



## Geothermal Exploratory Drilling Project (P152039)

EUROPE AND CENTRAL ASIA | Armenia | Energy & Extractives Global Practice |  
Recipient Executed Activities | Investment Project Financing | FY 2015 | Seq No: 1 | ARCHIVED on 24-Sep-2015 | ISR20717 |

Implementing Agencies: Renewable Resources and Energy Efficiency Fund

### Key Dates

#### Key Project Dates

Board Approval date:08-Jun-2015

Effectiveness Date:25-Aug-2015

Planned Mid Term Review Date:20-Jan-2017

Actual Mid-Term Review Date:--

Original Closing Date:31-May-2019

Revised Closing Date:31-May-2019

### Project Development Objectives

Project Development Objective (from Project Appraisal Document)

The proposed project development objective is to confirm whether the geothermal resource at the project site is suitable for power generation and, if confirmed, to involve the private sector in the development of a geothermal power plant.

Has the Project Development Objective been changed since Board Approval of the Project Objective?

No

### Components

Name

Phase I exploratory drilling program:(Cost \$5.37 M)

Phase II exploratory drilling program and transaction advisory:(Cost \$5.31 M)

### Overall Ratings

| Name                                 | Previous Rating | Current Rating |
|--------------------------------------|-----------------|----------------|
| Progress towards achievement of PDO  | --              | ● Satisfactory |
| Overall Implementation Progress (IP) | --              | ● Satisfactory |
| Overall Risk Rating                  | --              | ● Substantial  |

### Implementation Status and Key Decisions



The project is effective. The construction of the access road to the Karkar site and rig pads, required for equipment and facilities for drilling of slim well(s), is in progress. The drilling of slim well(s) will commence in early June 2016 immediately after the weather conditions at the site improve.

## Risks

### Systematic Operations Risk-rating Tool

| Risk Category  | Rating at Approval | Previous Rating | Current Rating |
|--|--------------------|-----------------|----------------|
| Political and Governance                                     | ● Low              | --              | ● Low          |
| Macroeconomic  | ● Moderate         | --              | ● Moderate     |
| Sector Strategies and Policies                               | ● Substantial      | --              | ● Substantial  |
| Technical Design of Project or Program                       | ● Substantial      | --              | ● Substantial  |
| Institutional Capacity for Implementation and Sustainability | ● Moderate         | --              | ● Moderate     |
| Fiduciary  | ● Moderate         | --              | ● Moderate     |
| Environment and Social                                       | ● Low              | --              | ● Low          |
| Stakeholders   | ● Low              | --              | ● Low          |
| Other  | --                 | --              | --             |
| Overall  | ● Substantial      | --              | ● Substantial  |



## Results

### Project Development Objective Indicators

► Evidence provided to the Government for its decision on whether or not to construct a geothermal power plant at the Karkar geothermal site (Yes/No, Custom)

|       | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
|-------|-------------|-------------------|------------------|-------------|
| Value | N           | --                | N                | Y           |
| Date  | 14-Jan-2015 | --                | 15-Sep-2015      | 30-Apr-2018 |

► If geothermal resource is confirmed, power plant development is competitively awarded to qualified private developer(s) (Yes/No, Custom)

|       | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
|-------|-------------|-------------------|------------------|-------------|
| Value | N           | --                | N                | Y           |
| Date  | 14-Jan-2015 | --                | 15-Sep-2015      | 30-May-2019 |

### Overall Comments

### Intermediate Results Indicators

► One or two slim exploratory wells drilled to a depth of around 1,200 meters (Text, Custom)

|       | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0           | --                | 0                | At least 1  |
| Date  | 30-Mar-2015 | --                | 15-Sep-2015      | 30-Sep-2016 |



- One production-size well drilled to a depth of around 1,800 meters if the results of the drilling of slim well(s) warrantee such drilling (Number, Custom)

|       | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00        | --                | 0.00             | 1.00        |
| Date  | 30-Mar-2015 | --                | 15-Sep-2015      | 30-Sep-2017 |

- Feasibility study for a potential power plant completed (Text, Custom)

|       | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
|-------|-------------|-------------------|------------------|-------------|
| Value | No          | --                | No               | Yes         |
| Date  | 30-Mar-2015 | --                | 15-Sep-2015      | 30-Apr-2018 |

- Tendering for private sector involvement in construction of a geothermal power plant completed if results from the feasibility study confirm technical and economic/financial viability of such a plant (Text, Custom)

|       | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
|-------|-------------|-------------------|------------------|-------------|
| Value | No          | --                | No               | Yes         |
| Date  | 30-Mar-2015 | --                | 15-Sep-2015      | 15-May-2019 |

