**CONTENTS**

## SECTION A. PROJECT DESCRIPTION

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

Title: Alaşehir Geothermal Power Plant Project
Version no.: 01 Date: 25.08.2014
Version no.: 02 Date: 02.12.2014
Version no.: 03 Date: 06.04.2015
Version no.: 04 Date: 16.09.2015

### A. 2. Project eligibility under the Gold Standard

**a)Scale of project activity**
This project is a large - scale project. The capacity of the project is 24 MW.

**b) Host country or state**
The project is located in Turkey.

**c) Type of project activity**
The Project is a Renewable Energy Supply Project that generates and delivers energy from non-fossil and non-depletable energy source (geothermal power).

**d) Greenhouse gases**
Among the greenhouse gases eligible under the Gold Standard, this project is reducing Carbon Dioxide (CO2)

**e) Official Development Assistance (ODA)**
This project is eligible for Gold Standard registration because it does not receive any ODA funding.

**f) Other Certification Schemes**
This project does not have any other certification schemes; therefore, the project is eligible under the Gold Standard.

### A. 3. Current project status

First of all, the Alaşehir Geothermal Power Plant Project will be operated by Türkerler Jeothermal Enerji Arama Üretim A.Ş. The facility price of the project is 70.000.000 $ as mentioned in Project Description File. In addition to these, the economic life is taken as 49 years. The construction period of the project is expected to be 2 years and it will be started on 26/09/2014.

| SECTION B. | DESIGN OF STAKEHOLDER CONSULTATION PROCESS |
|---|---|

**B. 1. Design of physical meeting(s)**

**i. Agenda**

**MEETING AGENDA**
**1.** Opening of the meeting
**2.** Explanation of the project
**3.** Questions for clarification about the project
**4.** Blind SD exercise
**5.** Discussion on monitoring SD
**6.** Closure of the meeting

Meeting agenda was developed according to the guidance in Gold Standard Toolkit 2.6.1 and was prepared in Turkish as below,

**GÜNDEM**
**1.** Açılış
**2.** Projenin Tanıtımı
**3.** Projenin sorular eşliğinde açıklanması
**4.** Sürdürülebilir Kalkınma Değerlendirilmesi
**5.** Sürdürülebilir kalkınmanın izlenmesiyle ilgili görüşlerin paylaşılması
**6.** Kapanış

**ii. Non-technical summary**

The Turkish version of the non-technical summary is given below:

**ALAŞEHİR JEOTERMAL ENERJİ SANTRALİ PROJE TEKNİK OLMAYAN ÖZETİ**

TÜRKERLER Jeotermal ENERJİ ARAMA VE Üretim A.Ş. Manisa ili, Alaşehir ilçesi, Piyadeler Beldesi yakınlarında Enerji Piyasası Düzenleme Kurumu'ndan aldığı üretim lisansıyla elektrik üreterek ulusal şebekeye aktarmak üzere jeotermal santrali kurmayı planlamaktadır. Toplam 24 MW'lık gücü ile proje yılda yaklaşık 177 GWh elektrik üretimi yapacaktır. Türkiye'nin mevcut enerji üretim tahminleri ile karşılaştırıldığında projenin yılda yaklaşık 97.350 ton karbon azaltımı sağlayacaktır. Türkerler Alaşehir Jeotermal Enerji Santrali'nde üretilecek olan enerjinin ulusal ağa aktarılmasıyla ülkemizin giderek artan enerji ihtiyacının bir kısmı karşılanmış olacak, yöre, gelir artışı, nüfus hareketleri, eğitim, sağlık ve diğer sosyal ve teknik alt yapı hizmetlerinin artışı ile olumlu yönde

etkilenecektir. Söz konusu santralde, çevresel etkiler açısından minimum etki yaratan yenilenebilir ve temiz bir enerji kaynağının kullanılacak olması nedeniyle projenin ekonomik açıdan büyük getiriler sağlayacağı düşünülmektedir.

Santralin faaliyete geçmesi ile birlikte; bölge ekonomisine katkı sağlanacak ve inşaat ve işletme aşamalarında yakın yerleşim yerlerinden işçi temin edilmesi ile yörede istihdam olanağı yaratılmış olacaktır. Piyadeler Beldesi'nde yapılacak olan toplantıda yeni bir jeotermal santrali yatırımı yapılması planı proje sahibi tarafından ilk defa halka duyurulacaktır. Toplantının amacı halkı ve katılımcıları proje hakkında bilgilendirmek ve kendileri ile projenin sosyal ve çevresel etkilerini değerlendirmektir.

Jeotermal Enerji Santrali'nde üretilecek olan enerjinin ulusal ağa aktarılmasıyla ülkemizin giderek artan enerji ihtiyacının bir kısmı karşılanmış olacak, yöre, gelir artışı, nüfus hareketleri, eğitim, sağlık ve diğer sosyal ve teknik alt yapı hizmetlerinin artışı ile olumlu yönde etkilenecektir. Söz konusu santralde, çevresel etkiler açısından minimum etki yaratan yenilenebilir ve temiz bir enerji kaynağının kullanılacağından projenin büyük getiriler sağlayacağı öngörülmektedir.

**The English version is given below;**

TÜRKERLER Jeotermal ENERJİ ARAMA VE Üretim A.Ş. (TÜRKERLER Geo-Thermal Energy Exploration and Generation Joint Stock Co.) plans to installed a Geo – Thermal Power Plant near the Sub-District of Piyadeler, District of Alaşehir, Province of Manisa to generate electricity and transmit it to the national grid under the generation license acquired from the EPDK (Energy Market Regulatory Authority. It will generate electricity of approximately 177 GWh annually thanks to the project having a total installed output of 24 MW. The project would ensure carbon reduction of approximately 97,350 tons annually when compared to Turkey's present energy generation forecasts. Upon transmission of energy to be generated by Türkerler Alaşehir Geo-Thermal Power Plant

to the national grid, a portion of the country's steadily increasing energy requirements would be met as the region would be positively affected by the increases in income, population movement, training, health and other social and technical amenities and utilities. It is considered that the Project would provide major outputs economically because renewable and clean energy resources, which generate minimal effects in terms of environmental effects, would be used by the Power Plant.

Upon putting the power plant into operation, contributions would be made to the regional economy as employment opportunities would be provided locally thanks to recruitment of labor from nearby Residential Areas at the stages of construction and operation. At the meeting to be held at Piyadeler Sub-District, the plan to invest in a new geo-thermal power plant will be publicly announced by the Project Owner for the first time. The purpose of the meeting is to provide information to the public on the Project and jointly assess the social and environmental effects of the project.

Upon transmission of energy to be generated by Türkerler Alaşehir Geo-Thermal Power Plant to the national grid, a portion of the country's steadily increasing energy

requirements would be met as the region would be positively affected by the increases in income, population movement, training, health and other social and technical amenities and utilities. It is considered that the Project would provide major outputs economically because renewable and clean energy resources, which generate minimal effects in terms of environmental effects, would be used by the Power Plant.

### iii. Invitation tracking table

| Category code | Organisation (if relevant) | Name of invitee | Way of invitation | Date of invitation | Confirmation received ? Y/N |
|---|---|---|---|---|---|
| B | The Grand National Assembly of Turkey | Sakine Öz<br>Deputy of Manisa | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Grand National Assembly of Turkey | Selçuk Özdağ<br>Deputy of Manisa | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Grand National Assembly of Turkey | Uğur Aydemir<br>Deputy of Manisa | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Grand National Assembly of Turkey | Sümer Oral<br>Deputy of Manisa | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Grand National Assembly of Turkey | Özgür Özel<br>Deputy of Manisa | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Grand National Assembly of Turkey | Recai Berber<br>Deputy of Manisa | Fax<br>Post<br>Telephone | 05/06/2014 | Y |

| | | | | | |
|---|---|---|---|---|---|
| B | The Grand National Assembly of Turkey | Muzaffer Yurttaş<br>Deputy of Manisa | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Grand National Assembly of Turkey | Hasan Ören<br>Deputy of Manisa | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Grand National Assembly of Turkey | Erken Akçay<br>Deputy of Manisa | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Grand National Assembly of Turkey | Hüseyin Tanrıverdi<br>Deputy of Manisa | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Directorate of Environment and Urban Planning of Manisa Province | Mustafa Yılmaz | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Governorate of Manisa Province | Erdoğan Beştaş<br>Governor | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Municipality of Alaşehir District | Dr. Gökhan Karaçoban<br>District Mayor | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The Municipality of Manisa Province | Cengiz Ergün<br>Mayor | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| B | The District Governorate of Alaşehir | Kemal İnan<br>District | Fax | 05/06/2014 | Y |

| | District | Governor | Post<br>Telephone | | |
|---|---|---|---|---|---|
| A | Headman of Çağlayan Village | Bülent Kurkutalp<br>Headman | Post<br>Telephone | 05/06/2014 | Y |
| A | Headman of Gürsü Village | Hamit Ayhan<br>Headman | Post<br>Telephone | 05/06/2014 | Y |
| A | Headman of Şahyar Village | Ramazan Bayram<br>Headman | Post<br>Telephone | 05/06/2014 | Y |
| A | Headman of Piyadeler Town | Mehmet Bozkurt<br>Headman | Post<br>Telephone | 05/06/2014 | Y |
| F | Greenpeace Turkey | Hilal Atıcı<br>Energy and Climate Campaigner | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| F | REC Turkey<br>Regional Environment Centre | Sibel Sezer Eralp | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| F | WWF Turkey | Tolga Baştak | Fax<br>Post<br>Telephone | 05/06/2014 | Y |
| F | Hivos | Herry Clemens | Mail | 18/06/2014 | Y |
| F | My Climate | Franziska Heidenreich | Mail | 18/06/2014 | Y |
| F | Helio | Helene O'Connor | Mail | 18/06/2014 | Y |

| | | | | | |
|---|---|---|---|---|---|
| | International | Lajambe | | | |
| E | Gold Standard<br><br>Regional Manager of Turkey | Bahar Ubay | Mail | 18/06/2014 | N |

First of all, the Grand National Assembly of Turkey has to be invited since the people who live in the project area are being presented by Deputies. The Municipality is also invited since the municipality personnel are responsible for all of the activities implemented in the district. The NGOs were invited to receive their comments and their opinions regarding the project. Information sharing concerning the project, local area, community and culture are aimed during the LSC.

