

Triple-A Tools

English version



NTUA



The Triple-A project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 846569.



Enhancing at an Early Stage the Investment Value Chain of Energy Efficiency Projects

Standardised Triple-A Tools

Guidelines

July 2021



The Triple-A project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 846569.

Disclaimer

The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Union. The content of the Triple-A toolbox' web page and the outcomes the Triple-A toolbox are for information purposes only. The relevant legal instruments and the text of the call shall take precedence over the information contained in this page. The European Commission or EASME does not accept responsibility for any use made of the information contained therein.

Copyright Message

This report, if not confidential, is licensed under a Creative Commons Attribution 4.0 International License (CC BY 4.0); a copy is available here: <https://creativecommons.org/licenses/by/4.0/>. You are free to share (copy and redistribute the material in any medium or format) and adapt (remix, transform, and build upon the material for any purpose, even commercially) under the following terms: (i) attribution (you must give appropriate credit, provide a link to the license, and indicate if changes were made; you may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use); (ii) no additional restrictions (you may not apply legal terms or technological measures that legally restrict others from doing anything the license permits).

Table of Contents

1	Introduction.....	1
2	Quick Start.....	2
3	Accessing the Triple-A Tools	4
3.1	Homepage	4
3.2	Signing up for the Triple-A Tool.....	5
3.3	Login into Triple-A Tool	9
4	Managing the Triple-A Assess Tool	10
4.1	Basic Information	10
4.2	Initial EE Project Information	11
4.3	The EU Taxonomy Compliance Check.....	12
4.3.1	Project Subsector / Category Selection.....	12
4.3.2	EU Taxonomy Criteria	15
4.4	The Risk Calculation step.....	17
4.5	Assess Tool Results	18
5	Managing the Triple-A Agree Tool.....	19
5.1	Basic Information	19
5.2	Input Required	20
5.3	Criteria and Weights Selection.....	21
5.4	Agree Tool Results	23
6	The Triple-A Assign Tool.....	24
6.1	Basic Information	24
6.2	Financing Bodies Interface.....	24
6.2.1	Find Projects.....	25
6.2.2	Aggregate Projects	28
6.2.3	Green Bonds Database	30
6.2.4	My Proposals	32
6.3	Companies and Project Developers Interface	33
6.3.1	Financing Proposals	34
6.3.2	Green Bonds Requests	35
7	“My Projects” Interface	37

Figures

Figure 1: Triple-A Tools - Assess, Agree, Assign Links	2
Figure 2: Triple-A Tools - Quick Start: Tools Basic Steps	3
Figure 3: Triple-A Tools - Homepage	4
Figure 4: Triple-A Tools - Registration Screen	6
Figure 5: Triple-A Tools - Optional Survey Questions for Companies/ Project Developers	7
Figure 6: Triple-A Tools - Optional Survey Questions for Financing Bodies	8
Figure 7: Triple-A Tools - Login Screen	9
Figure 8: Triple-A Assess Tool - Homepage	10
Figure 9: Assess Tool - Initial Project Information Page	11
Figure 10: Assess Tool - Buildings Sector Page	13
Figure 11: Assess Tool - Manufacturing Sector Page	14
Figure 12: Assess Tool - Transportation Sector Page	14
Figure 13: Assess Tool - District Energy Networks Sector Page	15
Figure 14: Assess Tool - EU Taxonomy Checklist	16
Figure 15: Assess Tool - Project Risk Q&A section	17
Figure 16: Assess Tool - Results	18
Figure 17: Agree Tool - Homepage	19
Figure 18: Agree Tool - Input Page	20
Figure 19: Agree Tool - Financial Indicator	21
Figure 20: Agree Tool - Weights Selection	22
Figure 21: Agree Tool - Results	23
Figure 22: Assign Tool - Homepage for Financing Bodies	25
Figure 23: Assign Tool - Project Database	26
Figure 24: Assign Tool - Financing Proposal Form	27
Figure 25: Agree Tool - Proposal Submission Confirmed	28
Figure 26: Assign Tool - Green Bonds Issue Interface	29
Figure 27: Assign Tool - Green Bonds Database	30
Figure 28: Assign Tool - Green Bond's Projects Breakdown	31
Figure 29: Agree Tool - My proposals	32
Figure 30: Assign Tool - Homepage for EE Companies / Project Developers	33
Figure 31: Assign Tool - Financing Proposals Interface for Companies / Project Developers	34
Figure 32: Assign Tool - Proposal Overview	35

Figure 33: Assign Tool - Green Bond's Requests Interface for Companies / Project Developers.....	36
Figure 34: Assign Tool - List of Projects Included in a Green Bond.....	36
Figure 35: Triple-A Tools - "My Projects" Interface	37
Figure 36: Triple-A Tools - Analytic Overview of a Submitted Project	38

Executive Summary

The Triple-A Standardised Tools are a web-based application (<https://toolbox.aaa-h2020.eu/>), which provides information on the identification and financing of Triple-A investments. More specifically, the Assess Tool evaluates mainly the risks and maturity of energy efficiency investments along with the EU Taxonomy compliance, the Agree Tool identifies the Triple-A investments that meet specific requirements, and the Assign Tool matches the investments with state-of-the-art green financing trends.

The report provides a user manual, including all necessary steps that a user should follow for each one of the Tools, and explains the produced output in each methodological step. The Triple-A Tools are analysed individually, reporting all the required operations during the navigation in the information platform. A user manual video has been also released to visualise the Tools' navigation, giving valuable information to potential users.

1 Introduction

The Triple-A scheme is introduced to identify “Triple-A” energy efficiency (EE) investments, aiming to reduce the respective time and effort required at the crucial phase of the investment’s conceptualisation and increase transparency and efficiency of the decision making.

The purpose of the present guidelines report is to provide a user manual for each Tool in order to support the user of the Triple-A Standardised Tools to navigate the web application better. The Triple-A Tools are accessible through the Triple-A Standardised Toolbox Platform (Standardised Triple-A Toolbox: <http://toolbox.aaa-h2020.eu/>), which can be reached through the direct link, or the Triple-A webpage (<https://aaa-h2020.eu/tools/>).

