://www.otpagrar.hu/Hiteltermekek/ZoldkartyaHitel
OTP Green Card Loan
https://www.otpagrar.hu/Hiteltermekek/MgTamogatasokElofinanszirozasa
OTP Pre-financing of Agricultural Grants
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