**iv. Text of individual invitations**

**The Turkish version of individual invitation is given below:**
**The following invitation letter was sent out in Turkish via email/mail/fax to the above mentioned stakeholders:**

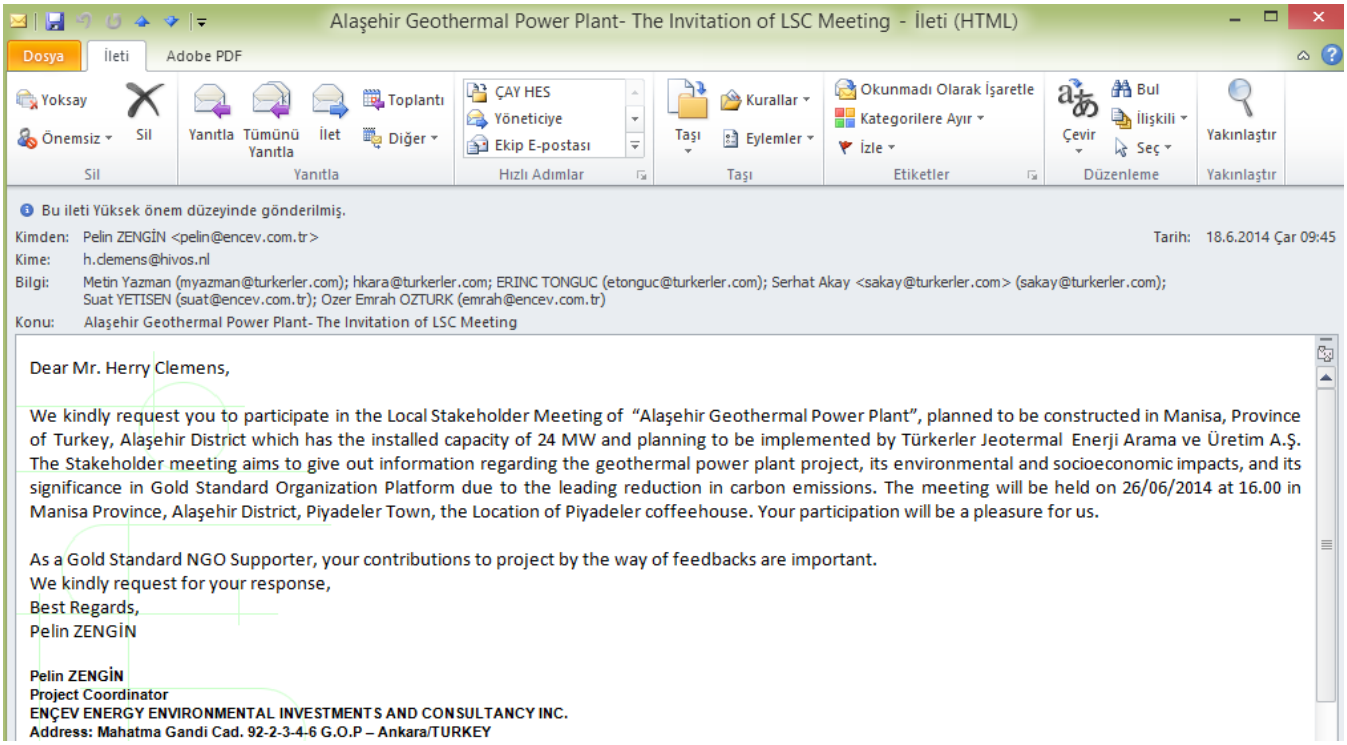
Sayın,
Manisa ili, Alaşehir ilçesinde; 24 MW kurulu güce sahip olacak şekilde inşa edilmesi planlanan Türkerler Jeotermal Enerji Arama ve Üretim A.Ş'ye ait Alaşehir Jeotermal Enerji Projesi'nin tanıtımının yapılması, çevresel ve sosyo-ekonomik etkileri hakkında bilgi verilmesi ve projenin karbon emisyonunun azaltılmasına olan katkısı nedeniyle Uluslararası Gold Standart Organizasyonu platformunda kazandığı değer ve bununla ilgili getiriler ile ilgili bilgi vermek ve projeye dair görüş ve önerilerinizi almak üzere 26 Haziran 2014 tarihinde saat 16.00 da Alaşehir İlçesi, Piyadeler Beldesi Kahvehanesin 'de yapılacak olan Paydaş Toplantısı'na teşriflerinizi arz ederim.

**The English version of individual invitation letter is given below:**

Dear Mr. Herry Clemens,

We kindly request you to participate in the Local Stakeholder Meeting of "Alaşehir Geothermal Power Plant", planned to be constructed in Manisa, Province of Turkey, Alaşehir District which has the installed capacity of 24 MW and planning to be implemented by Türkerler Jeotermal Enerji Arama ve Üretim A.Ş. The Stakeholder meeting aims to give out information regarding the geothermal power plant project, its environmental and socioeconomic impacts, and its significance in Gold Standard Organization Platform due to the leading reduction in carbon emissions. The meeting will be held on 26/06/2014 at 16.00 in Manisa Province, Alaşehir District, Piyadeler Town, the Location of Piyadeler coffeehouse. Your participation will be a pleasure for us.

As a Gold Standard NGO Supporter, your contributions to project by the way of feedbacks are important.
We kindly request for your response,
Best Regards,
Pelin ZENGİN


Alaşehir Geothermal Power Plant- The Invitation of LSC Meeting - İleti (HTML)

Bu ileti Yüksek önem düzeyinde gönderilmiş.
Kimden: Pelin ZENGİN <pelin@encev.com.tr> Tarih: 18.6.2014 Çar 09:45
Kime: h.clemens@hivos.nl
Bilgi: Metin Yazman (myazman@turkerler.com); hkara@turkerler.com; ERINC TONGUC (etonguc@turkerler.com); Serhat Akay <sakay@turkerler.com> (sakay@turkerler.com); Suat YETISEN (suat@encev.com.tr); Ozer Emrah OZTURK (emrah@encev.com.tr)
Konu: Alaşehir Geothermal Power Plant- The Invitation of LSC Meeting

Dear Mr. Herry Clemens,

We kindly request you to participate in the Local Stakeholder Meeting of "Alaşehir Geothermal Power Plant", planned to be constructed in Manisa, Province of Turkey, Alaşehir District which has the installed capacity of 24 MW and planning to be implemented by Türkerler Jeotermal Enerji Arama ve Üretim A.Ş. The Stakeholder meeting aims to give out information regarding the geothermal power plant project, its environmental and socioeconomic impacts, and its significance in Gold Standard Organization Platform due to the leading reduction in carbon emissions. The meeting will be held on 26/06/2014 at 16.00 in Manisa Province, Alaşehir District, Piyadeler Town, the Location of Piyadeler coffeehouse. Your participation will be a pleasure for us.

As a Gold Standard NGO Supporter, your contributions to project by the way of feedbacks are important.
We kindly request for your response,
Best Regards,
Pelin ZENGİN

**Pelin ZENGİN**
**Project Coordinator**
**ENÇEV ENERGY ENVIRONMENTAL INVESTMENTS AND CONSULTANCY INC.**
**Address: Mahatma Gandi Cad. 92-2-3-4-6 G.O.P – Ankara/TURKEY**

## v. Text of public invitations

The following invitation letter was published in Turkish in the regional newspaper " HÜR IŞIK" on 13/June/2014:

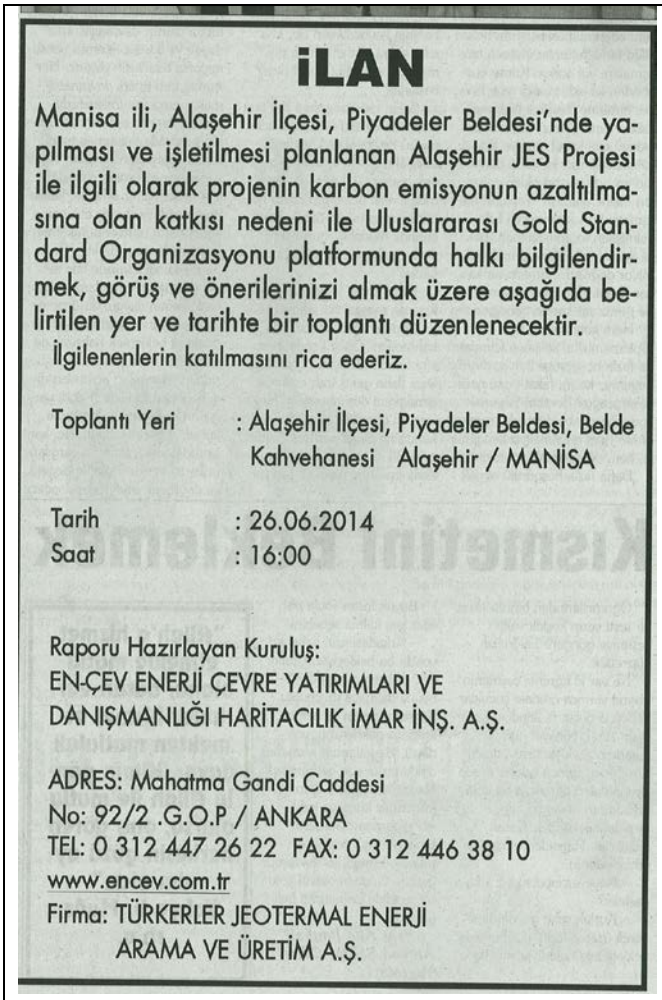
Manisa İli, Alaşehir ilçesinde yapılması ve işletilmesi planlanan Alaşehir JES Projesi ile ilgili olarak projenin karbon emisyonunun azaltılmasına olan katkısı nedeni ile Uluslararası Gold Standart organizasyonu platformunda halkı bilgilendirmek, görüş ve önerilerinizi almak üzere aşağıda belirtilen yer ve tarihte bir toplantı düzenlenecektir. İlgililerin katılmasını rica ederiz.

**Toplantı Yeri:** Alaşehir İlçesi, Piyadeler Beldesi, Belde Kahvehanesi Alaşehir/Manisa
**Tarih:** 26.06.2014
**Saat:** 16.00

The English version is as follows:

We have the pleasure of inviting you to participate in the Public Stakeholder Consultation Meeting of the Alaşehir Geothermal Power Plant Project that is planned to be constructed in Province of Manisa, Alaşehir District. The aim the of the meeting is to obtain feedback and provide information about the project and its significance in Gold Standard Organization Platform due to leading reduction in carbon emissions. Your participation will be a pleasure for us.

**Location:** Manisa Province, Alaşehir District, Piyadeler Town, the Location of Piyadeler coffeehouse.
**Date:** 26.06.2014
**Time:** 16.00



# İLAN

Manisa ili, Alaşehir İlçesi, Piyadeler Beldesi'nde yapılması ve işletilmesi planlanan Alaşehir JES Projesi ile ilgili olarak projenin karbon emisyonun azaltılmasına olan katkısı nedeni ile Uluslararası Gold Standard Organizasyonu platformunda halkı bilgilendirmek, görüş ve önerilerinizi almak üzere aşağıda belirtilen yer ve tarihte bir toplantı düzenlenecektir.

İlgilenenlerin katılmasını rica ederiz.

Toplantı Yeri : Alaşehir İlçesi, Piyadeler Beldesi, Belde Kahvehanesi Alaşehir / MANİSA

Tarih : 26.06.2014
Saat : 16:00

Raporu Hazırlayan Kuruluş:
EN-ÇEV ENERJİ ÇEVRE YATIRIMLARI VE DANIŞMANLIĞI HARİTACILIK İMAR İNŞ. A.Ş.

ADRES: Mahatma Gandi Caddesi
No: 92/2 .G.O.P / ANKARA
TEL: 0 312 447 26 22 FAX: 0 312 446 38 10
www.encev.com.tr
Firma: TÜRKERLER JEOTERMAL ENERJİ ARAMA VE ÜRETİM A.Ş.