A dedicated video with instructions is available online in Triple-A YouTube channel¹, Triple-A website Home, Tools² and Media³ pages. The Triple-A Tools Instructions Video shows and describes all the available functionalities and services that the Triple-A Tools provide in under 10 minutes, acting as an efficient, quick start guide for stakeholders that opt to use the Tools with the least effort needed.

In case any support is needed on the navigation and use of the Standardised Triple-A Tools, the user is more than welcome to contact Triple-A Team through the following e-mail: contact@aaa-h2020.eu.

¹ <https://www.youtube.com/watch?v=wd1XG4k6uyk>

² <https://aaa-h2020.eu/tools>

³ <https://aaa-h2020.eu/index.php/media>

2 Quick Start

Once landed on the [Tools Homepage \(https://toolbox.aaa-h2020.eu/\)](https://toolbox.aaa-h2020.eu/), the user should register to gain access. The registration is required as the Triple-A Tools provide personalised functionalities, results, and databases linked to each user, based on the user's input (e.g., the database of projects submitted). When registered and redirected to the Tools Homepage, by clicking on one of the Assess, Agree, Assign icons, the user can navigate to the corresponding Tool (Figure 1).

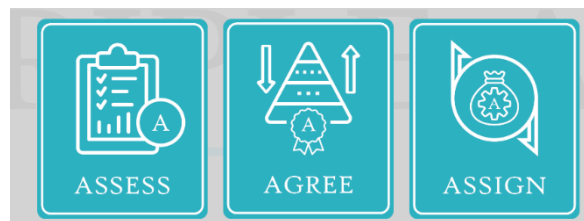


Figure 1: Triple-A Tools - Assess, Agree, Assign Links

The basic steps of the Tools are shown below (Figure 2).

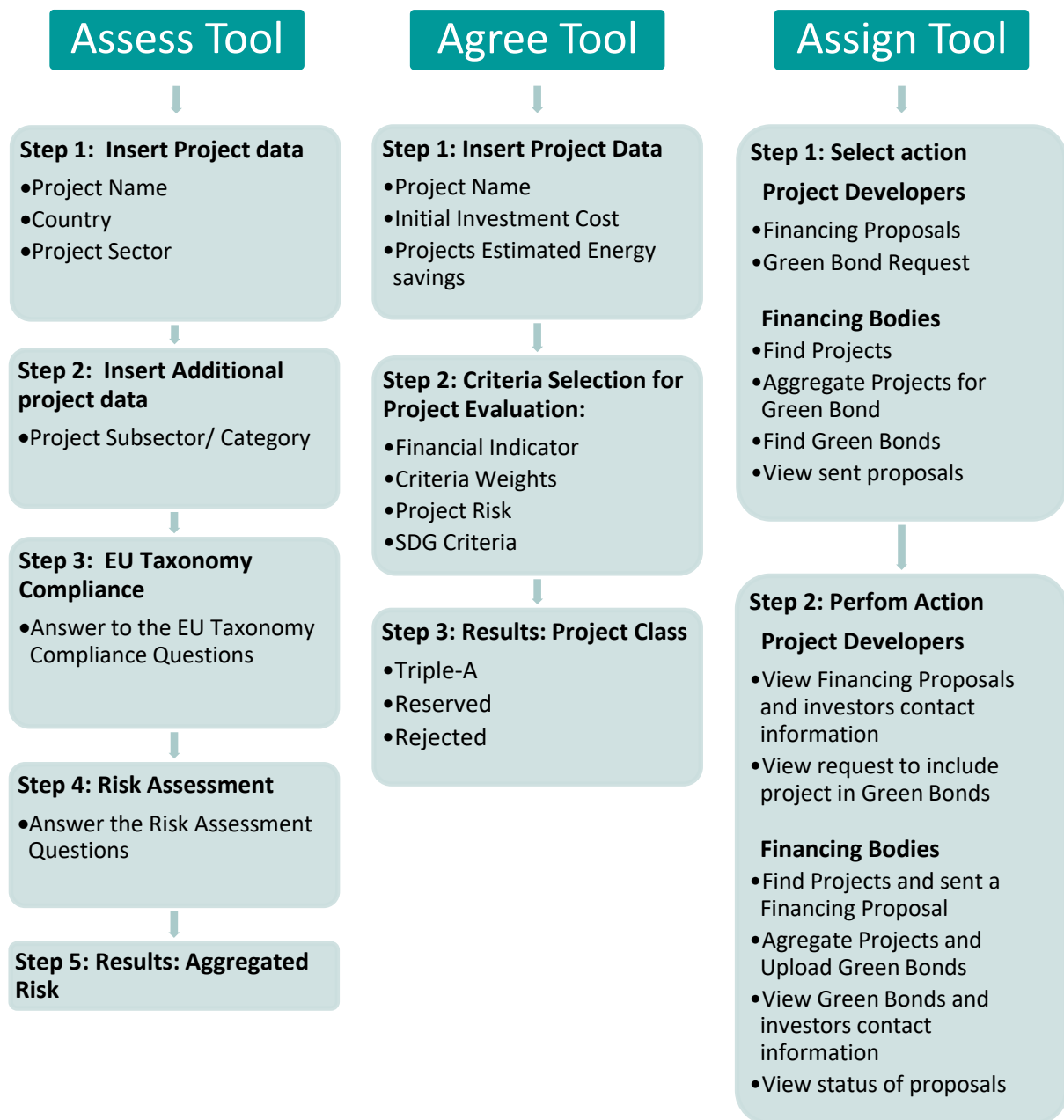


Figure 2: Triple-A Tools - Quick Start: Tools Basic Steps

3 Accessing the Triple-A Tools

The following sections provide basic information that is of general interest to all users of the Triple-A Standardised Tools.

The Triple-A Tools are accessible through the Triple-A Standardized Toolbox platform (<http://toolbox.aaa-h2020.eu/>) and could also be reached through the dedicated Triple-A webpage <https://aaa-h2020.eu/tools/>.

