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### EDREMIT GEOTHERMAL PROJECT DOCUMENT

#### CLEAN DEVELOPMENT MECHANISM PROJECT DESIGN DOCUMENT FORM (CDM-PDD)

Title of Project Activity Version number of document	Edremit Geothermal Space Heating Project 01
Project Participant	Project Owner / Developer: Edremit Geothermal Inc.
Host Party Selected methodology Version	Turkey AM0072 - Large-scale Methodology - Fossil Fuel Displacement by Geothermal Resources for Space Heating *
Sectoral scope(s):	03.0 01
Estimated amount of annual average GHG emission reductions	45,140.33 tCO2 /year

\*Tool 02:Combined tool to identify the baseline scenario and demonstrate additionality v06.0

Tool 05: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation v02.0 Tool to calculate project or leakage CO2 emissions from fossil fuel combustion V02.0 EB41 report Annex 11 *is used*.



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- B. Application of a <u>baseline and monitoring methodology</u>
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Annex 1: The official docs of Edremit Geothermal



#### SECTION A. General description of project activity

#### A.1 Title of the project activity:

EDREMIT GEOTHERMAL SPACE HEATING PROJECT (GS 5524) Project Design Document under GS Version 2.2 VER

#### A.2. Description of the project activity:

Edremit Geothermal Inc. has carried out its operations to generate heat from geothermal energy for space heating in buildings since 2005. The existing system of Edremit Geothermal is located in Edremit District, approximately 87 km to Balikesir Province of the Republic of Turkiye. The geothermal space heating system still provides its services on space heating to the urban area of 520.000 m<sup>2</sup>. It exploits 6.3 million m<sup>3</sup> of geothermal water annually from 10 new wells, with re-injection of returned water to only-one well by heating exchangers (for each building) with 6.000m transmission lines and 38.000 m of supply pipelines. The geothermal heat system is supplying heat to various parts of Edremit District with a total rated capacity of 19.8 MWth. This will cover 25 % of total heating demand of Edremit District.

The geothermal conditions in Edremit District indicate water temperatures from 42-52 °C. Given the relatively low temperature ranges, providing "the sustainability of geothermal space heating", and not power production, would be the most suitable use of the thermal resource available. For approximately ten years, Edremit Geothermal Inc. has provided the maximum sustainable heating services at the low temperature ranges mentioned above. The project is divided into two zones. The first phase of the project in Zone 1 has been completed and is equal with 3.000 HE which corresponds 11.42 to MWth. The second phase of the project in Zone 2 is equal with 4000 HE which corresponds to 15.23 MWth. The project's total heating capacity has been determined as 7.500 HE (household-equivalent) which corresponds to 28.56 MWth. Operations and services are still carried out with 5.200 HE which corresponds to 19.8 MWth. New users will be integrated to the system to be able to reach the desirable capacity within the scope of the second phase.

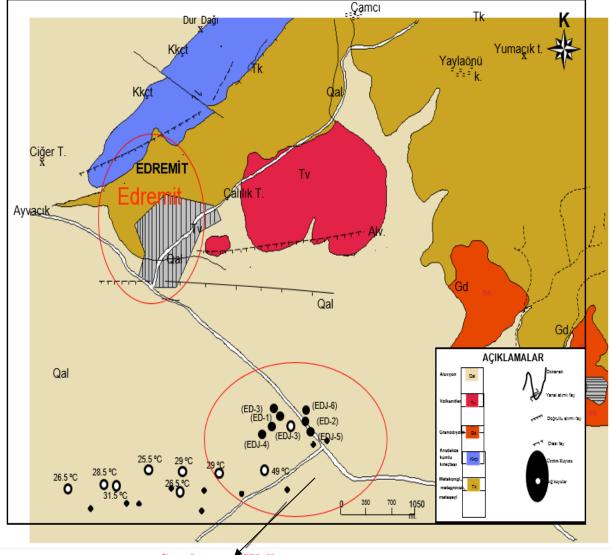
The main purpose of the project is expanding its operations and improving the energy efficiency of the existing wells and geothermal space heating services by the addition of extra geothermal wells and a pumping station to the system which will provide continuous heat and hot water to the residential, commercial and institutional buildings by replacing fossil fuel systems in the area of Edremit District. In addition that, it is essential for us to ensure the best practice and make a measurable impact on sustainable development in the field of geothermal space heating.

The project activity also aims to supply hot water and make an economic contribution to a greenhouse project which includes the practices on "seed-treatment experiments" as well as supplying services to greenhouses for agricultural use.

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The project activity also contributes to make Edremit District "smoke free" by eliminating coal boilers that currently provide the space heating in the mentioned area. Other uses of geothermal hot water include public institutions, hot spring baths and medical & health care treatment facilities. The avoided use of coal results in the reduction of carbon dioxide emissions from business as usual trends in the province, and contributes to the climate change mitigation activities of the Republic of Turkiye. Local stakeholders are always supportive and willing to contribute the project activity because they have realized the existing geothermal space heating services as a sound solution to the current air pollution situation.



#### **Edremit Geothermal Space Heating Project (7500 HE)**

**Geothermal Wells** 

Figure 1: Geological Map of the Project

WELLS	DRILLING DATE	INITIAL TEMPERATURES (°C)
<b>ED-1</b>	2000	60
ED-2	2001	47
ED-3	2001	59
EDJ-2	2007	55
EDJ-3	2005	59
EDJ-4	2005	49
EDJ-5	2006	59
EDJ-5	2013	55
EDJ-6	2009	60
EDJ-7	2006	59
EDJ-8	2007	59
EDJ-8	2012	56
EDJ-9	2010	35
<b>EDJ-10</b>	2010	55
<b>EDJ-11</b>	2012	63
<b>EDJ-12</b>	2013	25

The Table below indicates geothermal wells of the existing project.

Table 1: The List of geothermal wells



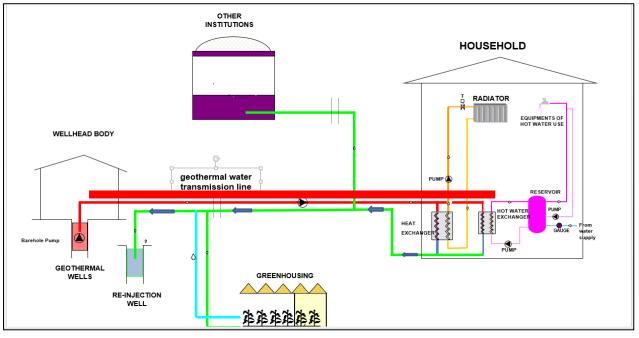


Figure 2. Flow Diagram of the heating system



Project Activity	Finished or Actual Action	Start and Finish Date	Planned Action	Planned Date
Zone 1 ( 3000 HE) Heating Service	Finished Action	2005 - 2009	×	×
Zone 2 (7500 HE) Heating Service	2200 HE Heating Service Finished Action		+2300 HE Heating Service Planned Action	2016 – 2019
Retrofitting Current Wells	Finished Action -Well EDJ 3 and Well EDJ 8 revised	2016		
1 <sup>st</sup> New Well Drilling*	Actual Action	2017	New well drilling	June -2017 On testing
2 <sup>nd</sup> New Well Drilling*	Actual Action	2017	New well drilling	September- 2017
Pumping System	Finished Action	28 <sup>th</sup> Dec, 2015 January, 2016	Maintenance and Repair Act.	Annual Activity- 2017
Retrofitting pipeline	Actual Action	2016	Maintenance and Repair Act.	Annual Activity- 2017
Re-injection Completion Activities	Actual Action	After field research-2017		
2 re-injection wells in total (Zone1-Zone2)	Actual Action	After field research-2017	2 re-injection wells	2018-2019
Other Technical equipment	Actual Action -Heat exchangers and pumps -Valves and ancillary equipment	2017	If required	Annual Activity
Technical services	Actual Action** Field Research	March 2017	On the second feasibility for rehabilitation	At the end of May, field research will be finished.

#### **Edremit Geothermal Space Heating Project Milestones and Timeline / Rehabilitation Activities**

Table 2. Milestones of the rehabilitation activities

\* New well drilling area will be mentioned in Annex3, Non-Technical Project Information.

\*\*According to new field research results, new well drilling and adding re-injection wells has been proposed by 2018 and 2019.



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#### A.3. Project participants:

Party involved (host) indicates a host Party	Private and/or public entity project participants	Indicate if the Party involved wishes to be considered as project participant
Turkiye	<b>Project Owner / Developer:</b> Edremit Geothermal Inc.	No

#### A.4. Technical description of the project activity:

### A.4.1. Location of the project activity:



#### Figure 3: Project Location on Turkiye Map



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#### A.4.1.1. Host Party (ies):

Host country is Turkiye.