## B. 2. Description of other consultation methods used

If individuals and/ or entities (e.g. NGOs) are unable to attend the physical meeting, please discuss other methods that were used to solicit their feedback/ comments (e.g. questionnaires, phone calls, interviews).

All of the stakeholders, official institutes and NGOs were invited with same methods of communication such as sending invitation letter, e-mail and public announcement in governmental offices and so on. Afterwards, the stakeholders and official institutes who could not attend the physical meeting were called and informed about the project.

The Mayor of Manisa Municipality, Mr. Cengiz Ergün and The Mayor of Alaşehir Municipality, Mr. Gökhan Karaçoban could not attend the LSC meeting. They responded the invitation as a fax and post that are given below:

25/06/2014 13:34 MANİSA BELEDİYESİ ÖZEL KALEM MÜD (FAX)0 236 234 15 17 P.001/001

MANİSA BELEDİYESİ

16.06.2014

Saat:16.00

Sayın: Pelin ZENGİN

En-Çev Enerji Çevre Yatırımları Danışmanlığı Harltacılık İmar İnş. A.Ş.

Nazik davetiniz için teşekkür ederim.

Görevde bulunmayışım nedeniyle katılamayacağım; Türkerler Jeotermal Enerji Arama ve Üretim A.Ş.'ye ait Alaşehir JES Proje Tanıtımının ve değerli yatırımının Manisa'mız için hayırlara vesile olmasını diler; size ve tüm davetlilere sevgi ve saygılar sunarım.

Cengiz ERGÜN

Manisa Büyükşehir Belediye Başkanı

T.C.
ALAŞEHİR BELEDİYE BAŞKANLIĞI

25.06.2014

**Sayın : En-Çev Enerji Çevre Yatırımları Danışmanlığı Haritacılık İmar İşl.A.Ş**

Nazik Davetiniz için teşekkür ederim.

Görevde bulunmayışım nedeniyle katılamayacağım; Türkerler Jeotermal Enerji Arama ve Üretim A.Ş'ye ait Alaşehir JES Proje Tanıtımının ve değerli yatırımının Manisa'mız için hayırlara vesile olmasını diler; size ve tüm davetlilere sevgi ve saygılar sunarım.

Gökhan KARAÇOBAN
Alaşehir Belediye Başkanı

## SECTION C. CONSULTATION PROCESS

## C. 1. Participants' in physical meeting(s)

### i. List of participants

Please see the original participants' list (in original language) as Annex 1.

| Participants list | | | | | |
|---|---|---|---|---|---|
| Date and time: 26.06.2104 | | | | | |
| Location: Manisa Province, Alaşehir District | | | | | |
| **Category Code** | **Name of participant, job/ position in the community** | **Male/ Female** | **Signature** | **Organisation (if relevant)** | **Contact details** |
| A | Zeki Karta Farmer | M | | Piyadeler | 0537654395 |
| A | Hasan Yavuz Farmer | M | | Piyadeler | 05383711346 |
| A | Mehmet Bozkurt Village Headman | M | | Piyadeler | 05327040353 |
| A | Halil Güleç Farmer | M | | Piyadeler | 05324702544 |
| A | İbrahim Ertürk | M | | Piyadeler | |
| A | Mustafa Akçay | M | | Piyadeler | |
| A | Ali Başak | M | | Piyadeler | |
| A | Ramazan Bayram Village Headman | M | | Şahyar Village | 05364861641 |
| A | Mahmut Karadağ | M | | Türkerler | |
| A | Cemil Seçkin | M | | Türkerler | |
| A | Süleyman Ülküner | M | | | |
| A | Mehmet Gündü | M | | | |
| A | Mehmet Özdemir | M | | Türkerler | |
| A | İbrahim Candan Farmer | M | | Piyadeler | 05352081625 |
| A | Bülent Kurkutul | M | | Çağlayan Quarter | 05332756518 |
| A | Hamil Ayhan | M | | Gürsu Quater | 05353178822 |
| A | Ali Özcan | M | | Piyadeler | 05393269272 |
| A | Mustafa Ayalın | M | | Gürsu Quarter | |
| A | Muharrem Akar | M | | Gürsu Quarter | 05376290725 |
| A | Mustafa Candan | M | | Piyadeler | 05355709107 |

| | | | | | |
|---|---|---|---|---|---|
| A | R. Şerif Şen | M | | Piyadeler | 05325221914 |
| A | İshak Demir | M | | Piyadeler | |
| A | Raşit Bilgiç | M | | Piyadeler | 05375593303 |
| B | Necdet Türk<br>President of Alaşehir Agriculture Chamber | M | | Alaşehir | 05326738687 |
| B | Sami Çeltikoğlu<br>Alaşehir Municipality | M | | Alaşehir | |

Comments accompanying Annex 1

The Local Stakeholder Consultation meeting was organized to the purpose of public briefing about the planned project and raising public awareness about green gas emission and emission reduction of Alaşehir Geothermal Power Plant with 24 MW total installed power on Sub-District of Piyadeler, District of Alaşehir, Province of Manisa obtaining opinions and proposals and creating awareness to accelerate the projects reducing greenhouse gas emissions is realized in 26.06.2014 with the attendance of 25 local residents. In the meeting, It was requested that the workers should be chosen from local people. In addition to this, local stakeholders think that the project improves the region in terms of social and economic.

## ii. Evaluation forms

The original evaluation forms (in original language) are attached as Annex 2.

| **Name** | **Muharrem Akar** |
|---|---|
| What is your impression of the meeting? | It is affirmative. |
| What do you like about the project? | Nothing |
| What do you not like about the project? | Production |
| Signature | |

| **Name** | **Halil Güleç** |
|---|---|
| What is your impression of the meeting? | |
| What do you like about the project? | |
| What do you not like about the project? | It will damage to us |

| | |
|---|---|
| Signature | |

| **Name** | **Ali Özenen** |
|---|---|
| What is your impression of the meeting? | The awareness of public |
| What do you like about the project? | It contributes the national economy |
| What do you not like about the project? | The streams will be polluted. |
| Signature | |

| **Name** | **Mehmet Yeşilyurt** |
|---|---|
| What is your impression of the meeting? | Information is always good. |
| What do you like about the project? | Clean energy. |
| What do you not like about the project? | I suffered damages at the installation stage. My damages have not been compensated. |
| Signature | |

| **Name** | **Galip Bilgiç** |
|---|---|
| What is your impression of the meeting? | Information having the nature of lies and errors. |
| What do you like about the project? | I do not like it. |
| What do you not like about the project? | It is the least popular as it is very adverse. |
| Signature | |

**Comments accompanying Annex 2**

Some of the comments above are related with the project implementation, some of them are not. The negative comments are harmful, misinformation and misrepresentation. The information given in the presentation is related to the energy production process of geothermal reservoirs, planned project technical details, carbon emission reduction. The all information is true and related to the project. Some people were opinionated about the project. Some people have negative comments, too. However, they paid attention to project. Then, they expressed their negative comments such as pollution of rivers. This comment was related to project. This negative comment was taken into consideration and a mitigation measure was determined related to comment. The reinjection wells will be constructed in order to give used geothermal water back to the reservoir. Therefore, the streams will not be damaged.

**C. 2. Pictures from physical meeting(s)**

## C. 3. Outcome of consultation process

### i. Minutes of physical meeting(s)

The Local Stakeholder Consultation meeting was organized to the purpose of public briefing about the planned project and raising public awareness about green gas emission and emission reduction of Alaşehir Geothermal Power Plant with 24 MW total installed power on Sub-District of Piyadeler, District of Alaşehir, Province of Manisa obtaining opinions and proposals and creating awareness to accelerate the projects reducing greenhouse gas emissions is realized in 26.06.2014 with the attendance of 25 local residents.The place of meeting was chosen to be the closest place to the project area and all local people are informed about meeting in advance by coffeehouse, municipality announcements and local newspaper announcements. Before presentation, agenda of the meeting was explained and non-technical Project summary was distributed to the participants.

Project presentation and description was made by EN-ÇEV Energy & Environmental Investments Consultancy Co. including information about project developers, the technology and operation of the power plant, estimated emission reduction amount of the plant, the importance of revenue from emission reduction, information about Gold Standard.

Prior to blind sustainable development exercise, questions and comments were taken from participants about further clarification of project. Questions and comments raised by participants were addressed in assessment of comments part.

In the meeting,

-It was observed that the stakeholders supported the project. On the other hand, they expressed their concerns about the project. The concerns;

- Will the separate wells be opened in order to irrigate greenhouses (vegetable glasshouses)? What will be the benefits of these wells?
- Will the waste water from wells and waste materials damage to environment?

The answers of these concerns;

- The energy import will be reduced with increasing power plant. Hence, the welfare of our country will develop. The geothermal energy source is the most powerful source in renewable energy sources. The villagers have opened the wells insensibly. As a consequence, the quantity of boron has been increasing. State Hydraulic Works is trying to take action to this increase.
- 18 wells have been opened since 2011. The depth of the wells opened by villagers is smaller than geothermal wells. Therefore, the water used by villagers is not affected.

- The system of wells used in greenhouses is not the same as geothermal wells. The opened wells will not be used in greenhouse. The water will give to city heating system.

- The water includes boron. The water can be harmful for vegetables. Therefore, the water must be use after rarefaction with distilled water for irrigation.

The concerns are handled with the answers above.

- It was requested that the workers should be chosen from local people.

- Local stakeholders think that the project improves the region in terms of social and economic.

The mitigation measures and relevant indicators will be explained. Since, the local people will be work for the project, the opinions and comments of them regarding the project will be important and thus has chance to involve other locals to the project by discussions accordingly. However, monitoring parameters are air quality nearby residential areas, Boron level in water streams, rivers and soil, water quality, soil condition, noise generation on the nearest settlement and paid wages to the workers. Therefore, there is no indicator that can be monitored by local people.

### ii. Minutes of other consultations

There is no any other consultation.