3.1 Homepage

The Triple-A Tools homepage contains some initial information about the Triple-A methodology. When the user enters the Tool is able to access and navigate the homepage without any additional subscription. The user also has the opportunity to navigate quickly to the three individual steps of the methodology by clicking on the respective icon.

There is a navigation bar on the top of the page that includes hyperlinks for the three individual steps of the Triple-A Tools.

In the right part of the navigation bar, the user may find the “Login” and “Register” buttons.

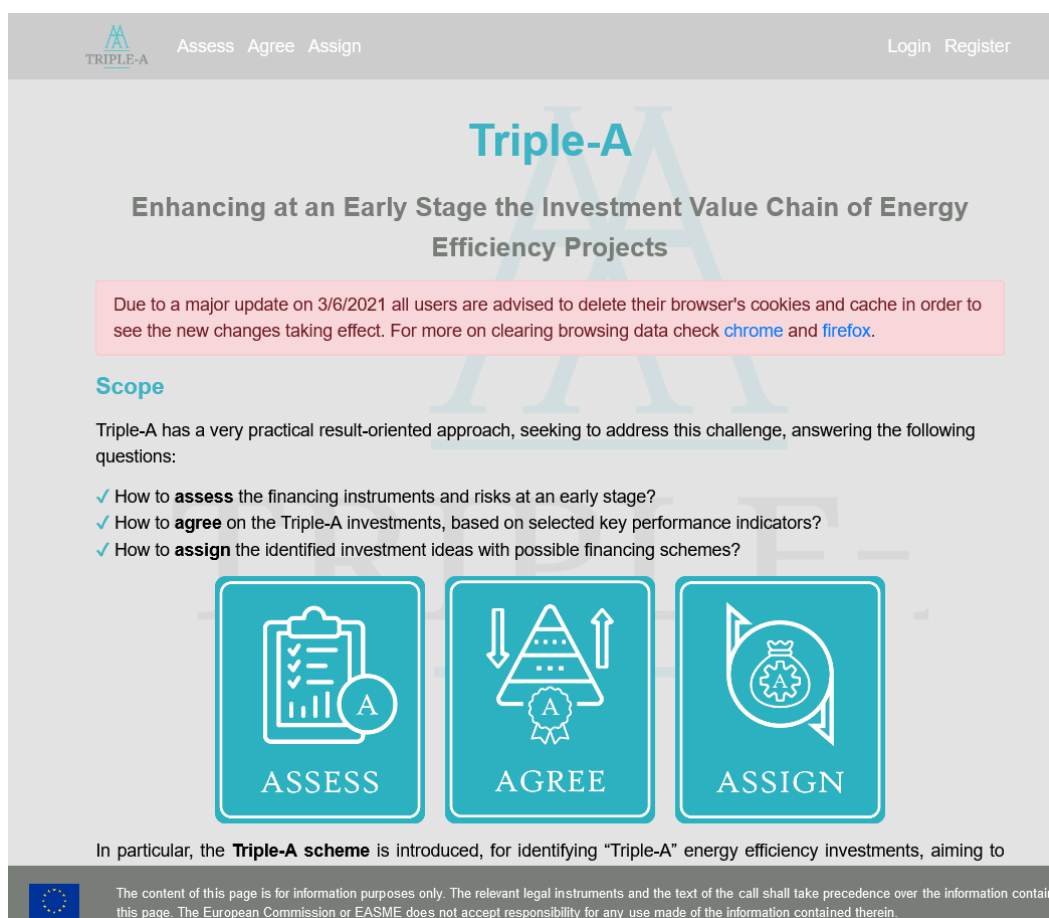


Figure 3: Triple-A Tools - Homepage

3.2 Signing up for the Triple-A Tool


Access to the Triple-A Standardised Tool is protected by a **username** and **password credentials**. If the user is not logged in, access to the Tool is limited. The first time that the Tool is used, registration is required. The registration is a quick process that is completed in a few minutes.

If the user already has an account, they could click on the “**Login**” button and login to the Triple-A Tool and access all the available functionalities. The only required information, in this case, is the username and the password.

While signing up, users should select their **type**. The user type defines the interface that will be loaded when the user enters the Assign Tool.

The alternative user types are the following:

- **Financing Bodies** (Green Investment Banks, Investment Funds (or managers), Unit Investment Trusts, Developers, and Managers of Financial Products).
- **Project Developers & Companies** (Energy Companies, ESCOs, Credit Professionals, Management Investment Companies, and Construction Companies).
- **Policy Makers and Policy Support Institutes** (EC Directorates & Units, Governments or Local Authorities, Ministries, Policy Support Institutes).
- **Researchers and Academia in Business and Techno-economic Fields** (Individuals Engaged in Research Initiatives).
- **Other** (Technology Suppliers, Property valuers, Real Estate Agents, Technical Chambers, Notaries, Association Individuals (e.g., Architects, Engineers), Media, NGOs).


Assess Agree Assign

Login Register

Create an account

Username:

Choose a Category:


Financing Bodies

Email:

Password:

Password Confirmation:

Sign Up



The content of this page is for information purposes only. The relevant legal instruments and the text of the call shall take precedence over the information contained this page. The European Commission or EASME does not accept responsibility for any use made of the information contained therein.

Figure 4: Triple-A Tools - Registration Screen

Once the sign-up is procedure is completed, users have the opportunity to edit their profiles and add technical and financial data regarding their company/ organisation under the **“Profile”** section on the top right corner of the Triple-A Tools page (Figure 3). The section included predefined surveys that can be completed to update the user’s profile. The surveys are customised to each user type, and the procedure is optional.

Optional survey questions

The following fields are optional. By answering to the following survey questions, you are completing your user profile, in order to be available to other Triple-A Assign Tool users. By doing so, potential investors and other project developers can have a quick overview of your organization profile. Keep in mind that by completing the following fields you agree that the information provided will be available to other Triple-A Assign Tool users.