- Percent of registered project related grievances responded to within stipulated service standards for response times (Percentage, Custom)

|       | Baseline    | Actual (Previous) | Actual (Current) | End Target  |
|-------|-------------|-------------------|------------------|-------------|
| Value | 0.00        | --                | 100.00           | 100.00      |
| Date  | 30-Mar-2015 | --                | 15-Sep-2015      | 30-May-2019 |

Overall Comments

## Data on Financial Performance



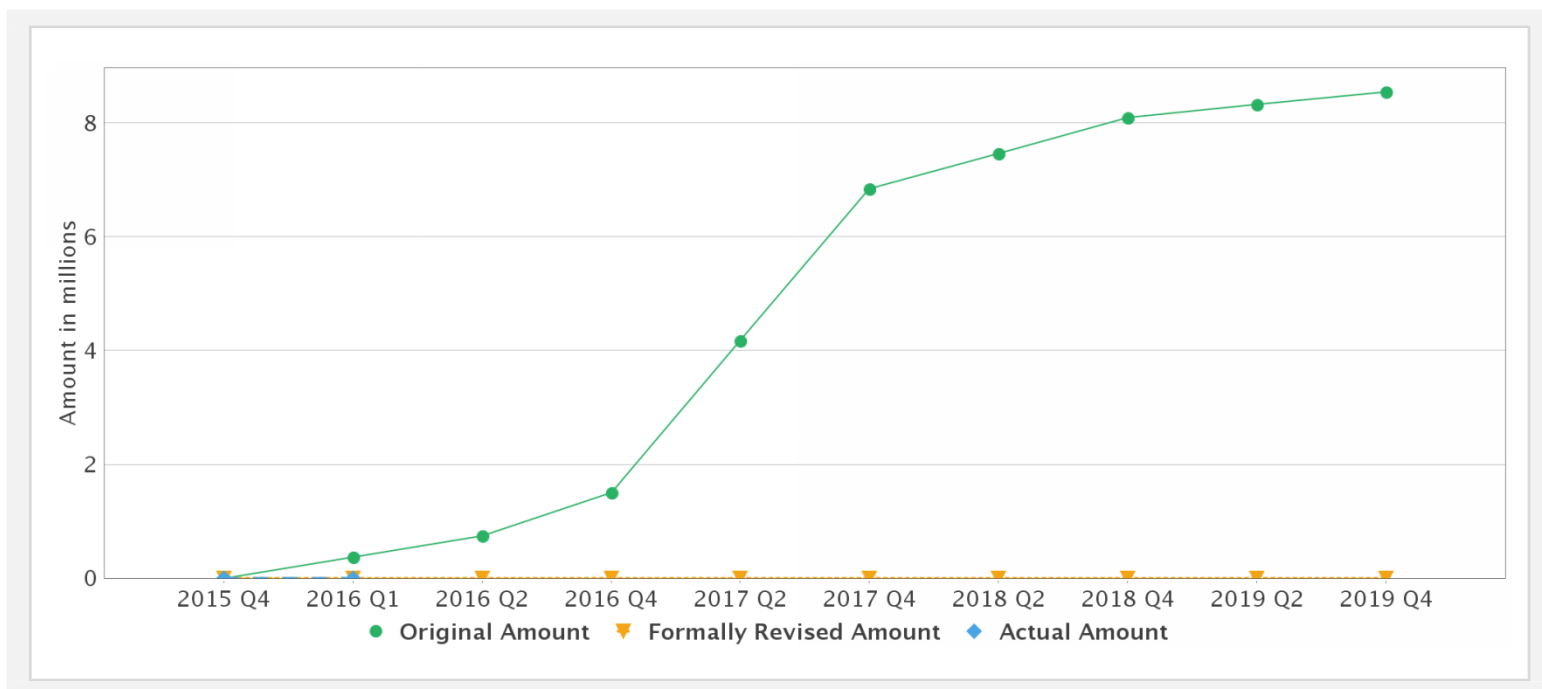
**Disbursements (by loan)**

| Project | Loan/Credit/TF | Status    | Currency | Original | Revised | Cancelled | Disbursed | Undisbursed | Disbursed |
|---------|----------------|-----------|----------|----------|---------|-----------|-----------|-------------|-----------|
| P152039 | TF-A0544       | Effective | USD      | 8.55     | 8.55    | 0.00      | 0.00      | 8.55        | 0%        |

**Key Dates (by loan)**

| Project | Loan/Credit/TF | Status    | Approval Date | Signing Date | Effectiveness Date | Orig. Closing Date | Rev. Closing Date |
|---------|----------------|-----------|---------------|--------------|--------------------|--------------------|-------------------|
| P152039 | TF-A0544       | Effective | 08-Jun-2015   | 16-Jun-2015  | 25-Aug-2015        | 31-May-2019        | 31-May-2019       |

**Cumulative Disbursements**



**Restructuring History**

There has been no restructuring to date.

**Related Project(s)**

There are no related projects.