### iii. Assessment of all comments

| Stakeholder comment | Was comment taken into account (Yes/ No)? | Explanation (Why? How?) |
|---|---|---|
| | | Upon an increase in the number of these power plants for generation, the sum of funds paid by the government to imports would decrease, with surplus funds being spent |

| | | |
|---|---|---|
| Would separate wells be bored to provide irrigation to the greenhouses? What would be the benefits of such wells? | Yes | on education, health and infrastructure. Therefore, our prosperity would increase. This energy is the most powerful one of renewable energy types such as wind, hydraulic and solar energy. The volume of boron getting out of the wells bored by villagers without proper awareness disturbs villagers. DSİ tries to take measures against this situation. As long as ground water is used without control in this plain, the volume of boron would increase in shallow waters as soil would be richer in terms of salt contents and we would have less and less opportunities to use land for agricultural purposes. Based on an analysis of the master plan made by DSİ in the region, agricultural activities would increase by preventing ignorant use of ground water. This is the benefit to be provided by it nationwide. In order to explain about Boron Level an expert report has been prepared by a chemist whose name is Nazım Yıldırım and a geological engineer whose name is Erinç Tonguç.<br><br>As regards the benefits to be provided by it to local communities, 18 wells have been bored from 2011 to the present times. Because the well depths would be higher, such |

| | | |
|---|---|---|
| | | volumes of water drawn by village people from such wells having a depth in the range of 150 m would not be affected thereby. The system of the wells which are used at the greenhouses are not related to our geo-thermal system. The wells which have been dug would not be used in greenhouse operations. It would be provided to the urban heating system. After all, geo-thermal water is not directly used at greenhouses. Water from the wells would be used to heat the system. |
| To what extent are the presently operating wells and generated waste waters and waste materials from you or other companies harmful on environment? | Yes | Water is such water having boron. Only boron is harmful on plants; other substances present therein have no harm. Therefore, if such water is to be used in irrigation, it must be used by diluting it with pure water. |

iv. **Revisit sustainability assessment**

| Are you going to revisit the sustainable development assessment? | **Yes** | **No** |
|---|---|---|
| Please note that this is necessary when there are indicators scored 'negative' or if there are stakeholder comments that can't be mitigated | ☐ | X |

| | | |
|---|---|---|
| | | |

| |
|---|
| Give reasoning behind the decision<br><br>It is not necessary to revisit the sustainable development assessment because of the fact that there is no negative parameter. |

## v. Summary of alterations based on comments

| |
|---|
| At this stage, there were no comments from stakeholders which substantiate project modification.<br><br>However, stakeholders are well aware that they can intervene to project development and ask for modifications if deemed necessary for their livelihood. |

## SECTION D. SUSTAINABLE DEVELOPMENT ASSESSMENT

### D. 1. Own sustainable development assessment

## i. 'Do no harm' assessment

| Safeguarding principles | Description of relevance to my project | Assessment of my project risks breaching it (low, medium, high) | Mitigation measure |
|---|---|---|---|
| **Human Rights** | | | |
| 1. The project respects internationally proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicity in Human Rights abuses. | Turkey is a party of European Convention on Human Rights[1] since 1954. Therefore the national and internationally protected rights will be considered and shall be complied in. Furthermore, dignity, cultural property and uniqueness of indigenous people will not be affected by the project | Low | Not required |

[1] Please See Official Website of Ministry of Foreign Affairs of Turkey : http://www.mfa.gov.tr/the-european-convention-on-human-rights.en.mfa

| | | | |
|---|---|---|---|
| | since no resettlement of indigenous people are in the project site. | | |
| 2. The project does not involve and is not complicit in involuntary resettlement. | The 18,035 m2 area of planned plant belongs to Türkerler Geothermal Energy Exploration and Production Co. The rest of the area (5560 m2) is party land-private land. The private land will be purchased with mutual consent or expropriation.[2] If the private land is purchased with mutual, expropriation process will be conducted with Turkish Expropriation Law. The process will be complied related laws and regulations. | Medium | Expropriation process will be conducted with Turkish Expropriation Law. The process will be complied related laws and regulations. |
| 3. The project does not involve and is not complicity in the alteration, damage or removal of any critical cultural heritage. | There is not any historical, Natural or Cultural Heritage area in the Project site that required to be protected according to the Agreement of Protection of Cultural and Natural Heritage of the World.[3] | Low | Not required |
| **Labour Standards** | | | |
| 4. The project respects the employees freedom of association and their right to collective bargaining and is not complicit in restrictions of these freedoms and rights | Not relevant to the project. Being a member of association and collective bargaining are a legal right of all employees in Turkey. All staff recruited is employed according to the national legislations.[4]<br><br>In addition, the international agreements ILO articles 87[5]- freedom of association- and 98[6] - | Low | Not required |

[2] Alaşehir GPP, Project Description File, page 25.
[3] Alaşehir GPP, Project Description File, page 27,28.
[4] Retrieved from http://www.ilo.org/public/turkish/region/eurpro/ankara/about/sozlesmeler.htm
[5] Retrieved from http://www.ilo.org/public/turkish/region/eurpro/ankara/about/soz087.htm
[6] Retrieved from http://www.ilo.org/public/turkish/region/eurpro/ankara/about/soz098.htm

| | | | |
|---|---|---|---|
| | right to collective bargaining- will be considered and applied. | | |
| 5. The project does not involve and is not complicit in any form of forced or compulsory labour. | Any form of forced or compulsory labour is not relevant to the project.<br><br>In addition to the relevant national legislations; Turkey is a party of ILO convention. Therefore regarding the forced labour the articles 29[7] and 105[8] of ILO convention will be considered. | Low | Not required |
| 6. The project does not employ and is not complicit in any form of child labour. | The project does not employ child labour. Turkey is a party of IPEC since 1992. Turkey has signed the convention of ILO (International Labour Organization) the articles 182[9] was ratified and 138[10] ratification process was initiated. | Low | Not required |
| 7. The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis. | Turkey has signed the relevant articles of ILO which are 10011 and 11112 and committed to comply with the articles in question. Therefore during whole project process the project will not involve any form of discrimination. | Low | Not required |
| 8. The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments. | Work Safety & Risk of accidents.<br><br>The construction of the project requires labour force for construction and machinery/equipment operation. During the construction phase, workers may be exposed to serious risks | Medium | The Project owner will take all measures make all provision in order to protect the health of workers and prevent occupational risks. The company will provide training and information to workers. The company has to make organisation and |

[7] Retrieved from http://www.ilo.org/public/turkish/region/eurpro/ankara/about/soz029.htm
[8] Retrieved from http://www.ilo.org/public/turkish/region/eurpro/ankara/about/soz105.htm
[9] Retrieved from http://www.ilo.org/public/turkish/region/eurpro/ankara/about/soz182.htm
[10] Retrieved from http://www.ilo.org/public/turkish/region/eurpro/ankara/about/soz138.htm
[11] Retrieved from http://www.ilo.org/public/turkish/region/eurpro/ankara/about/soz100.htm
[12] Retrieved from http://www.ilo.org/public/turkish/region/eurpro/ankara/about/soz111.htm

| | | | |
|---|---|---|---|
| | (accidents, explosion etc.) Turkey has ratified ILO convention 155 about work safety and precautions.[13] Furthermore, the host country has its own regulations. [14] | | provide equipments to protect the workers. The employer will adapt the health and safety measures to changing conditions.[15] |
| **Environmental Protection** | | | |
| 9. The project takes a precautionary approach in regard to environmental challenges and is not complicity in practices contrary to the precautionary principle. | This principle can be defined as[16]:<br><br>"When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."<br><br>The project has minimum impact on environment and takes precautionary approach regarding environmental challenges. According to the Project Description File of the project all Regulation which entered into force with Environmental Law Numbered 2872 will be followed.[17] | Medium | The minor wastes (domestic solid wastes, machine oils, packaging material wastes, used up tries, excavation) will be handled with necessary measures according to the relevant national legislations[18]**.**<br><br>The Project area a flat land. Therefore, only excavation work for foundation will be conducted. Firstly, vegetable soil will be stripped and it will be laid for appropriate sections of land. Excavation materials will be deposited in the Project site during construction Works. Then after completion of construction Works, excavation materials will be used for landscaping activities. If the excavation material increases the disposal of material will be carried out with relevant municipality.[19]<br><br>The excavation works shall comply with the "Regulation on the |

[13] Retrieved from http://www.ilo.org/public/turkish/region/eurpro/ankara/about/sozlesmeler.htm
[14] Regulation on Labour Health and Labour Safety http://www.mevzuat.adalet.gov.tr/html/5115.html
[15] Alaşehir GPP, Project Description File, page 16
[16] The Wingspread Conference on the Precautionary Principle (1998)
[17] Alaşehir GPP, Project Description File, page 6,27
[18] Alaşehir GPP, Project Description File, page 8,9,10
[19] Alaşehir GPP, Project Description File, page 10.

| | | | |
|---|---|---|---|
| | | | Control of Excavation Soil, Waste of Construction and Debris"[20] |
| 10. The project does not involve and is not complicity in significant conversion or degradation of critical natural habitats, including those that are (a) legally protected, (b) officially proposed for protection, (c) identified by authoritative sources for their high conservation value or (d) recognized as protected by traditional local communities. | There isn't any protected area or critical habitats in the project region.<br><br>Turkey has its own legislations regarding the protected areas and is a party of many international agreements regarding the protected areas like BERN[21]. | Low | Not required |
| **Anti-Corruption** | | | |
| 11. The project does not involve and is not complicit in corruption. | Turkey has ratified UN Convention against corruption[22] and the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions.[23] The project does not involve corruption. | Low | Not required |

## ii. Sustainable development matrix

| Indicator | Mitigation measure | Relevance to achieving MDG | Chosen parameter and explanation | Preliminary score |
|---|---|---|---|---|

[20] Published at the official gazette date: 18.03.2004 and number: 25406
[21] Alaşehir GPP, Project Description File, page 35,36
[22] Retrieved from http://www.unodc.org/unodc/en/treaties/CAC/signatories.html
[23] Retrieved from http://www.oecd.org/investment/briberyininternationalbusiness/anti-briberyconvention/40272933.pdf

| | | | | |
|---|---|---|---|---|
| Gold Standard indicators of sustainable development | If relevant, copy mitigation measure from 'Do No Harm' assessment, and include mitigation measure used to neutralise a score of '-' | Check www.undp.org/mdg and www.mdgmonitor.org<br><br>Describe how your indicator is related to local MDG goals | Defined by project developer | Negative impact: score '-' in case negative impact is not fully mitigated, score '0' in case impact is planned to be fully mitigated<br><br>No change in impact: score '0'<br><br>Positive impact: score '+' |
| Air quality | 1)Dust emissions will be reduced with watering the ground. | **MDG- 7: Ensure Environmental Sustainability**<br>*7.A Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources*<br>*7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss* | **Parameter:**<br>1)Gas emission from operation activities ($CH_4$, $H_2S$)<br><br>2)Level of dust emissions during construction of the product activity<br><br>**Explanation:**<br>1) The results of geothermal reservoir analysis, it was determined that the reservoir included the $CO_2$, $N_2$, $O_2$, $CH_4$, $H_2S$ mainly. The reservoir consists of 99,99 % $CO_2$ by volume. Total emission amount is 38.252 kg/h. Amount of $CO_2$ emission is 37,9 kg/h. [24] Amount of other gases are 0,352 kg/h.<br>2)There will be dust emissions during construction of the plant. | + |

[24] Alaşehir Project Description File, page 12

| | | | | |
|---|---|---|---|---|
| | | | 3) There might be gas release (0.352 kg/h) from the geothermal fluid. Therefore air quality nearby residential areas will be monitored.<br><br>4) Maintenance works of the construction machines will be conducted seasonable. Hence, the emissions will be minimized.[25]<br><br>**Monitoring:**<br>1) Air quality nearby residential areas will be monitored in terms of other gases (CH4, H2S). | |
| Water quality and quantity | 1)The used water will be re-injected to reinjection wells completely. Hence, existing groundwater level will be conserved.<br><br>2)The mitigation measure is not required for waste water from personnel. | **MDG- 7: Ensure Environmental Sustainability**<br>*7.C Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation* | **Parameter 1:** Amount of re-injected geothermal fluid.<br><br>**Parameter 2:** Waste water from personnel in construction and operation phase<br><br>**Parameter 3:** Bor level in water<br><br>**Baseline 1:** No injection of geothermal fluid since no exit of geothermal fluid from the wells to be re-injected.<br><br>**Baseline 2:** No waste water occurred from personnel in construction and operation phase | + |