Sector:

Years Active:

Total Employees:

Total Employees with technical accreditations/certifications related to energy efficiency:

Number of Projects over the last year:

Projects related to Energy Efficiency and Climate Change over the last year:

Total Revenue over the last year(€):

Figure 5: Triple-A Tools - Optional Survey Questions for Companies/ Project Developers

Optional survey questions

The following fields are optional. By answering to the following survey questions, you are completing your user profile, in order to be available to other Triple-A Assign Tool users. By doing so, potential investors and other project developers can have a quick overview of your organization profile. Keep in mind that by completing the following fields you agree that the information provided will be available to other Triple-A Assign Tool users.

Sector:

Not defined

Years Active:

Total number of employees:

Total number of financed projects over the last year:

Number of financed projects related to energy efficiency and climate change over the last year:

Figure 6: Triple-A Tools - Optional Survey Questions for Financing Bodies

The incorporation of survey questions for the technical and financial profiles of users' organisations aims to build trust between financing bodies and companies/ project developers. The user profiles are visible to other Triple-A users.

The user profile surveys are listed below:

Project Developers / Company

- Name
- Sector
- Years in activity
- Number of employees in total
- Number of employees with technical accreditations/certifications related to energy efficiency and climate change
- Any company certifications related to energy efficiency and climate change
- Total number of projects over the last year
- Number of projects related to energy efficiency and climate change over the last year
- Total revenue over the last year
- Company EBITDA over the last year
- Net profit over the last year
- Net debt over the last year
- Financial reports reviewed by a third party available

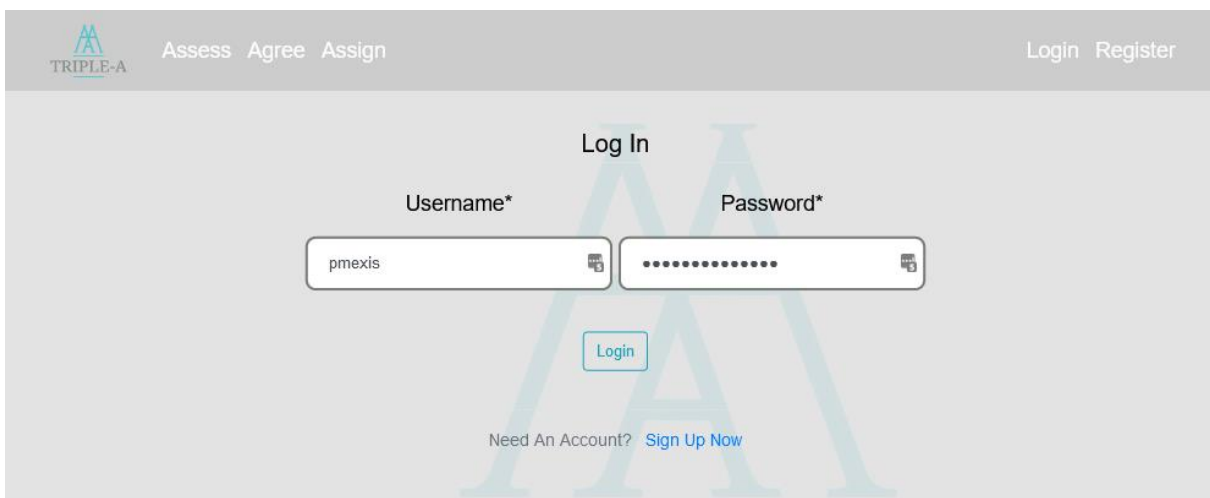
Financing Bodies

- Financing Body details and credentials

- Are you a public or private entity? If applicable, are you a physical person or a legal person?
- Sector
- Years in activity
- Total number of employees
- Total number of financed projects over the last year
- Number of financed projects related to energy efficiency and climate change over the last year

3.3 Login into Triple-A Tool

In order to log into the system, the user needs to fill in a valid username and password credentials in the corresponding fields and hit the “**Login**” button.



The screenshot shows the login interface of the Triple-A Tools. At the top, there is a navigation bar with the TRIPLE-A logo on the left and links for 'Assess', 'Agree', 'Assign', 'Login', and 'Register' on the right. The main content area is titled 'Log In'. Below the title, there are two input fields: 'Username*' and 'Password*'. The 'Username*' field contains the text 'pmexis'. The 'Password*' field is masked with dots. Below these fields is a blue 'Login' button. At the bottom, there is a link that says 'Need An Account? Sign Up Now'.

Figure 7: Triple-A Tools - Login Screen

Triple-A project is committed to ensuring the security and protection of the processed personal information and providing a compliant and consistent approach to data protection according to GDPR principles.

In case the user has any queries related to Triple-A compliance to GDPR, the user is invited to send an e-mail to contact@aaa-h2020.eu.

4 Managing the Triple-A Assess Tool

4.1 Basic Information

The user may access the Triple-A Assess Tool either through the Assess icon on the homepage or through the navigation bar on the top of the page. This page includes a short description of the Triple-A Assess Tool and methodology. The user should click the **“Get Started”** button to start the Assess Tool and agree that the project data will be saved to the Triple-A Tools database and visible to other users.

The Triple-A Assess Tool consists of two phases. In the first phase, the energy efficiency investments are checked in terms of EU taxonomy compliance. In the second phase, the aggregated risk of the candidate investments is calculated.