#### A.4.1.2. Region/State/Province etc.:

Edremit, Balıkesir Province is located in the western Turkey in the Aegean Region.

A.4.1.3. City/Town/Community etc.:

Edremit town is located within the boundaries of Balıkesir Province.

# A.4.1.4. Detail of physical location, including information allowing the unique identification of this project activity (maximum one page):

Edremit District, BALIKESİR Province

(39°35′56.35″N; 27°01′19.67″E)

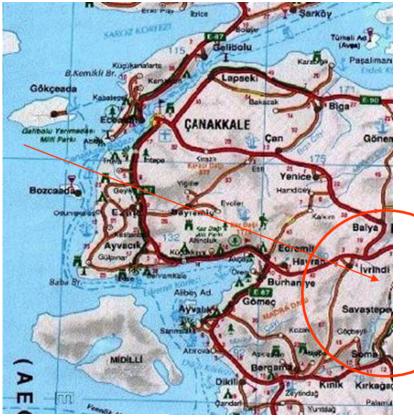


Figure 4: Project location



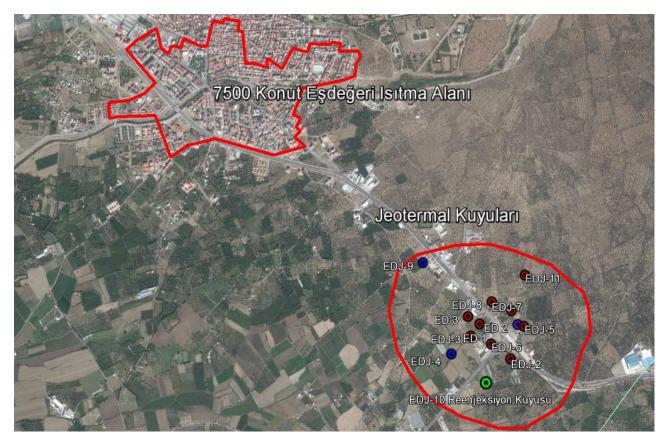


Figure 5: Geothermal Area and Heating District

#### A.4.2. Category (ies) of project activity:

The project falls under sectoral scope 1: Energy industries and (renewable / non-renewable). The project intends to use a proposed methodology entitled "AM0072- Fossil Fuel Displacement by Geothermal Resources for Space Heating".

#### A.4.3. Technology employed/to be employed by the project activity:

Within the scope of the existing system, geothermal water provided from geothermal area (geothermal wells) is being sent to the heat exchangers directly which are located under the buildings in the heating field. At each heated building; thermal water storage tanks, heat exchangers, water knockout drums, circulation pumps etc. are installed. The system is designed for the indirect use of geothermal water to avoid geothermal corrosion. Because the extracted water is not highly corrosive, use of titanium is unnecessary in heat exchangers. Clean water is used in the secondary system that is directly into the homes of the end users of heat. Thus normal steel can be used in all other system components in direct contact with clean water. Key to the spatial heating system however is insulation. From the insulation material available from experiences in other parts of the world, it is possible to achieve a temperature decrease of only 0.1 °C. In compliance with existing legislation, re-injection wells are used in the project activity. Spent geothermal water with decreased temperatures are re-injected into the geothermal reservoir.

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This 'recirculation' guarantees the long-term sustainability of the geothermal resource. Reinjection keeps reservoir pressure and eliminate pollution by the chemical composition of geothermal water. Moreover, re-injection prevents water from decreasing in the geothermal resource. This indicates that the project is environmentally safe and technologically sound from a sustainable development perspective.

#### A.4.4 Estimated amount of emission reductions over the chosen crediting period:

The table below shows the estimated amount of emissions reduction over the crediting period.

Year	Estimation of annual emission reductions in tones of CO2 e
2016	45,140.33
2017	45,140.33
2018	45,140.33
2019	45,140.33
2020	45,140.33
2021	45,140.33
2022	45,140.33
Total estimated reductions	
(tCO2 e)	315,982.31
Total number of crediting years	7
Annual average of the estimated reductions over the crediting period (tCO2 e)	45,140.33*

Table 2: Estimated annual GHG reduction

#### A.4.5. Public funding of the project activity:

No public funding is used in the project activity.

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#### SECTION B. Application of a baseline and monitoring methodology

# **B.1.** Title and reference of the approved baseline and monitoring methodology applied to the project activity:

AM0072 Large Scale Methodology- "Fossil Fuel Displacement by Geothermal Resources for Space Heating".

Edremit Geothermal Inc. still provides space heating services from geothermal energy since 2005. Zone 1 has been completed. Within the scope of the second zone, new users will be integrated to the system to be able to reach the desirable capacity. Project Developer, Edremit Geothermal Inc. is planning to expand its operations and improve the energy efficiency of the existing wells and heating services by the addition of extra geothermal wells and a pumping station to the system (Energy industries and (renewable / non-renewable). Within this scope, the project intends to use a proposed methodology entitled "AM0072- Fossil Fuel Displacement by Geothermal Resources for Space Heating").

AM0072 methodology; is a kind of a centralized geothermal heat supply system for space heating in buildings. The geothermal heat supply system can be a new system in new buildings, the replacement of existing fossil fuel systems or the addition of extra geothermal wells to an existing system.

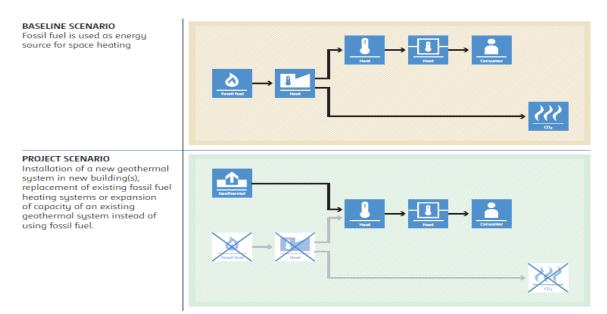


Figure 6: AM0072 Project Scenarios

# **B.2.** Justification of the choice of the methodology and why it is applicable to the project activity:

The condition under which this methodology is applicable is as follows:

(1)—The geographical extent of the project boundary can be clearly established, in terms of the location of buildings connected to existing heating systems and new buildings to be constructed that will use geothermal heat, in the case of expansion of existing facilities, the location and capacity of existing geothermal wells, and heating system infrastructure can be clearly identified



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- (2)—Project use geothermal resources for centralized and/or decentralized space-heating system of residential areas, commercial areas and/or public areas. *Geothermal resources in Edremit Geothermal Area are used for space heating for various construction systems within Edremit District.*
- (3) Current use of fossil fuel(s) for space heating is partially or completely replaced by heat drawn from geothermal water.

Space heating was provided by fossil fuel through coal fired boilers and decentralized heating stoves. These forms of space heating technology was displaced by the project activity ie. no coal fired boilers and coal heat stoves are being utilized within the boundary of the project activity.

#### (4)

The methodology is applicable for installing new heating systems in new buildings and replacing existing fossil fuel space heating systems. Current use of fossil fuel(s) for space heating is partially or completely replaced by heat drawn from geothermal water, in the case of expansion of existing facilities the methodology is applicable to expanding the existing geothermal heating system

The project activity shall not include the area where there is no space heating system that can be replaced by the geothermal heat.

Related to applicability condition (2), the project activity shall be implemented within boundaries of Edremit District which is known for its use of coal boilers and heat stoves for space heating requirements.

#### 5)

The installed heat capacity may increase as a result of the project activity. But this increase is limited to 10 per cent of the previous existing capacity; otherwise a new baseline scenario has to be determined for the new capacity

One or more geothermal wells feed into a substation k which may or may not have a heat exchange system. The substation controls and monitors heat coming from the geothermal wells and feeding to the end-use spaces.

Geothermal water provided from geothermal wells is being sent to the heat exchangers directly which are located under the buildings in the heating field; to the end-use spaces.

#### 6)

All fossil fuel heat-only boiler(s) used in the baseline must operate to supply the heat to the district heating system which is only used for heating of buildings and/or hot tap water supply in the residential and/or commercial sector, but not for industrial processes;

The heat supplied by the project activity does not cover whole heat demand of the supplied area. This shall be demonstrated that the historical demand is much larger than the supplied heat by the project activity. This shall be demonstrated for centralized space heating system(s) and the sum of the decentralized space heating equipment(s), respectively, if relevant.

From historic data for Xiong County, current space heating demand is 2,500,000 m2. This demand is met by a mix of fossil fuel and geothermal space heating systems. The project will provide heat for 1,650,000m2 of space while current geothermal space heating provides heat for 430,000m2 including the suburbs of Xiong County. This comes to a total of 2,080,000m2 heat to

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be provided by geothermal heat which is below the current demand of 2,500,000m2 of heat.
*This therefore satisfies the above applicability condition.* M2 leri ekle

The results satisfy the above applicability condition.