25 Alaşehir Project Description File, page 12

| | | | | |
|---|---|---|---|---|
| | | | **Baseline 3:**<br>A specific Bor level related to hydrogeological structure of water<br><br>**Target 1:**<br>All geothermal fluid will be re-injected to feed the geothermal field. Apart from that there is no waste water in operation phase<br><br>**Target 2:**<br>The waste water occured in both construction phase and operation phase is collected in cesspool. After that, the waste water is taken from vacuum truck of the Municipality of Piyadeler.<br><br>**Target 3:**<br>Bor level in the water will not exchange because of re-injection<br><br>**Explanation 1:**<br>By means of reinjection, the fluid will not be released or left to the soil. The reinjection process prevents environmental problems, pressure drop and heat loss.[26]<br><br>**Explanation 2:** In construction phase, 200 workers were assigned. Total water requirement of workers was 30 m3/day. Then 30 | |

[26] Alaşehir Project Description File, page 48

| | | | | |
|---|---|---|---|---|
| | | | m3/day waste water occured.<br><br>In operation phase, 30 employees are assigned. Total water requirement of employees is 4,5 m3/day. Therefore, 4,5 m3/day waste water is being occured. The waste water occured in both construction phase and operation phase is collected in cesspool. After that, the waste water is taken from vacuum truck of the Municipality of Piyadeler.<br>**Monitoring:**<br>Boron levels in water will be monitored. | |
| Soil condition | CO2 emission will be collected<br>and can be used in production of dry ice and frosting of food. The related regulations will be complied. The gas emissions including H2S will be under the limits. | **MDG- 7: Ensure Environmental Sustainability**<br>*7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss* | **Parameter:**<br>1. Level of acidic gas emission<br>2. Bor level in soil<br><br>**Baseline:**<br>1.No emission since any operation of geothermal power plant.<br><br>2. A specific Bor level related to topographical structure of project area<br><br>**Target:**<br>CO2 emission will be collected<br>and can be used in production of dry ice and frosting of food.[27] The related regulations will be complied. The gas emissions including H2S will be under the limits. Therefore, any | 0 |

[27] Alaşehir Project Description File, page 12

| | | | | |
|---|---|---|---|---|
| | | | negative impacts will not occur on the soil especially agricultural land.<br><br>**Monitoring:**<br>Boron levels in soil will be monitored. | |
| Other pollutants | No mitigation measure on noise is required since the The closest residental area is 100 m far from Project area. Hence, noise will not have a negative impact on the closest residentals.<br>28<br><br>The noise from equipment and machines will be absorbed by the plant walls. Hence, the off-site noise will be very little.<br><br>Waste oil[29] and solid waste[30] [31] will be handled according to the national regulations. | **MDG- 7: Ensure Environmental Sustainability**<br>*7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss* | **Parameter 1:**<br>Noise during construction and operation phases of the plant.<br>**Parameter 2:**<br>Waste oil and solid waste formed.<br>**Baseline 1:**<br>No noise pollution source exists.<br>**Baseline 2:**<br>No domestic solid waste of workers of Alaşehir GPP exists<br>**Target 1:**<br>During the construction the noise emerged Is not expected to disturb the settlements because of the distance in between.<br>**Target 2:**<br>Solid wastes will be collected by trucks of municipality and disposed to solid waste disposal sites.<br><br>**Monitoring:**<br>**1.**Machine and equipments will be monitored in order to determine covered or not with isolation materials.<br>**2.**solid waste will be monitored in order to determine disposed or not to Piyadeler | 0 |

[28] Alaşehir GPP Project Description File, page 15
[29] The "Regulation on Control of the Waste oil (Published in official gazette dated 30.07.2008 and numbered 26952, amendment: date: 30.03.2010,number: 27537 )
[30] Regulation of Disposal of Hazardous Wastes (Published in official gazette dated 14.03.2005 and numbered 25755, amendment: date: 30.10.2010 ,number: 27744 )
[31] Regulation of Disposal of Solid Wastes (Published in official gazette dated 14.03.1991 and numbered 20814)

| | | | | |
|---|---|---|---|---|
| | | | Municipality waste disposal site. | |
| Biodiversity | During the excavation works which shall be carried out under the Project, vegetal soil shall be scraped off at the site. Such vegetal soil to be scraped off shall be used in landscaping works around the activity units. | **MDG- 7: Ensure Environmental Sustainability**<br>*7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss.* | **Parameter:**<br>The number of affected species in the project site.<br>**Baseline:**<br>There are existing habitats and regional biodiversity in the region.<br>**Target:**<br>Minimize the impact of project activity to ecosystem and biodiversity during both construction and operation stages. There will be no significant negative impact on the environment that can be named as biodiversity loss as per GS Annex I.<br><br>**Monitoring:**<br>Vegetal soil will be monitored in order to storage regularly to use for landscaping. | 0 |
| Quality of employment | A mitigation measure is not required for this indicator. | **MDG-1: Eradicate extreme poverty & hunger**<br>*1.B. Achieve full and productive Employment and decent work for all, including women and women and young people* | **Parameter:**<br>Trainings to employees on Workers Health & Safety<br>Number of certificates / number of participants that will be participate the trainings<br><br>**Baseline:**<br>It is not expected that the local employees trained on the health and safety of workers before the proposed project.<br><br>**Target:**<br>During the whole process including | + |

| | | | | |
|---|---|---|---|---|
| | | | construction and operation phases, the health and safety of the workers will be considered well and necessary measures will be taken. Besides, the project will decrease unemployment by employing local people. | |
| Livelihood of the poor | A mitigation measure is not required for this indicator. | **MDG-1: Eradicate extreme poverty & hunger** ***1.A.****Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day* | **Parameter:** changes in living standards, number of people living under the poverty line by means of employment to the GPP: the number of recruited local people.<br><br>**Baseline:** No additional income for local people in absence of the project.<br><br>**Target:** Project will create new job opportunities during construction & operation phases.<br><br>**Explanation:** Income generation by local recruitment with project activity will have indirect impacts to changing living standards of the local people and number of people living under poverty line. | + |
| Access to affordable and clean energy services | A mitigation measure is not required for this indicator. | **MDG- 7: Ensure Environmental Sustainability** *7.2 CO2 emissions, total, per capita and per $1 GDP (PPP)* | **Parameter:** Clean energy provided for the use of people including the locals<br><br>**Baseline:** Energy demand increases in Turkey constantly. In the absence of the project activity there won't be any difference on energy production in contrary to the energy demand; or the fossil fuels will | 0 |

| | | | | |
|---|---|---|---|---|
| | | | take the place of renewable sources.<br><br>**Target:**<br>A distributed Energy Systems is useful for increasing the efficiency. Besides, the project helps to decrease the dependency of imported fossil fuels (like natural Gas, coal etc.) | |
| Human and institutional capacity | A mitigation measure is not required for this indicator. | **MDG-1: Eradicate extreme poverty & hunger**<br>*1.A.Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day* | **Parameter:** increasing awareness of people on environment.<br><br>**Baseline:** There is no significant development in the education and skills of the local people. Besides, most of the people don't aware of the environmental responsibilities.<br><br>**Target:** Project will contribute increasing the skills of the staff and awareness about environmental issues | 0 |
| Quantitative employment and income generation | A mitigation measure is not required for this indicator. | **MDG-1: Eradicate extreme poverty & hunger**<br>*1.A.Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day* | **Parameter:** annual wage rate to workers.<br><br>**Baseline:** No job opportunities and payment.<br><br>**Target:** Several employees will be employed during construction and operation phases. Therefore the project will contribute to decrease the local unemployment rate and help income generation.<br><br>**Monitoring**: | 0 |

| | | | | |
|---|---|---|---|---|
| | | | Paid wages to the workers will be monitored. | |
| Balance of payments and investment | A mitigation measure is not required for this indicator. | **MDG-8.D Develop a Global partnership for development** *8.C Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.* | **Parameter:** Amount of avoided fossil fuel (i.e. natural gas) imported.<br><br>**Baseline:** Turkey's dependency on imported fossil fuels like natural gas, imported coal, is at high levels.<br><br>**Target:** Calculated saved payments by shifting oil and natural gas. The project helps to decrease the dependency of imported fossil fuels (like Natural Gas, imported coal etc.) | + |
| Technology transfer and technological self-reliance | A mitigation measure is not required for this indicator. | **MDG-8.F** In cooperation with the private sector, make available the benefits of new technologies, especially information and communications. | **Parameter:** Total number of employee having geothermal power plant related trainings.<br><br>**Baseline:** No worker trained about GPP before that.<br><br>**Target:** The workers within the project trained to be able to work for a GPP, the workers shall be trained. | 0 |

The Government of Turkey and the United Nations system in Turkey, particularly UNDP, pay special attention to MDGs (local MDGs).

Furthermore, own sustainable development matrix is scored and the mitigation measures to be applied are selected in accordance with the conducted Project

Description File of the project.

## D. 2. Stakeholders Blind sustainable development matrix

| Indicator | Mitigation measure | Relevance to achieving MDG | Chosen parameter and explanation | Preliminary score |
|---|---|---|---|---|
| Gold Standard indicators of sustainable development | If relevant, copy mitigation measure from 'Do No Harm' assessment, and include mitigation measure used to neutralise a score of '-' | Check www.undp.org/mdg and www.mdgmonitor.org<br><br>Describe how your indicator is related to local MDG goals | Defined by project developer | Negative impact: score '-' in case negative impact is not fully mitigated, score '0' in case impact is planned to be fully mitigated<br><br>No change in impact: score '0'<br><br>Positive impact: score '+' |
| Air quality | | | | - |
| Water quality and quantity | | | | - |
| Soil condition | | | | - |
| Other pollutants | | | | - |
| Biodiversity | | | | - |
| Quality of employment | | | | + |
| Livelihood of | | | | + |

| | | | | |
|---|---|---|---|---|
| the poor | | | | |
| Access to affordable and clean energy services | | | | + |
| Human and institutional capacity | | | | + |
| Quantitative employment and income generation | | | | + |
| Balance of payments and investment | | | | + |
| Technology transfer and technological self-reliance | | | | + |

The sustainability questionnaires were distributed at the meeting. These questionnaires were filled in independently by the participants.

The number of negative, position and zero scores of each indicator were identified and tabulated below.

| | (+) | (-) | 0 |
|---|---|---|---|
| Air quality | 2 | 5 | 1 |
| Water quality and quantity | 1 | 5 | 1 |
| Soil condition | 1 | 5 | 2 |
| Other pollutants | 1 | 4 | 3 |
| Biodiversity | 1 | 5 | 2 |
| Quality of employment | 5 | 3 | - |
| Livelihood of the poor | 5 | 3 | - |
| Access to affordable and clean energy services | 6 | 2 | - |
| Human and institutional capacity | 4 | 3 | 1 |
| Quantitative employment and income generation | 7 | 1 | - |
| Balance of payments and investment | 5 | 3 | - |
| Technology transfer and technological self-reliance | 4 | 3 | - |
| Technological improvement* | 4 | 3 | 1 |

**One more indicator: technological improvement was added to questionnaire in order to identify the participants' opinion. However, it is not stated in the SDM since it has a fixed form.*

The highest score of each indicator was given as the score of blind SDM.