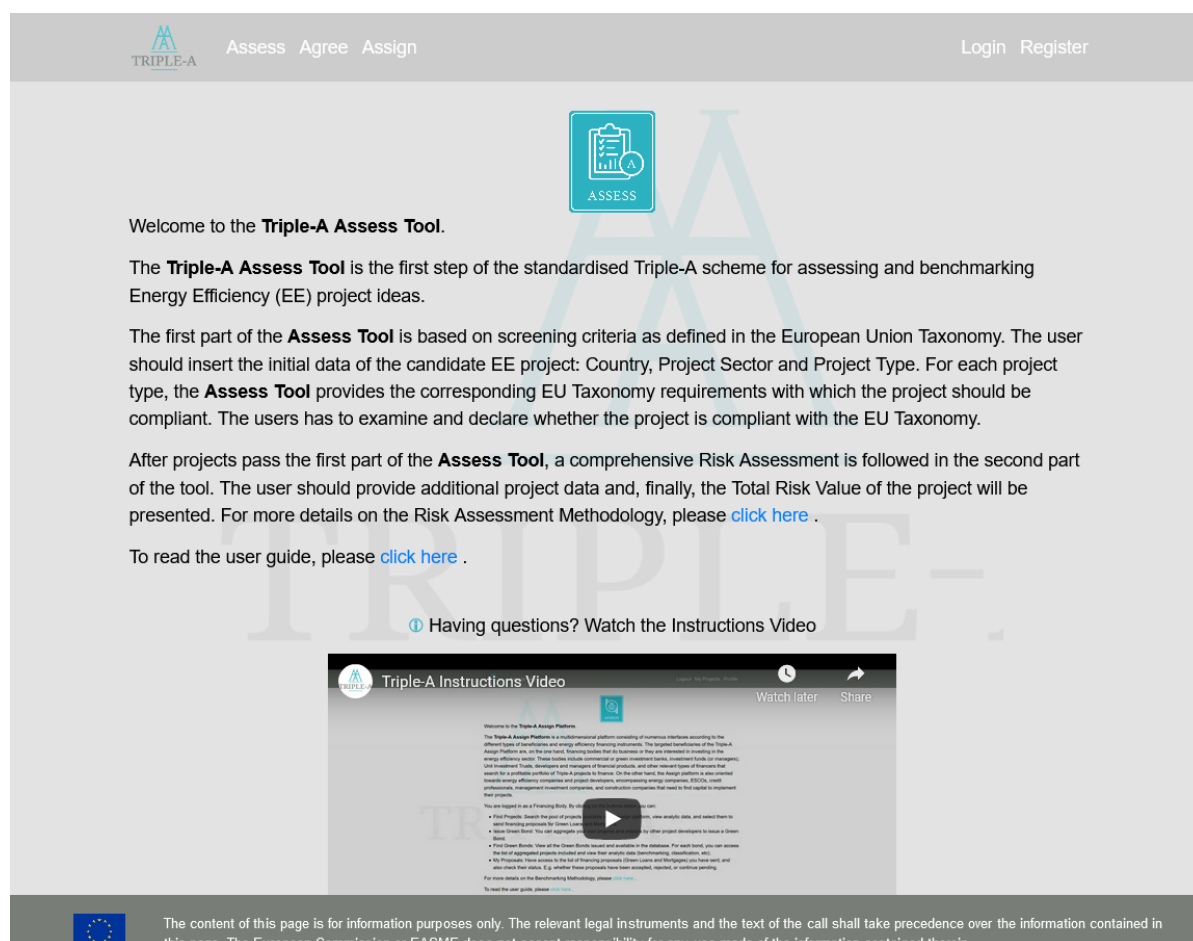


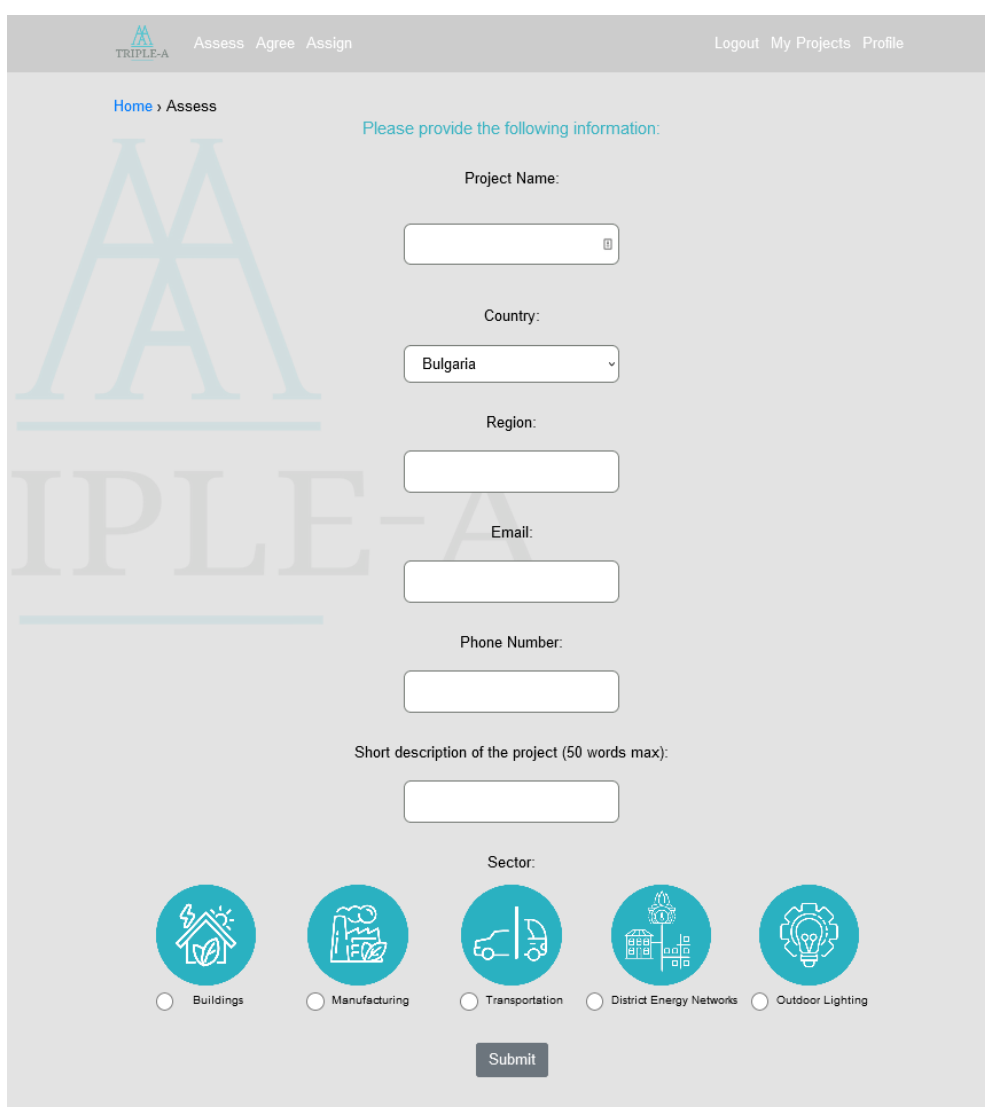
Figure 8: Triple-A Assess Tool - Homepage