7) The use of GHG emitting refrigerants is not permitted under this methodology.

#### **B.3.** Description of the sources and gases included in the project boundary

Heat supplied to end-users of construction type m will be measured continuously at substation k as part of the monitoring plan. Figure 7 below defines the project boundaries and indicates substation k (heat exchanger under the building) as the primary point of measurement for monitoring parameters.

#### Project Boundary

Geothermal well j		Loss	Construction type m Heat exchanger k
	Re-injection		

Figure 7: Project Boundary

The spatial extent of the project boundary includes:

- the site of geothermal heat extraction including, geothermal wells, re-injection wells, pumps, geothermal water storage tanks etc.
- centralized heating systems, including pipes, heat exchangers, buildings that are connected to the geothermal heating system;

decentralized heating equipment, including fossil fuel fired stoves etc.

Emissions sources included or excluded in accounting calculation

	Source	Gas	Included?	Justification / Explanation
	Fossil Fuel Used	CO <sub>2</sub>	Yes	Main emission source
Baseline	for space heating	CH4	No	Minor source. Neglected for simplicity and conservativeness.
Ba		N2O	No	Minor source. Neglected for simplicity and conservativeness.
		CO <sub>2</sub>	Yes	Can be an emission source.



geothermal extraction /	CH4	No	Minor source
operations	N2O	No	Minor source
Fuel used for	CO <sub>2</sub>	No	
geothermal extraction /	CH4	No	
operations	N <sub>2</sub> O	No	
Fugitive emissions	CO <sub>2</sub>	No	Low temperature ranges
from geothermal resource extraction	CH4	No	
	N <sub>2</sub> O	No	

#### Contribution of the project activity to sustainable development:

#### Energy and economic benefits

- Increase the efficiency of the thermal plant which utilizes low quality domestic coal.

- Contribute in improving energy security of Turkey and reduce energy dependency via increased energy efficiency.

#### **Environmental and health benefits**

- Improving air quality: Coal, being the main source for residential heating during winter months, causes significant air quality problems. The project is helping and will help improving coal use by the individual households and thus improve the air quality.

- Contribute into reducing health problems due to low air quality.

#### Social benefits

- Improving the living conditions of the locals: The project is providing and will provide continuous hot water to the beneficiaries which will contribute in improving the conditions of the residents. The necessity to handle coal ash will be removed.

## **B.4**. Description of how the baseline scenario is identified and description of the identified baseline scenario:

The baseline scenario for the proposed project activity has been identified using the "Combined tool to identify the baseline and demonstrate additionality", adopted in the methodology AM0072.

#### **Building categorization**

Buildings are categorized in line with the methodology as follows;

**Existing buildings/sub-area:** Within the scope of the existing system, during the project activity, geothermal water provided from geothermal area (geothermal wells) is being sent to the heat exchangers directly which are located under the existing buildings in the heating field. At each heated building; thermal water storage tanks, heat exchangers, water knockout drums, circulation pumps etc. are installed. Recently constructed buildings (i.e. built after the start of the project activity either next to existing buildings or in place of a demolished building) that are connected to network, replace old boiler houses, supplying to existing isolated heat distribution network, should be treated as existing buildings.

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**New buildings/sub-area:** Buildings in a part of the area, during the project activity that will be constructed after the start of the rehabilitation of the project. These are buildings constructed in an area which prior to project activity did not have any heat distribution network.

First category of the building is the subject of the proposed rehabilitation project and also the second category of buildings is planned to add during rehabilitation activities.

The total number of households in Edremit is 37.500 where the pilot number of households is 7.500. Coal is the main fuel source deployed for residential heating in Edremit.

Lack of sufficient space to accommodate a boiler and to deposit sufficient coal to run the system have been the major handicaps against expanding heating applications, besides, the necessity to adjust the chimney stack or the need to employ a personnel responsible for the daily maintenance of it. The space heating system is considered to be one of the cleanest, cheapest and most viable systems for the users, as it will help reduce energy bills of the end-users over all, does not require any dedicated operator by each building, nor it takes up too much space.

Residential type of heating practice is mostly relying on coal combustion in Edremit. Besides its high cost around the area, the calorific value of fossil fuel is considerably low which causes low efficiency combustion and serious air pollution problems. Successful rehabilitation activities of Zone 1 and implementation of Zone 2 of the project is expected to reduce about 37.500 tonnes of coal. Coal consumption of the district is given in the table below.

District	Number of Households	Consumed tonnes of coal
Edremit	37500	187500

Table 3. Coal Consumption for Edremit

#### **B.5.** Demonstration of additionality

#### Step 1: Identification of alternative scenarios Step 1a. Define alternative scenarios to the proposed project activity

The methodology requires identification of all alternative scenarios that are available to the project participants and that provide outputs or services (i.e. heat supply) with comparable quality as the proposed CDM project activity. For the purpose of identifying relevant alternative scenarios, below table is an overview of other technologies or practices used for generation of heat that have been implemented prior to the start of the project activity or are currently underway in the relevant geographical area.

.Alternative	Description	Applicability project	to the	Included for further consideration
1	Introduction of a new integ primary network:	grated district he	ating systen	n(s) connected by a new

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A	The proposed project activity undertaken without being registered as a CDM project activity.	This is an applicable scenario to the proposed project in terms of rehabilitation and implementation however the project is not considered as economically feasible as demonstrated in the financial additionality of the project.	Yes
В	The introduction of a new district heating system, but with a different configuration for heat generation;	Introducing a new system with different configuration in Edremit District is not considered as practical scenario as the existence of Edremit Geothermal sources. In addition, the district has no natural gas connection.	
С	The introduction of another district heating system.	The district has no natural gas connection yet.	No
2	heating network(s) (both existing network) or est network(s) (for new build boundary without the in	rehabilitation of an exis existing and new buildings ablishment of a new [iso dings) covering all buildi troduction of a primary h network(s) employ the follo NA	can be connected to an olated] district heating ngs within the project neating network. Such
	through a small heat distribution network; Natural gas fired boilers in boiler houses, supplying several buildings through a small heat distribution network;	NA	No
	Oil fired boilers in boiler houses, supplying several buildings through a small heat	NA	No



	distribution network;		
	Small decentralized cogeneration plants;	NA	No
	Renewableenergysources,suchasbiomassorsolarthermalcollectors,connected to a smallheatheatdistributionnetwork	NA	No
3	Continued use or introduc	tion of building isolated he	eating networks using:
	Coal fired boilers for individual buildings;	This is the baseline scenario which represents the emissions that would occur in the absence of the proposed project activity and based on which the emission reductions are calculated. This scenario is deemed to reasonably represent the most likely alternative scenario to project implementation.	Yes
	Natural gas fired boilers for individual buildings;	N/A. No gas distribution is available in the district nor is underway.	No
	Oil fired boilers for individual buildings.	N/A. There is no oil utilization in the district, thus, oil is not included in the alternative scenarios. Oil is not considered as an alternative fuel to coal due to lack of infrastructure and rapid change in prices.	No
4	Continued use or introduction of individual heat supply solutions:		
А	Coal fired stoves for individual apartments;	This is the baseline scenario which represents the emissions that would occur in the	



		absence of the proposed project activity and based on which the emission reductions are calculated. This scenario is deemed to reasonably represent the most likely alternative scenario to project implementation.	
В	Natural gas fired stoves for individual apartments;	N/A. No gas distribution is available in the district.	
C	Oil fired stoves for individual apartments;	There is no oil utilization in the district, thus, oil is not included in the alternative scenarios. Oil is not considered as an alternative fuel to coal due to lack of infrastructure and rapid change in prices.	
D	Electricity (e.g. off- peak storage heating);	The cost of individual electricity space heating will be too expensive compared to coal, thus, it is not considered as a realistic alternative to the project scenario.	No
E	Individual heating devices using renewable energy sources, e.g. solar thermal collectors;	This option is not considered economically feasible compared to the project scenario as household- scale renewable energy systems are very costly and not fully commercialized.	No
F	Individual heating devices using non- renewable biomass.	This option is not feasible as the resources around is not sufficient and there is strict regulations on the extraction of forest- products by individuals.	No



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Table 4. Assessment of alternative scenarios to the proposed project activity

#### Outcome of Step 1a:

According to the assessment as above, three realistic and credible alternative scenarios are identified as follows:

1(a). The proposed project activity undertaken without being registered as a CDM project activity; 3(a). Coal fired boilers for individual buildings;

4(a). Coal fired stoves for individual apartments.

Scenario 1 (a) is proved not be economically feasible in the investment analysis below.

Scenarios 3(a) and 4(a) are considered as the baseline scenarios.