The negative scored indicators are air quality, water quality, soil quality, other pollutants and biodiversity.

Give analysis of difference between own sustainable development matrix and the one resulting from the blind exercise with stakeholders. Explain how both were consolidated.

For the blind SD matrix, survey sheets were distributed and the final scoring was done by arithmetic average of each all scores. Furthermore, own sustainable development matrix is done according to Project Description File. The main reason of difference between the own sustainability assessment and the blind sustainability assessment is prejudice od public. The project area is rich in geothermal sources. Several companies worked through the geothermal reservoirs there. Some of them could be damage the local stakeholders' goods or lands. Therefore, they don't want to any company came there in order to produce energy from geothermal reservoirs. They think this project will be damage for them, too. Hence, they filled the evaluation forms (especially environmental impacts) negatively. With these reasons there is a difference between assessments. It is obvious that the geothermal power plants have no negative impacts on air quality and water quality (if the reinjection system installs).

**D. 3.Consolidated sustainable development matrix**

| **Indicator** | **Mitigation measure** | **Relevance to achieving MDG** | **Chosen parameter and explanation** | **Preliminary score** |
|---|---|---|---|---|
| Gold Standard indicators of sustainable development | If relevant, copy mitigation measure from 'Do No Harm' assessment, and include mitigation measure used to neutralise a score of '-' | Check www.undp.org/mdg and www.mdgmonitor.org<br><br>Describe how your indicator is related to local MDG goals | Defined by project developer | Negative impact: score '-' in case negative impact is not fully mitigated, score '0' in case impact is planned to be fully mitigated<br><br>No change in impact: score '0'<br><br>Positive impact: |

| | | | | |
|---|---|---|---|---|
| | | | | score '+' |
| Air quality | 1)Dust emissions will be reduced with watering the ground. | **MDG- 7: Ensure Environmental Sustainability**<br>*7.A Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources*<br>*7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss* | **Parameter:**<br>1)Gas emission from operation activities (CH4, H2S)<br><br>2)Level of dust emissions during construction of the product activity<br><br>**Explanation:**<br>1) The results of geothermal reservoir analysis, it was determined that the reservoir included the CO2, N2, O2, CH4, H2S mainly. The reservoir consists of 99,99 % CO2 by volume. Total emission amount is 38.252 kg/h. Amount of CO2 emission is 37,9 kg/h. [32]Amount of other gases are 0,352 kg/h.<br>2)There will be dust emissions during construction of the plant.<br><br>3) There might be gas release (0.352 kg/h) from the geothermal fluid. Therefore air quality nearby residential areas will be monitored.<br><br>4) Maintenance works of the construction | 0 |

[32] Alaşehir Project Description File, page 12

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| | | | machines will be conducted seasonable. Hence, the emissions will be minimized.[33]<br><br>**Monitoring:**<br>1) Air quality nearby residential areas will be monitored in terms of other gases (CH4, H2S). | |
| Water quality and quantity | 1)The used water will be re-injected to reinjection wells completely. Hence, existing groundwater level will be conserved.<br><br>2)The mitigation measure is not required for waste water from personnel. | **MDG- 7: Ensure Environmental Sustainability**<br>*7.C Halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation* | **Parameter 1:**<br>Amount of re-injected geothermal fluid.<br><br>**Parameter 2:**<br>Waste water from personnel<br><br>**Parameter 3:**<br>Bor level in water<br><br>**Baseline 1:**<br>No injection of geothermal fluid since no exit of geothermal fluid from the wells to be re-injected.<br><br>**Baseline 2:** No waste water occurred from personnel in construction and operation phase<br><br>**Baseline 3:**<br>A specific Bor level related to hydrogeological structure of water<br><br>**Target 1:**<br>All geothermal fluid will be re-injected to feed | 0 |

33 Alaşehir Project Description File, page 12

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| | | | the geothermal field. Apart from that there is no waste water in operation phase<br><br>**Target 2:**<br>The waste water occured in both construction phase and operation phase is collected in cesspool. After that, the waste water is taken from vacuum truck of the Municipality of Piyadeler.<br><br>**Target 3:**<br>Bor level in the water will not exchange because of re-injection<br><br>**Explanation 1:**<br>By means of reinjection, the fluid will not be released or left to the soil. The reinjection process prevents environmental problems, pressure drop and heat loss.[34]<br><br>**Explanation 2:** In construction phase, 200 workers were assigned. Total water requirement of workers was 30 m3/day. Then 30 m3/day waste water occured.<br><br>In operation phase, 30 employees are assigned. Total water requirement | |

[34] Alaşehir Project Description File, page 48

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| | | | of employees is 4,5 m3/day. Therefore, 4,5 m3/day waste water is being occured. The waste water occured in both construction phase and operation phase is collected in cesspool. After that, the waste water is taken from vacuum truck of the Municipality of Piyadeler.<br><br>**Monitoring:**<br>Boron levels in water will be monitored. | |
| Soil condition | $CO_2$ emission will be collected and can be used in production of dry ice and frosting of food. The related regulations will be complied. The gas emissions including $H_2S$ will be under the limits. | **MDG- 7: Ensure Environmental Sustainability**<br>*7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss* | **Parameter:**<br>1. Level of acidic gas emission<br>2. Bor level in soil<br><br>**Baseline:**<br>1.No emission since any operation of geothermal power plant.<br><br>2. A specific Bor level related to topographical structure of project area<br><br>**Target:**<br>$CO_2$ emission will be collected and can be used in production of dry ice and frosting of food.[35] The related regulations will be complied. The gas emissions including $H_2S$ will be under the limits. Therefore, | 0 |

[35] Alaşehir Project Description File, page 12

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| | | | any negative impacts will not occur on the soil especially agricultural land.<br><br>**Monitoring:**<br>Boron levels in soil will be monitored. | |
| Other pollutants | The energy generation building in where generators will be located, designed and covered with sound/noise isolation material.<br>Therefore, noise level relevant to the project remains under the limit value 70 dBA[36] at a 100 m distance from the settlements.[37]<br><br>Waste oil[38] and solid waste[39] [40] will be handled according to the national regulations. | **MDG- 7: Ensure Environmental Sustainability**<br>*7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss* | **Parameter 1:**<br>Noise during construction and operation phases of the plant.<br>**Parameter 2:**<br>Solid waste was formed.<br><br>**Baseline 1:**<br>No noise pollution source exists.<br>**Baseline 2:**<br>No domestic solid waste of workers of Alaşehir GPP exists.<br><br>**Target 1:**<br>During the construction the noise emerged Is not expected to disturb the settlements because of the distance in between.<br>**Target 2:**<br>Solid wastes will be collected by trucks of Piyadeler Municipality and disposed to solid waste disposal sites.<br><br>**Monitoring:**<br>**1.**Machine and | 0 |

[36] The "Regulation On Assessment and Management of Environmental Noise" (Published in official gazette dated 07.03.2008 and numbered 26809)
[37] Alaşehir Project Description File, page 15
[38] The "Regulation on Control of the Waste oil (Published in official gazette dated 30.07.2008 and numbered 26952, amendment: date: 30.03.2010,number: 27537 )
[39] Regulation of Disposal of Hazardous Wastes (Published in official gazette dated 14.03.2005 and numbered 25755, amendment: date: 30.10.2010 ,number: 27744 )
[40] Regulation of Disposal of Solid Wastes (Published in official gazette dated 14.03.1991 and numbered 20814)

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| | | | equipments will be monitored in order to determine covered or not with isolation materials.<br>**2.**solid waste will be monitored in order to determine disposed or not to Piyadeler Municipality waste disposal site. | |
| Biodiversity | During the excavation works which shall be carried out under the Project, vegetal soil shall be scraped off at the site. Such vegetal soil to be scraped off shall be used in landscaping works around the activity units. | **MDG- 7: Ensure Environmental Sustainability**<br>*7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss.* | **Parameter:**<br>The number of affected species in the project site.<br><br>**Baseline:**<br>There are existing habitats and regional biodiversity in the region.<br><br>**Target:**<br>Minimize the impact of project activity to ecosystem and biodiversity during both construction and operation stages.<br>There will be no significant negative impact on the environment that can be named as biodiversity loss as per GS Annex I.<br><br>**Monitoring:**<br>Vegetal soil will be monitored in order to storage regularly to use for landscaping. | 0 |
| Quality of employment | A mitigation measure is not required for this indicator. | **MDG-1: Eradicate extreme poverty & hunger**<br>*1.B. Achieve full and productive Employment and decent work for all, including women* | **Parameter 1:**<br>Number of employees that will be participate the trainings preferred by project manager | + |

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| | | *and women and young people* | **Baseline:**<br>No trained personnel in selected preferred training (ie environmental awareness and process, operation condition of geothermal power plants<br><br>**Target:**<br>The increase in the environmental awareness of employees by training. . | |
| Livelihood of the poor | A mitigation measure is not required for this indicator. | **MDG-1: Eradicate extreme poverty & hunger**<br>***1.A.****Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day* | **Parameter:**<br>changes in living standards, number of people living under the<br>poverty line by means of employment to the GPP: the number of recruited local people.<br><br>**Baseline:**<br>No additional income for local people in absence of the project.<br><br>**Target:**<br>Project will create new job opportunities during construction & operation phases.<br><br>**Explanation:**<br>Income generation by local recruitment with project activity will have indirect impacts to changing living standards of the local people and number of people living under poverty line. | |
| Access to affordable and clean energy | A mitigation measure is not required for this indicator. | **MDG- 7: Ensure Environmental Sustainability**<br>*7.2 CO2 emissions,* | **Parameter:**<br>Clean energy provided for the use of people | 0 |

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| services | | *total, per capita and per $1 GDP (PPP)* | including the locals (the parameter can be defined as a measurable way, since Turkey do not have separated and specific regions that produce and use the electricity only in the region. Hence, the indicator will not be monitored.)<br><br>**Baseline:**<br>Energy demand increases in Turkey constantly. In the absence of the project activity there won't be any difference on energy production in contrary to the energy demand; or the fossil fuels will take the place of renewable sources.<br><br>**Target:**<br>A distributed Energy Systems is useful for increasing the efficiency. Besides, the project helps to decrease the dependency of imported fossil fuels (like natural Gas, coal etc.) | |
| Human and institutional capacity | A mitigation measure is not required for this indicator.<br>. | **MDG-1: Eradicate extreme poverty & hunger**<br>*1.A.Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day* | **Parameter:** increasing awareness of people on environment.<br><br>**Baseline:** There is no significant development in the education and skills of the local people. Besides, most of the people | 0 |

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| | | | don't aware of the environmental responsibilities.<br><br>**Target:** Project will contribute increasing the skills of the staff and awareness about environmental issues | |
| Quantitative employment and income generation | A mitigation measure is not required for this indicator. | **MDG-1: Eradicate extreme poverty & hunger**<br>*1.A.Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day* | **Parameter:** annual wage rate to workers.<br><br>**Baseline:** No job opportunities and payment.<br><br>**Target:** Several employees will be employed during construction and operation phases. Therefore the project will contribute to decrease the local unemployment rate and help income generation.<br><br>**Monitoring**:<br>Paid wages to the workers will be monitored. | 0 |
| Balance of payments and investment | A mitigation measure is not required for this indicator. | **MDG-8.D Develop a Global partnership for development**<br>*8.C Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.* | **Parameter:**<br>Amount of avoided fossil fuel (i.e. natural gas) imported.<br><br>**Baseline:**<br>Turkey's dependency on imported fossil fuels like natural gas, imported coal, is at high levels.<br><br>**Target:** Calculated saved payments by shifting oil and natural gas. The project helps to | + |