4.2 Initial EE Project Information

On the first page of the Triple-A Assess Tool, the user should fill in the basic information of the candidate energy efficiency project. More specifically, it is required to insert the **project name / type** and the **country** in which the project is to be developed, as well as to select one of the five sectors:

- Buildings
- Manufacturing
- Transportation
- District Energy Networks
- Outdoor Lighting

After having inserted all the necessary information about the project, the user should click on the **“Submit”** button in order to proceed to the next step.



The screenshot shows the 'Assess' page of the Triple-A tool. At the top, there is a navigation bar with the Triple-A logo, links for 'Assess', 'Agree', and 'Assign', and user options for 'Logout', 'My Projects', and 'Profile'. Below the navigation bar, the page title is 'Home > Assess'. The main content area is titled 'Please provide the following information:'. It contains several input fields: 'Project Name' (text input), 'Country' (dropdown menu with 'Bulgaria' selected), 'Region' (text input), 'Email' (text input), and 'Phone Number' (text input). Below these is a 'Short description of the project (50 words max):' (text input). At the bottom, there is a 'Sector:' section with five radio button options, each accompanied by an icon: 'Buildings' (house with sun), 'Manufacturing' (factory), 'Transportation' (truck), 'District Energy Networks' (city grid), and 'Outdoor Lighting' (lightbulb). A 'Submit' button is located at the bottom center of the form.

Figure 9: Assess Tool - Initial Project Information Page

4.3 The EU Taxonomy Compliance Check

The first phase involves assessing whether the EE project is EU taxonomy⁴ eligible, taking into account the relevant Technical Screening Criteria. As long as the investment is located within the EU Member States, it is assumed that the Do No Significant Harm (DNSH) are met, including the appropriate management of the associated social risks. The basic concept in this step is that the user should declare whether the EE project fulfils a series of Taxonomy criteria or not. The indication of whether the project is Taxonomy compliant or not will be included in the project's details and will be visible to investors in the Assign Tool. Depending on the sector that was selected in the previous step, this phase may be dimly differentiated. Except for the Outdoor Lighting sector, all sectors include an intermediate step that requires the definition of some additional information about the **project subsector and/or category**.

4.3.1 Project Subsector / Category Selection

As mentioned above, most sectors require the user to provide some additional information before presenting the EU Taxonomy criteria eligibility checklist. This further classification of the projects is necessary because each project category and subsector combine different Taxonomy criteria. In case that a project belongs to the Outdoor Lighting sector, this intermediate phase is skipped. Therefore, the user is immediately transferred to the EU Taxonomy checklist screen. In the following paragraphs, the available options for each sector are presented.

4.3.1.1 Buildings Sector

For projects of the Buildings sector, the user should select the **project subsector** (residential / non-residential) and at least one **project category**.

It is important to note that multiple project types could be selected, thus not restricting the user to include only projects which belong to a specific project type.

⁴ EU Taxonomy Regulation (<https://eur-lex.europa.eu/eli/reg/2020/852/o>)

Home > Assess > Buildings

Buildings



Please provide the **project subsector** :

☐ Residential
☐ Non residential

Please provide the **project category(ies)**:

It is necessary to select at least one project category.

☐ Building envelope retrofits
☐ HVAC&R retrofits
☐ Lighting appliances retrofits
☐ Automatic control retrofits
☐ RES installations
☐ Construction of a new building

Figure 10: Assess Tool - Buildings Sector Page


4.3.1.2 Manufacturing Sector

For projects of the Manufacturing sector, the user should select the **project subsector** of the investment. Therefore, the user should choose one of the following subsectors:

- Hydrogen
- Iron and Steel
- Aluminium
- Cement
- Low carbon technologies
- Fertilisers and Nitrogen
- Other organic basic chemicals
- Other inorganic basic chemicals

Home > Assess > Manufacturing

Manufacturing



Please select the project subsector of the investment from the following options:

- ☐ Hydrogen
- ☐ Iron and Steel
- ☐ Aluminium
- ☐ Cement
- ☐ Low carbon technologies
- ☐ Fertilizers and Nitrogen
- ☐ Other organic basic chemicals
- ☐ Other inorganic basic chemicals


Figure 11: Assess Tool - Manufacturing Sector Page

4.3.1.3 Transportation Sector

For projects of the Buildings sector, the user should select the **project subsector** of the investment between public transport and passenger cars and light commercial vehicles.

Home > Assess > Transportation

Transportation



Please select the project subsector of the investment from the following options:

- ☐ Public Transport
- ☐ Passenger cars and light commercial vehicles

SUBMIT

Figure 12: Assess Tool - Transportation Sector Page

4.3.1.4 District Energy Networks Sector

For projects of the District Energy sector, the user should select the **project type** of investment.