Step 1b: Consistency with applicable laws and regulations

Edremit Geothermal Space Heating Project is only a rehabilitation project and it is coordinated with Edremit Municipality within the scope of legal obligations. The environmental system is encouraged by the legal or local authorities. All of the permission is taken and there are no regulatory obligations or subsidy system for expansion and rehabilitation of geothermal heating project. As per the applied methodology the alternatives should be in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution.

Based on these criteria, the selected alternative scenarios are subject to the regulations below:

- Regulation of Controlling Air Pollution Caused by Heating \*

- Assessment and Management of Air Quality Regulation \*\*

#### Outcome of Step 1b:

Both two scenarios indicated above are identified as realistic and credible scenarios which are consistent with relevant applicable laws and regulations in Turkey.

#### Step 2: Investment analysis

The investment analysis has been done in order to make an economic and financial evaluation of the project with and without the revenue from the sale of VERs. The analysis may not be sufficient enough due to the project is not a new project; it is only a rehabilitation project. In this scope, the financial analysis can only include the working capital, not the capital investment details. However, no ODA is available in Turkey for financing of this type of projects, thus, the project will be realised with 100% equity.

#### Sub-step 2a: Determine appropriate analysis method

"Tool for the demonstration and assessment of additionality" identifies three options for the investment analysis which are:

- Simple Cost Analysis;

- Investment Comparison Analysis;
- Benchmark Analysis.

Since the proposed project generates economic benefits from sales of hot water and heating services, the simple cost analysis is not applicable. Also, since the only remaining alternative to



the proposed project other than the proposed project activity undertaken without being registered as a CDM project activity, is the baseline scenario, no alternative investment options are available. Thus, it has been decided to use benchmark analysis for evaluation of the project investment.

	Unit	Data Value
Installed Capacity	MWth	19.9
Income tax rate	%	20
Depreciation	Years	<ul><li>25 years for electromechanical equipment</li><li>40 years for other facilities</li></ul>
Exchange rate	€/\$	1.09
Heat sales unit price	\$ Cents/100 m <sup>2</sup>	43 (monthly payment)
Expected VERs price	\$/ tons CO2e	5.7
<b>Operation &amp; Maintenance Cost</b>	\$/Year	605.521,695

\*Regulation of Controlling Air Pollution Caused by Heating

http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.7265&MevzuatIliski=0&sourceXmlSearch=Is%C4%B1nma \*\* Assessment and Management of Air Quality Regulation

http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.12188&sourceXmlSearch=&Mevz

#### Sub-step 2b: Option III. Apply benchmark analysis

It has not been possible to extract dedicated-IRR value for heating projects in Turkey. Thus, for the benchmark analysis 40% IRR figure for energy efficiency projects defined by the World Bank Report22\* (May, 2009) has been intended to use, however the investment of the project which is a

required figure for the IRR calculation could not be included due to its retroactive date of this rehabilitation project. The heat sale tariff is determined as monthly 43\$ for 100 cm<sup>2</sup> household.

#### Sub-step 2c: Calculation and comparison of financial indicators

Equity IRR has been calculated according to the tool as stated in the applied methodology. "Guidelines on Assessment of Investment Analysis" version 5.0 has been followed. As clearly mentioned in the guidelines, length of the analysis period has been determined as 30 years even though the crediting period can be a maximum of ten years as per the applied methodology.

For the proposed project, IRR has been calculated as -21% in the absence of carbon revenues taking into account there is no capital investment included to the analysis due to the nature of the project. As mentioned above the project is only a rehabilitation project and monthly income is a kind of investment for the company. The capital investment had been done in 2005, 11 years before the rehabilitation project began. Monthly payments are fixed.



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The project does not use any bank loans. When the carbon revenues with a unit price of 5.7\$/t are included in the cash flow, the project can reach the level of fulfilling the expenses of rehabilitation operations and the heat generation potential of the Edremit Geothermal will be more than enough for meeting the heating demand of all residential buildings. Carbon revenues have a significant effect in this respect in terms of sustainability and rehabilitation of the existing project.

#### Sub-step 2d - Sensitivity Analysis

Sensitivity analysis has not been carried out due to the lack of capital investment for the rehabilitation of the existing project. The investment of the project was made in 2005. The applied project is only a rehabilitation project.

\*World Bank Report (May, 2009), p 81 http://documents.worldbank.org/curated/en/112271468311114629/pdf/468080PAD0P112101Official0Use0Only1.pdf

#### **Outcome of Step 2:**

VER revenues will improve the financial indicators of the Project remarkably.

#### **Step 3. Barrier analysis**

This step is not applied as the additionality is demonstrated in previous steps.

#### **Step 4: Common practice analysis**

The "Tool for the demonstration and assessment of additionality", version 07.0.0, requires the proposed projects to apply common practice analysis if "the proposed project type (e.g. technology or practice) has already diffused in the relevant sector and region".

The proposed project is diffused neither in the region nor in Turkey. It will be the effective implementation of such project at this scale in the region. Thus, common practice analysis is not applicable for the proposed project.

#### **B.6. Emission reductions**

#### **B.6.1. Explanation of methodological choices**

Proposed project activity is only a rehabilitation of the Edremit Space Heating system by using geothermal sources. According to the applicable methodology AM0072 (version 03.0), the identified baseline situation is the continuation of using coal in small heat only boilers for residential heating purposes. Therefore, the baseline emissions are CO2 emissions from small coal fired boilers.

Emission reductions from the proposed project can be calculated based on the AM0072. To calculate the emission reductions the equation below is applied:

$$BE_{y} = \sum_{i} (HS^{BL}_{i,y}) \times EF_{CO2,i} / \eta_{BL,i}$$

BEy	The baseline emissions from heat displaced by the project activity durin the year y (t CO2e/yr)	ıg
EF <sub>CO2,i</sub>	The CO2 emission factor per unit of energy of the fuel of technology that would have been used in the baseline heating technology in CO2/TJ).	



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$\eta_{_{\rm BL,i}}$	=	The net thermal efficiency of the heating technology i using fossil fuel that would have been used in the absence of the project activity
HS <sup>BL</sup> <sub>i,y</sub>	=	The net output of heat generated by the baseline heat supply system using the technology i1 measured at the end point of the heat facility, during the year y (TJ/yr)

 $BE_{y} = 3450 \text{ kg} \times 44/12 \times 0,4735/0,69$ = 8.680.83 kgCO2/yr = 5000 × 4157 kcal = 20.785.000 kcal / 860 kcal = **24.168.60 kw/yr** 

Emission factor per unit of energy =8680.83/24.168.60 =**0.3591 kgCo2/yr** 

Net heat energy 24.168,60 kw/yr , 0,3591 kg CO2/KW emission factor per unit of energy

HSY = 86.801.8 MW/yr

Average instant debit is 453 lt/sec, net heating value is 52 °C.

Qt = m.c.Dt = $200 \times 3600 \times 52-40^{\circ}$ C = $8.640.000 \text{ kcal/h} \times 24 \times 30 \times 12$ =74.649.600.000 kcal/yr=86.801.860 kw/yr

And;

0,1°C the heating loss is counted;

 $\begin{array}{l} 0,1^{\circ}\text{C the heating loss} = 200 \times 3600 \times 0,1 \\ = 72.000 \text{ kcal} \times 24 \times 30 \times 12 \\ = 723.348.8 \text{ kw/yr} & \text{Loss}^{\text{pj}}\text{y} = 723 \text{mw/yr} \end{array}$ 

#### **Equation3:**

$$(HS_y \times DF_y) - (Loss^{PJ}_y \times f_{BL:PJ,y}) = \sum_i HS^{BL}_{i,y} - Loss^{BL}_y \\ \times \\ DF_y = Discount factor for calculation of geothermal extraction that results from CDM (fraction) \\ f_{BL:PJ,y} = Weighting factor for calculating project emissions for projects (fraction)$$

= 86.801,8 mw/yr -723 mw/yr



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CDM - Executive Board

$$\sum_{i} HS^{BL}_{i,y} = 5000 \text{kg} \times 4157 \text{kcal/kg}$$
  
= 2.0785.000/860  
= 24.168,60 kw/yr  
= 24 mw/yr (one HE)  
= 5200 \times 24 = 124.800 mw/yr  
Loss^{BL}\_{y} = 1550 \text{kg} \times 4157 \text{ kcal/kg}  
=7492 kw/yr = 7,5 mw

=7.5 mw/yr = 7.5 mw=7.5 mw/yr × 5200 = 39000 mw = 39.000 mw/yr

= 86801,8mw/yr-723=124.800-39000

#### **Equation 4:**

$$DF_{y} = \frac{\min\{Ex_{NEW,y}; Ex_{NEW,design}\}}{\max\{Ex_{BL,y}; Ex_{BL,design}\} + \min\{Ex_{NEW,y}; Ex_{NEW,design}\}}$$