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| | | | decrease the dependency of imported fossil fuels (like Natural Gas, imported coal etc.) | |
| Technology transfer and technological self-reliance | A mitigation measure is not required for this indicator. | **MDG-8.F**<br>In cooperation with the private sector, make available the benefits of new technologies, especially information and communications. | **Parameter:**<br>Total number of employee having geothermal power plant related trainings.<br><br>**Baseline:**<br>No worker trained about GPP before that.<br><br>**Target:**<br>The workers within the project trained to be able to work for a GPP, the workers shall be trained. | 0 |

**Justification choices, data source and provision of references**

A justification paragraph and reference source is required for each indicator, regardless of score

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| Air quality | Loading and unloading shall be carried out without hurling and if necessary, it shall be ensured by spraying that soil is kept humid for the purpose of preventing dust emission which would generate during land preparation works.[41] The emission to be generated by the vehicles to be operated in construction Works would be of very low volumes and emissions originating from equipment would not have any adverse effects on the present air quality. In order to minimize the emissions that would arise from the vehicles which would operate at the stage of construction, routine controls shall be commissioned on any vehicles and equipment and such vehicles requiring maintenance would be taken under maintenance and other vehicles would be used in their place until completion of their maintenance.[42] |
| Water quality and quantity | Such volumes of waste water which would potentially generate at the stages of construction and operation under the project would be collected at a cesspit to be built impermeably and when the cesspit is full, wastes would be taken out and disposed by means of a cesspit emptier to be obtained from Piyadeler Municipality on payment.[43]<br>Re-injection process was decided by project owner after further thought about discharge methods of geothermal fluid. The re-injection process is the best alternative in erms of environmental and economic |

[41] Alaşehir GPP, Project Description File, page 20
[42] Alaşehir GPP, Project Description File, page 12
[43] Alaşehir GPP, Project Description File, page 7

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| | issue. In the planned project, the energy production process will be conducted with re-injection. The facility will not operate if the re-injection is put into use. The freshwater aquifers will not be damaged during both construction phase and operation phase.[44] The reinjection process will increase the life of the reservoir and prevent the environmental problems. Therefore the pressure drop and heat loss will be prevented. The reinjection process will be conducted in a closed loop and the control systems will be installed against leakage. Hence, there will not be any negative impact into the ground water and underground water.[45] |
| Soil condition | The Project Area is flatland and only foundation excavation would be carried out in the area where the power plant building would be located. Prior to commencement of Works, vegetal soil would be scraped off on the Project Area and subsequently spread on the suitable parts of land as per applicable technique thereof. It would be stored in an area inside the Project Area in such a manner and to such an extent ensuring that its height would not exceed 2 meters and that there would be oxygen circulation into soil. On rainy days, no operations would be carried out in connection with top soil and soil which is scraped off would not be stored inside any water deposits. Materials which would generate in excavation Works would be collected inside the Project Area throughout excavation and used in landscaping Works following completion of construction works.[46] |
| Other pollutants | **Noise:** There would be noise emission originating from such machinery and equipment to be used in the land preparation and construction Works of the project. The Residential Areas nearest to the Project Area is Piyadeler Municipality which is located approximately 100 m east of the Project Area. Therefore, noise which would generate at the stage of construction in the Project Area would not be expected to have any adverse effects on the existing structures. In addition, because land preparation Works would be carried out outdoors under the project, it would be very difficult to take measures against noise. Noise would vary during a day throughout the Works but because Works would be carried out during day time (07.00-19.00), generation of noise emission would thus be limited.[47] In addition, necessary measures shall be taken to protect workers from risks, especially those related to hearing, which would occur in terms of health and safety due to their exposure to noise. It shall be ensured by providing those working on the machines and equipment at the stage of construction with suitable protective aids and gadgets such as heatgears, earpieces or ear plugs. Thus, the levels of noise that would originate due to such machinery and equipment used in Works would have been reduced to such a level which would not disturb workers and local residents. In addition, the values which are stipulated by the Regulations would also be met and thus, noise to be caused to the surroundings would be kept at a minimum.[48]<br>**Solid Waste:** The domestic wastes from personnel and non-recyclable waste will be collected separately in closed containers that installed around the plant. The collected waste will be sent to the disposal sites of Piyadeler Municipality periodically.[49] |

[44] Alaşehir GPP, Project Description File, page 8
[45] Alaşehir GPP, Project Description File, page 18
[46] Alaşehir GPP, Project Description File, page 19
[47] Alaşehir GPP, Project Description File, page 20
[48] Alaşehir GPP, Project Description File, page 21
[49] Alaşehir GPP, Project Description File, page 18-19

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| | Waste Oil: Maintenance of any mechanical equipment to be used during production will be made the closest authorized technical service. However, if there is a necessity about making maintenance in the site, waste management shall be achieved in such a manner and to such an extent ensuring that such waste generation could be minimized pursuant to the Regulation on the Control of Hazardous Wastes as regards Waste Oils and Regulation on the Control of Waste Oils, which took force after it was issued in the Official Gazette Issue No 26952 of 30.07.2008 as regards Waste Oils again and such types of wastes shall be temporarily stored in impermeable tanks and sent to the licensed disposal facilities according to the analysis results in connection therewith. [50] In the operation phase, the isolation oil will be used. The isolation sample will be taken periodically by maintenance crew in order to determine air and gas ratio. The The oil includes more air and gas will be used again after vacuuming. The life of isolation oil is between 25-30 years. The isolation oil completed the lifetime will be handled according to Waste Oil Control Regulation[51] |
| Biodiversity | **Flora&Fauna:** There are no such plant species in the activity area and its surroundings, which are endemic, rare and endangered among such taxons having a higher possibility to exist there due to the habitat characteristics, which must be placed under control as per Annex 1 List of the "Convention on the Protection of Wildlife and Habitats in Europe" (BERN CONVENTION) and which are included in the "Convention on the International Trade of Endangered Species of Wild Animals and Plants (CITES)" .[52]<br>The terrestrial fauna species are not such species which would particularly suffer harm and they are not under any threat and considered part of such species causing least concern. In addition, necessary warnings shall be issued by the activity owner to such staff members who would be involved in the Project so that no damages would be inflicted on the fauna species [53] |
| Quality of employment | Unqualified staff members would be recruited locally to the largest extent possible at the stage of construction under the project and permanent staff members would again be locally recruited at the operation stage and thus, contribution would be made to the local economy though to a low extent. Such staff members who would work at the stage of construction of the project would have accommodation at the job site to be built inside the Project Area.[54] |
| Livelihood of the poor | It is projected to employ approximately 200 persons at the land preparation and construction stages of the Project and approximately 30 persons at the operation stage.[55] In the scope of the Turkish laws, trainings about waste management are conducted in the facilities by the consultants. Therefore, the local people employed in the power plant will be trained about waste management trainings. |
| Access to affordable and clean energy services | As a local energy source, geothermal power helps to mitigate Turkey's high import dependency and thus improves the access to energy services, especially in the scenarios of import stops or energy price hikes. The International Energy Agency criticizes dependency on oil |

[50] Alaşehir GPP, Project Description File, page 9
[51] Alaşehir GPP, Project Description File, page 9-10
[52] Alaşehir GPP, Project Description File, page 32
[53] Alaşehir GPP, Project Description File, page 38
[54] Alaşehir GPP, Project Description File, page 6
[55] Alaşehir GPP, Project Description File, page 6

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| | and gas imports and demands for expansion of renewable energy in Turkey. However, as the improved access to energy services does not affect the local public (as the electricity is delivered to the grid) and cannot be assigned to specific consumers.[56] |
| Human and institutional capacity | Project development will promote the use of renewable energies in the region. It will require widespread education and skills improvement, as the local people will be incorporated in the development and maintenance of the project. The local public is intensively involved in the development and decision-making regarding the plant within the stakeholder consultation process, representing a new kind of institution as part of the development of a Turkish energy project. One measurable effect on human capacity is the improved skills of plant staff. Education and trainings are part of the monitoring. One measurable effect on human capacity is the improved skills of plant staff. Education and trainings are part of the monitoring as described in (cf. section G of the projects Gold Standard Passport) |
| Quantitative employment and income generation | It is projected to employ approximately 200 persons at the land preparation and construction stages of the Project and approximately 30 persons at the operation stage.[57] When the power plant would start operation, contributions would be made to the local economy and employment opportunities would be locally created upon recruitment of labor from the nearest Residential Areas at the stages of construction and operation.[58] Unqualified staff members would be recruited locally to the largest extent possible at the stage of construction under the project and permanent staff members would again be locally recruited at the operation stage and thus, contribution would be made to the local economy though to a low extent. Upon transmission of energy to be generated by Türkerler Alaşehir Geo-Thermal Power Plant to the national grid, a portion of the country's steadily increasing energy requirements would be met as the region would be positively affected by the increases in income, population movement, training, health and other social and technical amenities and utilities. It is considered that the Project would provide major outputs economically because renewable and clean energy resources, which generate minimal effects in terms of environmental effects, would be used by the Power Plant. |
| Balance of payments and investment | The project and its role in strengthening the sustainable sector of electricity generation in Turkey tend to contribute to mitigation of import dependency.70 With 70 percent of total primary energy supply in the last years and a growing trend this is an important issue for Turkish energy policy. Electricity generation from renewable sources is completely independent from any imports and thus does not have any negative effects on the balance of payments. The positive effect of this project to this indicator will be monitored by calculation of avoided natural gas and liquid fuel import amount for electricity production. The share of electricity generation from natural gas and liquid petroleum fuels, total natural gas and liquid petroleum fuels amounts used for electricity production and electricity production amount of |

[56] IEA: Energy Policies, Turkey 2005 review, 2005, pages 85, 100 and 129
[57] Alaşehir GPP, Project Description File, page 6
[58] Alaşehir GPP, Project Description File, page 49

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| | natural gas and liquid petroleum fuels will be taken from official statistics.(TUIK)[59] |
| Technology transfer and technological self-reliance | Project will assist in transfer of new technology to Turkey . Technological skills of local suppliers and technicians are also expected to increase as a result of trainings provided by the equipment manufacturers. |

[59] Retrieved from TUIK, www.tuik.gov.tr

## SECTION E. SUSTAINABILITY MONITORING PLAN

### E. 1. Discussion on Sustainability monitoring Plan

The monitoring will be implemented by the project owner. They will encourage local stakeholders to be included in the monitoring plan. First of all, the aim of the monitoring will be introduced to the stakeholders. The mitigation measures and relevant indicators will be explained. Since, the local people will be work for the project, the opinions and comments of them regarding the project will be important and thus has chance to involve other locals to the project by discussions accordingly. However, monitoring parameters are air quality nearby residential areas in terms of CO2, CH4, H2S, Boron level in water streams, rivers and soil, water quality, soil condition, noise generation on the nearest settlement, vegetal soil and paid wages to the workers .