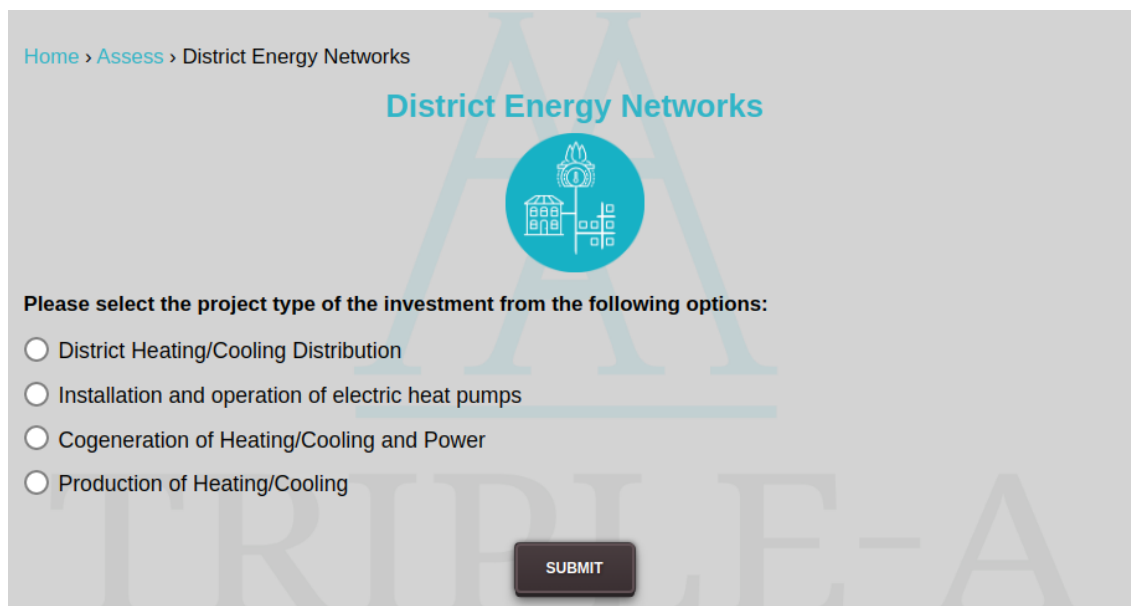


Figure 13: Assess Tool - District Energy Networks Sector Page

Therefore, the user should select one of the following subsectors:


- District Heating / Cooling Distribution
- Installation and operation of electric heat pumps
- Cogeneration of Heating / Cooling power
- Production of Heating / Cooling

4.3.2 EU Taxonomy Criteria

After having imported all the project-specific information, the user should select whether the investment is EU Taxonomy eligible. The process for the selection is the following:

Depending on the project sector and the additional information is given (Project Type, Project Category, etc.), an EU Taxonomy list appears, including the thresholds that need to be met by the investment and some explanations on the requirements, such as the metrics of each threshold.

Then, the user should carefully check if the investment fulfils all the thresholds. In case that all the requirements are met, then the **Yes** checkbox should be selected, stating that the investment is Taxonomy compliant.



Assess Agree Assign

Logout My Projects Profile

[Home](#) > [Assess](#) > [Buildings](#) > Individual building renovation measures

Building Sector

Project Type: Individual building renovation measures



Step 1: EU Taxonomy compliance

In order to proceed, your project has to meet the EU Taxonomy criteria, based on the project sector and project type.

EU Taxonomy defines:

The individual building renovation measures are eligible if compliant with the energy performance standards set for individual components and systems in the applicable building regulations transposing the Energy Performance Building Directive (EPBD).

For more information, please refer to the [EU Taxonomy Technical Report](#)

Is your investment taxonomy compliant?

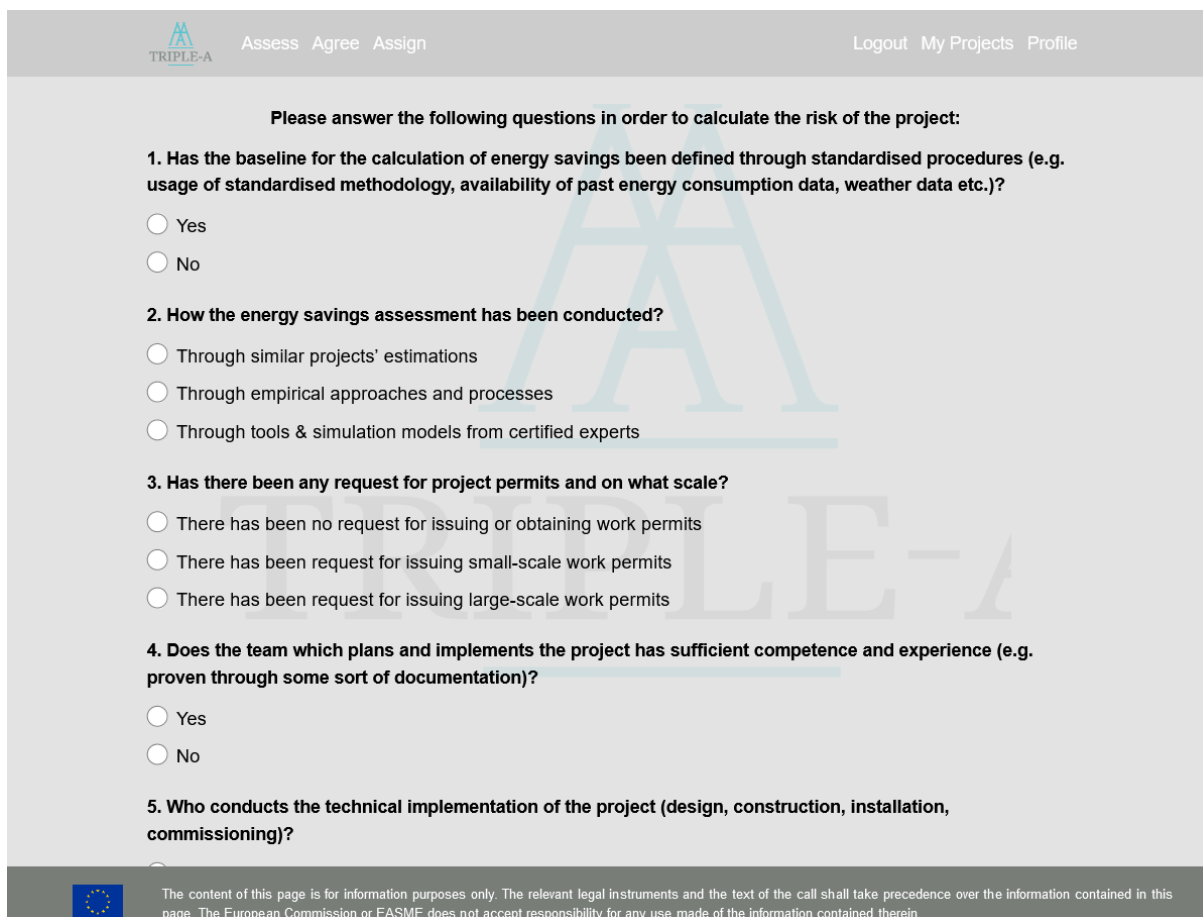
☒ Yes
 ☐ No

Submit

Figure 14: Assess Tool - EU Taxonomy Checklist

4.4 The Risk Calculation step

Under this step, the Assess Tool calculates the aggregated risk of the investment. The user is asked to answer a series of project-specific questions, which are taken into consideration for the aggregated investment risk calculation.