$Ex_{BL,y}$	=	Actual quantity of heat extracted from baseline geothermal wells in year y (GJ)
$Ex_{BL,design}$		Design capacity for sustainable heat extraction from baseline geothermal wells (GJ)
Ex <sub>NEW,y</sub>	=	Actual quantity of heat extracted from new geothermal wells (geothermal wells that would not have been developed in the baseline) (GJ)
$Ex_{NEW,design}$	=	Design capacity for sustainable heat extraction from new geothermal wells (geothermal wells that would not have been developed in the baseline) (GJ)
$Ex_{BL,y} = 200$	)lt/sec 5	52 °C (52°C- 40°C)
$Ex_{BL,design} = 453$	3lt/sec 5	52 °C (52°C- 40°C)
$Ex_{BL,y}$	= 20	$0 \times 3600 \times 12/863$

=10046,5 kw/h =10.046mw

 $=10.046 \text{ mw} \times 24 \times 30 \times 12 = 86.801,86 \text{ mw/yr}$ 

 $Ex_{BL,design} = 453 \text{ lt/sec} \times 3600 \times 12/860 \times 1000$ =22.7553488 × 24 × 30 × 12 =196.606,2 mw/yr

Based on Well EDJ11:



$Ex_{NEW,y}$	$= 30 \text{ lt/sn } 63 ^{\circ}\text{C} (63 ^{\circ}\text{C} - 40 ^{\circ}\text{C})$
Ex <sub>NEW,design</sub>	$= 40 \text{ lt/sn } 63 ^{\circ}\text{C} (63 ^{\circ}\text{C} - 40 ^{\circ}\text{C})$
$Ex_{NEW,y}$	= 30 lt/sec × 3600 × 23/860× 1000 = 2,888337209× 24 × 30 × 12 = 24955,53 mw/yr
$Ex_{NEW,design}$	= 40×3600×23/ 860× 1000 = 3,85116279× 24 × 30 × 12 = 33274,05 mw/yr
	$min\{Fr_{1},\ldots,Fr_{n},\ldots,\}$

$$DF_{y} = \frac{\min\{Ex_{NEW,y}; Ex_{NEW,design}\}}{\max\{Ex_{BL,y}; Ex_{BL,design}\} + \min\{Ex_{NEW,y}; Ex_{NEW,design}\}}$$

 $DF_y = 24.955,53/196606,2+24955,8$ =0,1126 = 11,26%

#### **Equation 5:**

$$f_{BL:PJ,y} = \frac{Ex_{NEW,y}}{Ex_{BL,y} + Ex_{NEW,y}}$$
  
= 24.955,53/86.801,86+24.955,53  
= 24.955,53/111.757,39  
= 0,2233 = 22,33%

#### **Equation 6:**

$$HS^{BL}_{i,y} = w_i \times \sum_i HS^{BL}_{i,y} \text{ or } HS^{BL}_{i,y} = w_i \times (HS_y - Loss^{PJ}_y + Loss^{BL}_y)^2$$

 $HS^{BL}_{i,y} = 0,30 \times (86801,8 - 723 + 39.000)$ = 37.523,64 mw = 0,7 ( 86801,8-723+39000) = 87.555,16

#### **Project Emission**

#### **OPTION A**

WCiy = 47,35%



 $w_{C,i, y} = 0,4735$  (Analysis Values given by ELİ Management)

 $\begin{array}{rcl} \text{COEF}_{i, y} = w_{\text{C}, i, y} * \\ 44/12 & = & 0,4735^{*}(44/12) = & 1,7362 \\ \\ & & \text{PE}_{\text{FC}, j, y} = \sum_{i} \text{FC}_{i, j, y} \times \text{COEF}_{i, y} \\ & & (5200^{*}5000^{*}1,7362)/100 \\ & & \text{PE}_{\text{FC}, j, y} = & 0 = & 45141,2 & \text{ton/yr CO}_{2} \end{array}$ 

#### SECTION C. Duration of the project activity / crediting period

#### C.1 Duration of the project activity:

#### C.1.1. Starting date of the project activity:

>> 21/09/2005-01/01/2016

#### C.1.2. Expected operational lifetime of the project activity:

>> It depends on the analysis results of the geothermal sources.

#### C.2 Choice of the crediting period and related information:

(	C.2.1. Renewable	e crediting period
	C.2.1.1.	Starting date of the first crediting period
>>		
	C.2.1.2.	Length of the first crediting period:

>> seven (7) years

jurnet ve juridaşı mateterine j

3.Her türlü inşası taabbüt işleri, konut, işyeri, hicarethane inşaatlarını yapınak, sutmak, kendi hesabına arazi ve arsalar almak bunlar üzerinde veya başkalarına ait arsa ve arazıler üzerinde kat karşılığı binalar yapınak.

4.Her türlü konut, fabrika, atöliye ve benzeri binalara çatı izolasyonu, dış cephe izolasyonu yapmak.Isi yalıtımlı, giydirmeli dış cephe kıplama işleri yapmak.

5. Yurt içinde ve yurt dışında her nirtü resmi ve özel inşaatın elektrik tesisatını yapınak, yapıtrmak, altyapısını hazırlamak, ölçüm işlerini yapınak, yapıtrmak, taabhütöre girmek, bu işler için gerekli organizaryonları kurmak,

6.Her türlü mühendislik hizmetleri vermek, proje ve uygulamalarını yapmak.

<sup>7</sup>.Eğitim ve öğretim hizmetleri konusunda Türkiye Cumhariyeti, Kanunlarının izin verdiği her seviyede anaokulu, ilköğretim okulu, lise, yüksek okul ve üniversite açmak, özel dersaneler açmak, işletmek, her türlü eğitim hizmetleri vermek;

8.Şirket yurt içinde sürücü belgesi vermek amacıyla sürücü kursları açabilir, işletebilir.

9 PVC, Mobilya ve dekarasyon malzemeleri, ahşap ve metalden büro ve ev mobilyaları, her türlü mutfak dolapları ve mutfak dekomsyon işleri, yatak odaları, orurma odaları, yemek odası, genç odası, koltuk, masa ve sandalye ve her türlü mobilya imalatı, alımı, sanımı, pazarlaması, ithalan ve ihracatını yapmak.

10.Her türlü tesislerin mobilya dekorasyon işlerini yapmak, taabbütleede bulunmak.

II.Kara, hava ve deniz yolu ile yurticinde ve yurtilişinda uluşlar arasında yapılması sörbest olan ber tüelü eşya, yolcu ve yük taşımacılığı yapımak, kargo uşımacılığı ve acentelik yapımak, yapınmak, bu işleri yapabilmek için her türlü araç satın alımak, satımak, kiralantuk ve kiraya vermek, ithalatını yapınak, bu işleri yapımak için gerekli yetki belgelerini alımak.

12.Her türfü araç kıralama ve her türfü otopark hizmeti vermek

13.Her türlü servis taşımacılığı yapmak bu amaçla filolar kurmak, ihalelere girmek, taahbütlerde bulunmak, yetki belgeleri almak

14.Her türlü isitma soğutma, her türlü elektrik ve elektronik ev aletleri; buzdolabı, bulaşık, çamaşır makimeleri, tirko ve nakış makineleri, teyp, radyo, televizyon, müzik seti, mutfak robotları, saş kurutma makinesi alım satım, tamiri, bakımı, bunlarla ilgili yedek parça aksamlarınım ithalatı, ihracatı, toptan ve perakende alım satım. Bu cihazların teknik servis bayılıklerini alımak ve işletmek,

15.Yurt içinde ve yurt dışındaki tim özel ve resmi kuruluşların, belediyelerin, toplu konut ve sitelerin, sunayi ve tarım fabtikalarının, plaza ve iş merkezlerinin iç mekan ve dış 16.Her turtu temazlık madde ve t malzemeleri ile temizlik makinelerini almak, satmak,

17.Her türlü ev, işhanı, bina, iş merkezi, otel, toplu komat, resmi ve özel hastanelerin, her türlü açık alanların, haşere, sürüngen ve kemirgen kontrolünü 110 ilaçlamasını yapmak Haşere ilaclamaunda kullamian ilaclana, makine ve ekipmanların alimi, satom, ithalati ve ihracatimi yapmak, 18.Her türfü renni ve özel kurumlara temizlik, gövenlik v.b işçilik hizmeti vermek bu konuda taseronluk hirmeti yapmak. Her türlü güvenlik hizmetleri vermek, güvenlik hizmeti vennek üzere eleman vetistirmek, ilirili kanunlar dahilinde bu konuda eğitim ve sertifikalar vermek,