### E. 2. Discussion on continuous input / grievance mechanism

By the way of continuous input/grievance mechanism, it is aimed to maintain a transparent communication channel with the local stakeholders throughout the crediting period of the project, to obtain the unforeseen issues that arise during the course of a project , to monitor the suggestions of stakeholders about the project, to understand the local conditions with locals' direct experience, to maintain the participation of stakeholders in a more active and continuous way and to increase the mutual trust between the project owner and the local stakeholders.

1. Continuous input/grievance expression process book
2. Telephone access
3. Internet/email access will be the methods to maintain the mechanism.

The comments received through those methods shall/will be documented using the template below which is the template of process book as well. The template book will be in Turkish.
*The template of process book;*

| | Method Chosen (include all known details e.g. location of book, phone, number, identity of | Justification |
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| | mediator) | |
| Continuous Input / Grievance Expression Process Book | The book will be located at the Alaşehir Municipality. | At the LSC meeting, after mentioning about the subject of monitoring, the continuous input & grievance mechanism explained to the participants. The methods of input were explained to ensure that which method will be more appropriate. The process book and where is appropriate to make it available for local people and others were asked to participant. The mediator method was eliminated since locals stated that, "the mediator may be subjective after a while. You say during 7 or more years, people can change, we cannot be sure that he will be objective." The project consultant brought forward the method of process book after that criticism of local people. However, the place of book could not be decided for long time. Actually, it resulted in a clutter. It is foreseen actually since all local authorities may think as the position of process book somehow shows to the reputation and domination. The local people could not give their opinions even the project consultant encourage them to give comments. At the end of debates, it was decided that the process book will located at the Alaşehir Municipality. |
| Telephone access | Telephone number of EV-ÇEV Energy and TÜRKERLER Geo-Thermal Energy Exploration and Generation Joint Stock Co. | EN-ÇEV Energy<br><br>Pelin ZENGİN<br>+90 312 447 26 22<br>pelin@encev.com.tr<br><br>TÜRKERLER Geo-Thermal Energy Exploration and Generation Joint Stock Co.<br><br>Serhat AKAY<br>+90 312 492 03 06 |

| | | |
|---|---|---|
| | | sakay@turkerler.com |
| Internet/email access | | info@goldstandard.org |
| Nominated Independent Mediator (optional) | | n.a. |

| SECTION F. | DESCRPTION OF THE DESIGN OF THE STAKEHOLDER FEEDBACK ROUND |
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Following the LSC, the PDD and GS Passport will be completed during **March 2015**. As soon as these documents are finalized, both validation and stakeholder feedback round will be initiated.

The stakeholder feedback round shall include:

- Upload of documents (LSC report, PDD, GS Passport) to a Turkish website (either project developer's website or Turkish Focal Point)

- Letters to the stakeholders who were invited via letter to the LSC, referring to the available documentation, describing the procedure and asking for comments.

- Public announcement at project site and neighbouring villages, pointing to available documents in the internet as well as print-outs in mayor's office and the place of the LCS meeting (or adequate alternative with public access).

- The local environmental and other respective NGO's will be reached during the SFR process and attendance or at least comments received will be requested.

- During SFR the project introductory file will be introduced and explained. The important aspects of the project will be demonstrated during the meeting. The comments of stakeholders regarding project will be taken into consideration.

- LSC report will be available in Turkish, PDD and GS Passport in English.

- Announcements and documents shall contain clear contact data (Address, Telephone, and e-mail of project developer) where stakeholders can leave comments and ask questions.

- The stakeholder feedback round shall be finalized in **May 2015.**

## ANNEX 1. ORIGINAL PARTICIPANTS LIST

MANİSA İLİ, ALAŞEHİR İLÇESİ, PİYADELER BELDESİ, ALAŞEHİR JEOTERMAL ENERJİ SANTRALİ PROJESİ PAYDAŞ TOPLANTISI KATILIM LİSTESİ 26.06.2014

| AD-SOYAD | KURUM | ADRES | TEL / FAKS | E-POSTA | İMZA |
|---|---|---|---|---|---|
| Bülent Kurkutan | | Çağlayan mah. | 0533 275 6518 | | |
| Ahmet Aydın | | Gürsu Mah | 0535 3178522 | | |
| Ali Özcan | | Piyadeler | 0539 3269272 | | |
| Mustafa Ağalın | | Gürsu Mah | | | |
| Muharrem Akkan | | Gürsu Mah | 0537 629 0325 | | |
| CUMDAN Mustafa | | Piyadeler-Köy | 0535 570 41 07 | | |
| R. Şerif Şen | | Piyadeler | 0532 522 19 14 | | |
| İsha Adamir | | Piyadeler | | | |

MANİSA İLİ, ALAŞEHİR İLÇESİ, PİYADELER BELDESİ, ALAŞEHİR JEOTERMAL ENERJİ SANTRALİ PROJESİ PAYDAŞ TOPLANTISI KATILIM LİSTESİ 26.06.2014

| AD-SOYAD | KURUM | ADRES | TEL / FAKS | E-POSTA | İMZA |
|---|---|---|---|---|---|
| Zeki KARTA | Çiftçi | Piyadeler | 05376154295 | — | |
| Hasan Yavuz | Çiftçi | Piyadeler | 05383711346 | | |
| Mehmet Bozkurt | Muhtar | Piyadeler | 0532 7060353 | | |
| Halil Güleç | Çiftçi | Piyadeler Mh Alaşehir | 05324702544 | | |
| İbrahim Ertürk | | " | | | |
| Mustafa Akçay | | " | | | |
| Ali Basak | | " | | | |
| Ramazan Bayram | Muhtar | Şabyan | 05364586641 | | |

MANİSA İLİ, ALAŞEHİR İLÇESİ, PİYADELER BELDESİ, ALAŞEHİR JEOTERMAL ENERJİ SANTRALİ PROJESİ PAYDAŞ TOPLANTISI KATILIM LİSTESİ 26.06.2014

| AD-SOYAD | KURUM | ADRES | TEL / FAKS | E-POSTA | İMZA |
|---|---|---|---|---|---|
| Mahmut Karadağ | Türkerler | Türkerler | | | |
| Cemil SEÇKİN | Türkerler | Türkerler | | | |
| Süleyman ülküner | | | | | |
| mehmet | Gündü | | | | |
| Mehmet | Özdemir | Türkerler Piyadeler | | | |
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MANİSA İLİ, ALAŞEHİR İLÇESİ, PİYADELER BELDESİ, ALAŞEHİR JEOTERMAL ENERJİ SANTRALİ PROJESİ PAYDAŞ TOPLANTISI KATILIM LİSTESİ 26.06.2014

| AD-SOYAD | KURUM | ADRES | TEL / FAKS | E-POSTA | İMZA |
|---|---|---|---|---|---|
| Rasit Bilgic | | Piyadeler | 0532 5591303 | | |
| Necdet Türk | Alaşehir Ziraat odası | Alaşehir | 0532 6738687 | | |
| Sami Gettikoğlu | Alaşehir Belediyesi | " | | | |
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MANİSA İLİ, ALAŞEHİR İLÇESİ, PİYADELER BELDESİ, ALAŞEHİR JEOTERMAL ENERJİ SANTRALİ PROJESİ PAYDAŞ TOPLANTISI KATILIM LİSTESİ 26.06.2014

| AD-SOYAD | KURUM | ADRES | TEL / FAKS | E-POSTA | İMZA |
|---|---|---|---|---|---|
| İbrahim Candan | Çiftçi | Alaşehir Piyadeler mahallesi | 0535 208 1625 Hasan | Fa Zafer Sekat umam | |
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| ANNEX 2. | ORIGINAL EVALUATION FORMS |
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**DEĞERLENDİRME FORMU**

**TÜRKERLER ALAŞEHİR JEOTERMAL ENERJİ SANTRALİ PROJESİ**

**KARBON EMİSYON AZALTIM PROJESİ HALKIN KATILIMI TOPLANTISI, 26.06.2014**

| | |
|---|---|
| **Ad Soyadı** | GALIP BICGIÇ |
| Toplantı hakkındaki izlenimleriniz nelerdir? | Yalan yanlış Bilgiler |
| Projenin beğendiğiniz yönleri nelerdir? | Hiç beğenmiyorum |
| Projenin beğenmediğiniz yönleri nelerdir? | çok ters Halka yakın |
| İmza | |

**DEĞERLENDİRME FORMU**

**TÜRKERLER ALAŞEHİR JEOTERMAL ENERJİ SANTRALİ PROJESİ**

**KARBON EMİSYON AZALTIM PROJESİ HALKIN KATILIMI TOPLANTISI, 26.06.2014**

| | |
|---|---|
| **Ad Soyadı** | Muharrem Alev |
| Toplantı hakkındaki izlenimleriniz nelerdir? | Olumlu |
| Projenin beğendiğiniz yönleri nelerdir? | Yok |
| Projenin beğenmediğiniz yönleri nelerdir? | Öğrendim |
| İmza | |

**DEĞERLENDİRME FORMU**

**TÜRKERLER ALAŞEHİR JEOTERMAL ENERJİ SANTRALİ PROJESİ**

**KARBON EMİSYON AZALTIM PROJESİ HALKIN KATILIMI TOPLANTISI, 26.06.2014**

| | |
|---|---|
| **Ad Soyadı** | Halil Çiçek |
| Toplantı hakkındaki izlenimleriniz nelerdir? | Bizlere zarar |
| Projenin beğendiğiniz yönleri nelerdir? | verecek |
| Projenin beğenmediğiniz yönleri nelerdir? | |
| İmza | |

**DEĞERLENDİRME FORMU**

**TÜRKERLER ALAŞEHİR JEOTERMAL ENERJİ SANTRALİ PROJESİ**

**KARBON EMİSYON AZALTIM PROJESİ HALKIN KATILIMI TOPLANTISI, 26.06.2014**

| | |
|---|---|
| **Ad Soyadı** | Ali Özcan |
| Toplantı hakkındaki izlenimleriniz nelerdir? | Halkı bilindirme |
| Projenin beğendiğiniz yönleri nelerdir? | ülke Ekonomisine katkı |
| Projenin beğenmediğiniz yönleri nelerdir? | Dere ve Akarsuların Kirlenmesi |
| İmza | |

**DEĞERLENDİRME FORMU**

**TÜRKERLER ALAŞEHİR JEOTERMAL ENERJİ SANTRALİ PROJESİ**

**KARBON EMİSYON AZALTIM PROJESİ HALKIN KATILIMI TOPLANTISI, 26.06.2014**

| | |
|---|---|
| **Ad Soyadı** | Mehmet Yeşilyurt<br>Piyadeler |
| Toplantı hakkındaki izlenimleriniz nelerdir? | Bilgilendirme her zaman iyidir. |
| Projenin beğendiğiniz yönleri nelerdir? | Temiz enerji oluşu |
| Projenin beğenmediğiniz yönleri nelerdir? | Kurulum aşamasında zarar gördüm zararım telafi edilmedi<br>~~Temiz enerji~~ oluşu |
| İmza | |