19 Her tilelü güvenlik sistemleri ve yedek paça ve aksesuarlarını satmak, imal etmek, irhalatmı ve ihracatmı yapmak.

20.Her çeşit sağlık hizmetleri vermek üzere özel hastaneler, poliklinikler, dispanserler, taboranurlar, sağlık kabunleri, doğumevleri, diş (ağız sağlığı) ve protez tedavi merkezleri işitetmek,

21. Insan sağlığına hizmet edecek hastane bünyesinde olmak üzere tara ve tedavi merkezleri, fizyoterapi, rebabilitasyon üniteleri açmak, check-up merkezleri kumak ve işletmek Her rürlü sağlık resisleri ve ribbi cihazlar konularında yatırım yapmak ve bunları işletmek, ihalelere girmek, inabhütlerde bulunmak,

22.Sigorta aracılık hizmetleri yupmak, bu konuda acentelikler almak, sözleşmeler düzenlemek,

23. Her türlü petrol, petrol türevleri; benzin, motorin, gaz yağı, fuel oil İg, solveni, jet yağlar, gresiler, odun, kömür yağlar, gresiler, odun, kömür yağlar, gresiler, odun, kömür yağlar, boşaltma, depolama, dağıtım, dolum tesislerini kurmak Akaryakır tarasyonları açmak, tişletmek, yakama yağıma servis tatasyoları kurmak. Her nevi tür gaz alam satımı yapımak, füp gaz bayılığı almak ve vermek

24 Her çeşit cep ve mobil telefonları, telefon santralleri, telsiz haberleşme cihazları ve bunların yedek parça ve akcesuarlarınım alam, satımı, maimul, bakım ve onarımım, ithalatınıs, ihracatını ve iç ticaretini, pazarlamasını, bayiliğini, distribtörlüğünü ve mümessiliğini yapınak.

25.Her marka bilgisayar ve bilgisayar donaniminin ithalati, ihracusi ve dahli ticaretini, tim bilgisayar ve yaa donanimlari birimleri mikrofilm, faksim ile bunlar gibi tim bilişim sistemleri, endüstriyel bürö utomasyon, tim yazılım ve donanım finaliyetleri servis bürö hizmetleri vermek. Imernet üzerinden her tirli bilgi, ses ve görüntü hizmetli vermek, web sitesi hazırlamak, hazırlamak ve imternet servis sağlayıcılığı yapınak.

26.Enerji Piyasası Düzenleme Kurumundan gerekli lisana energisi arecima, azecisen esektrik energisinin ve/veya kapasitenin müşterilere satuan yapmak

27.Her titelä yaş sehze meyve ve her türlü bokliyut, hubobat ve her türlü tarım ürünlerinin teetimini ve üreticisinden veya satıcısından alımına, satımını pazerlamasıni ithalat ve ihracatımı yapımak, Bu maksatla nareticiye pakerleme tesisleri, soğluk hava depoları, meyve suyu ve konserve fabrikası, an fabrikası ber nirlü tarım ürünleri işleme ve pakerleme fabrikaleri kurmak ve işletmeci, kurufunuş tesisleri ve arszileri satın almak veya kiralamak

28 Her türlü zeytincilik, reytinden yarı manul ve mamil, reytinyağı, nebati yağ imalanın yapmak, üreticininden veya satıcınındas alumın, satımın, pazafamsanıs ibalat ve ihracanın yapmak, Bu maksatla zeytinyağı imalat ve ambalajlama tesisleri, soğdı hava depolari, kuenak ve işletinek, kuculmaş tesisleri ve arazileri satın almak veya kiralamak

29 Her çeşit caslı hayysa alam, satım, pazarlamasın, ithalat ve ihracatım yapınak.Her tiirlin etr yemebile, canlı hayyatların usul ve essalar dahilinde kesimi yapınak, Besistilik ve hayyanı yetiştirisciliği yapımak, Her tiirlis besihane, kuluçhane, kesimihate, derihane, tabahane, hayvani yağ eritme tesisi, buzhane ve soğukhaya tesisleri, mazbaha kurunlang tesisleri, es anasileri satın alımak veya kıralamak

.30 Gerekli yerlevden izim almak şartı ile yer altı ve yer üstü maden ve tabii kaynakların çıkarahman, işlettimesi, sata alanması ve kiraya verilmesi.

31.Maden arama ruhisatnamesi almak, maden aramak, işletme hakka talep etmek, işletme ruhisatnamesi devri kabil maden haktanın devir almak.

32.līgili yerlerden izin almak şati ile her türlü maden, mermer, taş, kireç, kil, kiimir ocakları işletmeciliği yapmak.

33.tligili mevzuata riayet etnek koşuha ile maden kaşsanına gören tüm ürtinlerin aranması, çıkartılmusi, işlenmesi, alımı sutum, ithalar ve ihracatını gerçekleştirmek.

34.ligili mevzuata nayet etmekkoyalu de ber tärlü kesilebilir ve parlatabilir tien teşlar, pomza taşı, memer, granit, diahaz, traverten, oniks, bozalt gibi taşların aranması, çıkartalman, işlenmesi, alım satımı, ithalat ve ihracatanı arreckleştirmek.

35 İlgili mavzuuta riayet etmek koşulu ile ber türlü yarı kışmetli ve kışmetli tapların aranması, çıkartılması, işlenmesi

36.Şırket amacını gerçekleştirmek için her türlü gaytimenkul alabilir satabilir, kiralar, kiraya veru, bunlar üzerinde ayni ve şəbsi her türlü hakları tesis edebilir, ipotek alabilir, ipotek verebilir ve ipotekleri fek edebili Şirken gaytimenkullen üzerinde intifak, intifa, sükna, gayrimenkul milkellefiyeti, kas intifaki, kut He sight her next musinese ve tasarrafları gerçekleştirebilir. Strketin amacı ile ilgili olarak marka ihtira berati, ustalik (knowhow) ve diğer sınai mülkiyet hakları iktisap etmek devir ve ferağ etmek bunlar üzerinde lisans anlaymalars yapmak Sirket faaliyet konularma giren işleri yapan hakiki ve bükmi şahıslarla ortak girişimlerde bulunabilir, mevcut ticari isletmelere istirak edebilir ve osllaron hisarlerini un tahvillerini uz diğer menkul kuymetleri aracılık yapmamak kaydıyla alabilir satabilir

Yukarıda gösterilen konulardan başka ilende şirkat için faydalı ve lözumlu görülecek başka işlere girişimek istendiği takdirde ortaklar genel kunslu karar aldıktan sonra şirkket bu işleri de yapabilecektir.

Ana sörleyme değişikliğinde olan işbu kararın uygularması için ticaret siciline tescil ve ilan entirilecektir.

Ortak Rezzan Çirak imza 16139160232

(10/A)(27/64228)

#### UMEMI HEYET TOPLANTILARI

Edeemit Ticaret Sielli Memarluğundan Mersis No: 0324036952700012 Ticaret Sielli Nn: 4570 / 5081

Ticaret Ürvan EDREMİT JEOTERMAL MERKEZİ ISITMA SİSTEMLERİ TERMAL TURİZM YATIRIM VE İSLETME ANONİM ŞİRKETİ

Yukawda Ticaret Sicili Namaraa ile Ünvan yazılı olan tarafından middieliğiamitre verilen dilekçede: 27.11.2014 tarihli genel kurul toşlantı tutanağının Ticaret Siciline tescil ve ilanı talep eddidiğinden keyfiyeti Türk Ticaret Kamun Hikimiterine uygun olarak 23.01.2015 tarihinde tescil edildiği ilan olanur.

Toplanti Tarihi: 27.01.2015

#### Toplantiya Katılan

Başkın: Naman Urun Üyeler:Adnan Urun Edremit Belediyesi Lıtl.Şti Orhan Şükrü Meroğlu Uru Enerji San Ve Tsc. A.Ş., Berat Urun, Abdulkadır Urun, Endi Şaban Urun

Edremit Jestermal Merkezi Isatma Sistemleri Termal Turizm Yatırım Ve İşletme Anonim Şirketi Oluğan Genel Kurul Toplantı Tutanağı

Edremit Jostermal Merkezi Istma Sistemlori Termal Turitm Yatirum ve işletine Anonim Şirken'nin 2013 yılına ait oluğun genel kural toplantus 27.11.2014 tarihinde saat 14:00'de şirket merkez adresi olan Camivasat Mah.9 Eylül Cad.No: 9 Edremit Malikesir adresinde, Balikesir Valiliği Ticaret il Müdürlüğü'nün 25.11.2014 tarih pirket puylan 10.000 adet hisse karşılığı ve toplam 1.000.000.00 -IL toplam stibari değerli sermayosine tekabúl edeo 650.000.00 .-TL'lik sermaye karpılığı 6.600 adet hissenin Asaleten, 130.000,00 -TL'lik sermayeye karşılığı 1.300 adet hissenin temsilen, 210.000,00 -TL'lik sermaye karşalığı 2.100 adet hissenin vekaleten temsil edildiği ve bürün payların toplantıda hazır bulunduzu böylece TTK'nin 416.maddesine göre öngörülen toolanti karar nisabinin mevcut olduğu ve herhangi bir itiriizin bulunmadığının anlaştiması üzerine toplantı yönetim kurulu başkanı Numan Uzan tarafından açılarak gündemin görliştilmesine pecildi

#### Gündem Maddeleri

 Toplantının açalışı yönetim kurulu başkanı Numan Uzun tarafından yapıldı.

2- Toplantı Başkanlığına Numan Uzun oy birliği ile seçüdi.

Gündeme sehven alınması umutulun Edremit Belediyesi inşaat Temizfik Tanıtım Ulaşım Turizm Zevtin Jeotermal Effence Gids Taron Grünleri ithaliat ve ihracat Sanayi ve Ticaret Limited Sirkett'ni temsilen boşalan yönetim kurulu öyeliğine atanan Mehmet Alpay'ın yönetim kurulu Qyeliğinin tasvip edilmesinin gündeme alınması ile ilgili verilen yazili önerge okundu ve oylamaya mmuldu. Gündemin 3 ncü maddesinden sonra 4 ncü madde olarak adrilsülmesine ov birligi ile karar verildi

 Genel Karul toplantı tutanaklarının inzalanması için davan buşkanlığına yerki verilmesine oybirliğiyle karar verildi.

4- Gündeme sehven alınması unutulan Edremit Belediyesi inşaat Temizlik Tanının Lilasım Turizm Zevtin Jeotermal Felence Gida Tarım Örünleri ithalat ve ihmcat Sanayi ve Ticaret Limited Sirketi'ni temsilen boşalan yönetim kurulu üyeliğine stanan Mehmet Alpay'ın yönetim kurulu üyeliğinin tasvip edilmesinin gündeme alınması de ilgili verilen yamlı öserge okundu ve oylamaya sanuldu ve TTK 363.Maddesi geregince Mehmet Alpav'ın vönetim kurulu üyeliğinin tasvıp edilmesine oy birligi ile karar venildi

5- 2013 yılı Yönetim kurulu faaliyet raporu Yönetim kurulu Başkanı Numan Uzun tarafından okundu, müzakere edildi.

6- 2013 Bilanço ve kasızarar(Gelir tablosu) hessplats okundu ve mitzakere edildi. Yapılan oylama sonnounda, bilanço ve Kasızarat hesapları oybirliğiyle enaylandı.

 Yapılan oylama sonucunda yönetim kurulu üyeleri kendi ibralarında oy kullanmamış olup, 8.500 oy ile ibra edildiler.

8- Şirketimirin ana sözleşenesinin amaçlar kısmında belirtilen ve Yöactini Kurulumuzun Aralık 2010 yılında 41 sayı numaralı ilke kararıyla

#### SAYFA: 638

#### TÜRKİYE TİCARET SİCİLİ GAZETESİ

#### kurucular arasında bir limited Aktif Yoktur lanmis olup, doğrusu "Korkut Reis Avdın Kadıoğlu (Baştarafi 637, Sayfada) şirket kurulmuş bulunmaktadır. Mahallesi Cihan Sokak No:13/A Pasif Yoktur pekiştirilen amaçları içinde vekaleten Cankaya/ Ankara" olarak Firmanın 3.Kişilere karşı alacağı Firma Sahibi bulunan "iklim değişikliğiyle Stra No: 1 Kase Ve Imza ve borcu yoktur. düzeltilmiştir, ilan olunur. mücadelede uluslararası atıları Kurucunun Adı ve Soyadı: Firma Sahibi Mehmet Acar imza adımlarla oluşan sertifikasyon (8/A)(28/66784) Gürcan Drama Kase ve Imza (2/A)(27/63514) süreçleri ve karbon piyasalarına Yerlesim Yeri: 29 Ekim Mah. (2/A)(27/63517) paralel olarak sirketimiz; Makro Doğan Avcioğlu Cad. 19H/22 BOR öleekte atılan bu adımlara, ulusal Avdin Ticaret Sleil Nilüfer/Bursa ve uluslararası sevivede Konya Ticaret Sicil Müdürlüğünden Uyruğu: T.C. ulasabilecegi en ivi ölçeklerde Siell No: 2294 Müdürlüğünden Ilan Sira No: 1643 Kimlik No: T.C Kimlik çevreci ve yenilikçi katkılar Mersis No: 3123705531000011 Ilan Sira No: [Ilansirano] Numarasi: \*\*\*\*\*\*\*\*\* sağlamayı, Çevreci proje ve teknik Ticaret Ünvani: Mersis No: 2379826861200015 Ticaret Sicil No: 9568 T.C. Kimlik No: \*\*\*\*\*\*\*\*\*\* çalışmalar sonucunda edinilen BOR AGACLANDIRMA Sirketin Ünvanı: TARIM TICARET VE SANAYI kazanım ve deneyimleri yerel, Ticaret Sicil No: 34060 Ticaret Unvani Madde 2-LIMITED SIRKETI ulusal ve uluslararası bağlamda AYDIN IXORA PARFUMSpaylaşıma açmayı, Çevreci ve NERIMAN IPEK Ticaret Unvani Sirketin ünvanı Drama Motor Türkiye Ticaret Sicili Gazeteyenilikçi alanda gerçekleştirilen AHMET UYANIK - PASIFIK Yenileme Sanavi ve Ticaret teknik çalışmalar, sunulan si'nin 19.12.2012 tarih 8218 sayılı Adres: Kurtulus Mah.Adnan DOĞALGAZ VE ISITMA Limited Sirketi dir. hizmetler kapsamında "en iyi nüshasının 1053. sayfasında Menderes Buly 2015 Sk.No: 1/C uygulama"ya ulaşılabilmesi ve bu (644161) dip numarası ile yayım-Adres: Nisantası Mahallesi Aydın Amaç ve Konu: uygulamaların küresel seviyede Makami Sokak Elif Sit. A Blok No: lanan ilanında Ayfer Adıgüzel'in Madde 3yürütülmesine katkı sağlayacak T.C. kimlik numarası 9/A Selçuklu Konya Yukanda bilgileri verilen gerçek standardizasyon çalışmalarının "21968016316" şeklinde sehven kişi tacir ile ilgili olarak aşağıda Yukanda bilgileri verilen gerçek Sirketin amaç ve konusu başlıca başlahlması ve tamamlanmasını, yayımlanmış olup, doğrusu belirtilen hususların Türk Ticaret kişi tacir ile ilgili olarak aşağıda sunlardır Planlanan calismalar sonucunda "21967016316" olarak Kanunu'na uygun olarak belirtilen hususlarm Türk Ticaret 1. Her türlü içten yanmalı edinilen karbon kredilerinin karbon düzeltilmiştir, ilan olunur. 19.01.2015 tarihinde tescil edildiği Kanunu'na uygun olarak motoriarın bakımı, tamir edilmesi, piyasalarında satışını yapmayı ve 24.01.2015 tarihinde tescil edildiği ilan olunur. islemlerinin yenilenmesi karbon geliri elde etmeyi (8/A)(28/66785) ilan olunur. yapılması, bunlarla ilgili yedek hedeflemeye oy birliği ile karar Tescil Edilen Hususlar: Terkin Tescil Edilen Hususlar: Terkin parça aksamlarının ithalatı, verilmistir Terkin Sicil No: 2390 ihracati, toptan ve perakende alum 9- Yönetim Kurulu Üvelerine bu Yukanda bilgileri verilen Tacirin Terkin satımı. Bu motorların bayiliklerini dönem huzur hakkı ödenmemesine Yukarıda bilgileri verilen Ticaret sicil kaydı memurluğumuza Ticaret Ünvanı: almak ve işletmek. ovbirliği ile karar verilmiştir. Tacirin ticaret sicil kavdı ibraz edilen evraklara istinaden ve BOR REFIRIGIRATION 2. Har türlü inşaat ve inşaat 10- Dilek ve temennilere memurlugumuza ibraz edilen Türk Ticaret Kanununa uygun SOĞUK HAVA DEPOSU taahhüdü ile uğraşmak. Arsa ve geçildi.Söz alan olmadığından evraklara istinaden ve Türk Ticaret olarak Talep Üzerine Terkin IŞLETMECİLİĞİ PAKET arazi satın almak. Bunların parsel toplantiva divan baskanlığınca son Kanununa uygun olarak Talep Edilmiştir. STOKLAMA LOJISTIK ifrazini yapıp satmak. Bu arsa ve verildi 27.11.2014 Uzerine Terkin Edilmiştir... MEYVE VE SEBZE ITHALAT arazi üzerine her türlü inşaat yapıp Edremit/Bahkesir İlan Edilecek Diğer Hususlar: flan Edilecek Diger Hususlar: VE IHRACAAT SANAYI VE satmak. Kat karşılığı arsa alıp kat Terk Mal Beyani TICARET LIMITED SIRKETI mülkiyeti yaptırıp inşaat yapıp Bakanhk Temsilcisi Mal Beyannamesi satmak. Bunlarla ilgili proje ve Nuray Paköz imza 19.01.2015 Tarihli Mal (Yeni Ticaret Unvani: mühendislik hizmetleri vermek. Toplanti Baskani Aktif: 0 Beyandır. BOR SOĞUK HAVA DEPOSU Konusu ile ilgili ihalelere Numan Uzun imza Pasif: 0 ISLETMECILIĞİ DERİ VE girmek bu konularda müteahhitlik (10/A)(27/62781) Firmanın ticaretten mütevellit Aktif Yoktur MAKINA İMALAT LOJİSTİK veya taseronluk yapmak. hic bir alacak ve borcunun Pasif Yoktur SANAYI VE TİCARET 3.Her türlü motorlu tasıt ticareti, bulunmadığını beyan ederim. Firmanın 3.Şahıslara Karşı LIMITED SIRKETI) ithalat ve ihracatmi vuomak. TICARETI TERK EDENLER Alacaĝi Ve Borcu Yoktur. 4. Sirket otomotiv sanavi ile Firma Sahibi Imza Türkiye Ticaret Sicili Gazeteilgili olarak otobüs, minibüs; (2/A)(27/64091) Neriman loek imza si'nin 07.06.2010 tarih 7579 sayılı midibüs, kamyon, kamyonet, Aydın Ticaret Sicil Kase Ve Imza nüshasının 989, sayfasında traktör, taksi, motorsiklet, Müdürlüğünden (288350) dip numarası ile yayımbisiklet, trayler ve bunlara benzer Ilan Sira No: 1644 DÜZELTMELER (2/A)(27/63513) lanan ilanında tescil tarihi motoriu ve motorsuz kara, hava, Mersis No: 1252132501200015 "25.05.2009" seklinde sehven deniz tasıtlarının, grayder, silindir Ticaret Sicil No: 12069 vavimlanmış olup, doğrusu v.b. ağır iş ve sanayî makinelerinin, ANKARA "25.05.2010" olarak düzeltilmiştir. Sicil Aydın Ticaret vükleme, boşaltma iş Ticaret Unvans ilan olunur. Müdürlüğünden makinelerinin vurt içinde ve yurt KADIOĞLU TİCARET -Sicil No: 85480 Ilan Sira No: 1645 disinda imalatini ve ticaretini AYDIN KADIOĞLU (5/A)(28/66794) Mersis No: 1738052590000011 yapmak, acente, bayilik ve Ticaret Sicil No: 16460-Tiearet Ünvanı: mümessilliğini almak, ithalat, Adres: Ata Mah.Alt Sanayi YAPI VE KREDİ BANKASI

Ticaret Sicili

Burss

ihracat, toptan ve perakende

Merkez

C. H. M. AM. In Arden

29 OCAK 2015 SAYI : 8747

	A	В	С	D	E	F	G	Н		J	К	L	М	N
1	KUYULAR	AÇILIŞ YILI	İLK AÇILIŞ SICAKLIKLARI (°C)	Kuyu Kodları	GÜNCEL ÇALIŞMA SICAKLIKLARI (°C)	KUYU RAPORLARINDAKİ DEBİLER (İt/sn)	POMPA FİRMASI	POMPA MOTOR GÜCÜ (KW)	POMPA MOTOR DEVRİ (d/d)	POMPA EMİŞ DERİNLİĞİ (m)	KUYULARDAKİ ÇALIŞAN POMPA DEBİLERİ (İt/sn)	POMPA KADEMELERİ	KOLON BORUSU ÇAPI (inç)	DERİNLİH (m)
2	ED-1	2000	60	21,25	48	72	LAYNE BOWLER	110	1450	48,5	72	19	8	195,6
3	ED-2	2001	47	26,27	-	2	-	-	-	-	-	-	-	496,5
4	ED-3	2001	59	23,285	49	18	LAYNE BOWLER	55	2968	42	20	13	5	495
5	EDJ-2	2007	55	25,56	49	55	LAYNE BOWLER	110	2968	64,5	72	4	8	300
6	EDJ-3	2005	59	21,405	49	86	LAYNE BOWLER	110	2968	~60	72	4	8	266
7	EDJ-4	2005	49	20,69	45	86	VANSAN	75	1450	42	40	9	6	296
8	EDJ-5	2006	59	26,43	40	45	-	-	-	-	-	-	-	216
9	EDJ-5 Revize	2013	55	26,43	55	20	GRUNDFOS (DALGIÇ)	30	2870	90	20	6	5	495
10	EDJ-6	2009	60	23,45	61	30	LAYNE BOWLER	75	1450	75	30	13	8	405
11	EDJ-7	2006	59	24,83	51	30	VANSAN	75	1450	60	40	9	6	246
12	EDJ-8	2007	59	23,93	-	39	-	-	-	-	40	-	-	250
13	EDJ-8 Revize	2012	56	23,93	52	40	Has Pompa (Dalgıç)	66	2870	72	40	5	8	330
14	EDJ-9	2010	35		-	5	-	-	-	-	-	-	-	485
15	EDJ-10	2010	55	24,445		72		REENJE	KSIYON K	UYUSU OLA	RAK KULLANILM	AKTADIR.		320
16	EDJ-11	2012	63		62	60	LAYNE BOWLER	110	2968	60	72	4	8	495
17	EDJ-12	2013	25		-									381



### TERMAL VE MINERALLI SU ANALIZ FORMU

11

-1

	AN MARKEN	2										
umi	une No		I				2		3			
umune Alim Yeri EL-I Sonaajı						ED- 2	Sonda	jı	ED-3 Sondajı			
<b>n</b> boratuvar No												
nali	z Tarihi	29.1.	200	I								
ebi	- Sıcaklık	75 <sup>It,</sup>	/sn	60	°C	2 11	/sn	47 °C	I8 It,	/sn 5	9 °C	
bku	- Tad											
		mg/lt	mva	l/lt	%mval	mg/lt	mval/lt	%mval	mg/lt	mval/lt	%mval	
	к+	8	0.2	20	I.67	4.2	O.II	0.81	8.5	0.22	1.71	
ĸ	Na *	199	8.6	55	72.38	255	II.09	81.42	231	10.04	77.8	
A	Ca **	18	0.9	)	7.53	47	2.34	17.18	34.5	I.72	13.3	
r I	Mg **	26.8	2.2	2	18.42	I	80.0	0.59	II.I	0.92	7.13	
<i>,</i> [	NH₄ <sup>+</sup>	<0.I				<0.I			<0.I			
	Fø (total)	0.44				0.03			0.3			
	As (total)	0				0			0			
	B (total)	I				0.05			I.6	2 2		
	Mn (total)	<0.1				<0.I			<0.I		1	
1	Li *	0.4				0.3			0.98			
× ľ	AI ***									5.5		
ł	TOPLAM	253.64	II.95	5	100	307.58	13.62	100	287.98	12.9	100	
	HCO,	79	I.2	29	13.96	46	0.75	6.15	71	I.I6	9.09	
	CO3	<10				< 10			< IO			
A	SO4	300	6.2	25	67.64	480	IO	82.04	472.3	9.84	76.9	
N	CI-	60.5	Ι.7	7	18.4	5I	I.44	II.8I	63.5	I.79	13.9	
γÌ	1~											
0	F -	5.2				4.7			5.3			
	S <sup>-</sup> (titras)											
N	Br ¯	<0.I				<0.I			<0.I			
L	NO <sub>2</sub>	<0.I				<0.1			<0.I			
A	NO3	4.5				0.5			0.5			
R	PO (total)	< 0.I				< 0.I			<0.I			
I	TOPLAM	449.2	9.24	4	100	582.2	12.19	100	612.6	12.79	100	
AN	SiO,	38.4				35		1	36.4			
	CO <sub>2</sub>	I.59				7.37			4.52			
OPL	AM	742.83				932.I	5		941.5			
н	(25°C)	7.9				7			7.4			
_	ond. (25°C)	1291		μmt	no/cm			µmho/cm		μ	mho/cm	
	Gravite (25°C)			gr/ci	m <sup>3</sup>			gr/cm <sup>3</sup>		9	r/cm <sup>3</sup>	
uh.H	(alint. (180°C)			mg/l	lt			mg/lt		n	ng/lt	
	am Sertlik	8.7		dH°				dH°		d	H°	
	ici Sertlik	1.9		dH°			dH°			- dH°		
	i Sertlik	6.8		dH°				dH°		d	н°	