Please answer the following questions in order to calculate the risk of the project:

1. Has the baseline for the calculation of energy savings been defined through standardised procedures (e.g. usage of standardised methodology, availability of past energy consumption data, weather data etc.)?
 - ☐ Yes
 - ☐ No
2. How the energy savings assessment has been conducted?
 - ☐ Through similar projects' estimations
 - ☐ Through empirical approaches and processes
 - ☐ Through tools & simulation models from certified experts
3. Has there been any request for project permits and on what scale?
 - ☐ There has been no request for issuing or obtaining work permits
 - ☐ There has been request for issuing small-scale work permits
 - ☐ There has been request for issuing large-scale work permits
4. Does the team which plans and implements the project has sufficient competence and experience (e.g. proven through some sort of documentation)?
 - ☐ Yes
 - ☐ No
5. Who conducts the technical implementation of the project (design, construction, installation, commissioning)?
 - ☐

The content of this page is for information purposes only. The relevant legal instruments and the text of the call shall take precedence over the information contained in this page. The European Commission or EASME does not accept responsibility for any use made of the information contained therein.

Figure 15: Assess Tool - Project Risk Q&A section

Finally, the Assess Tool calculates the risk per factor, as well as the aggregated risk of the investment.

- **Financial risk** is related to the creditworthiness of the applicant for the loan/financing.
- **Behavioural risk** is related to the rebound effect that can exist in the context of the inspected EE investment.
- **Energy Market & Regulatory risk** is related to the energy prices and energy taxes volatility of the country in which the investment takes place and the request for issuing work permits that may exist in the context of the inspected project.
- **Economic risk** category is related to the economic environment of the country that the investment takes place.
- **Technological, Planning and Operational risk** is related to the technical complexity, the initial savings assessment, the implemented equipment, the project design, and the Operation & Maintenance of the inspected project.

4.5 Assess Tool Results

After completing the EU Taxonomy compliance and Risk Assessment, the user is prompted with the procedure results, as shown in Figure 16.

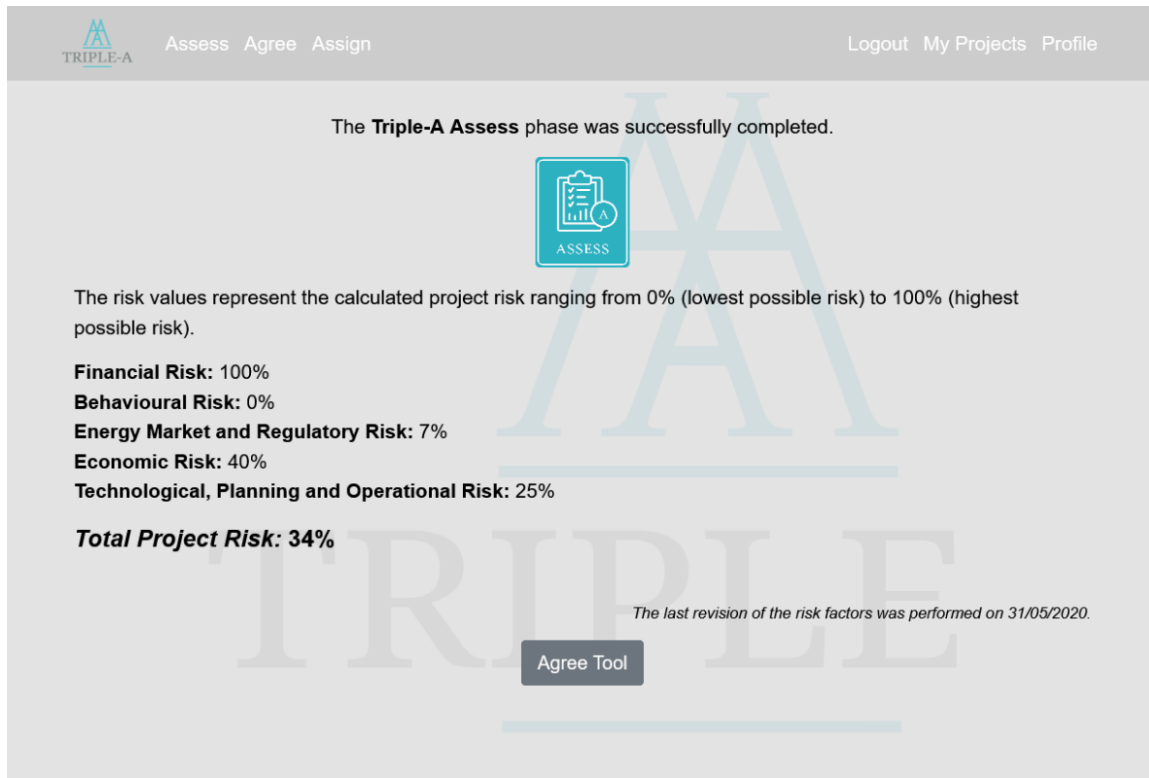


Figure 16: Assess Tool - Results

5 Managing the Triple-A Agree Tool

5.1 Basic Information

The user could access the Triple-A Agree Tool either through the Agree icon on the homepage, through the navigation bar on the top of the page, or by hitting the button “**Agree**” on the Assess Tool’s results page (Figure 16). By clicking on one of these options, the user is transferred to the homepage of the Triple-A Agree Tool. The user should click the “**Get Started**” button to start the Agree Phase.

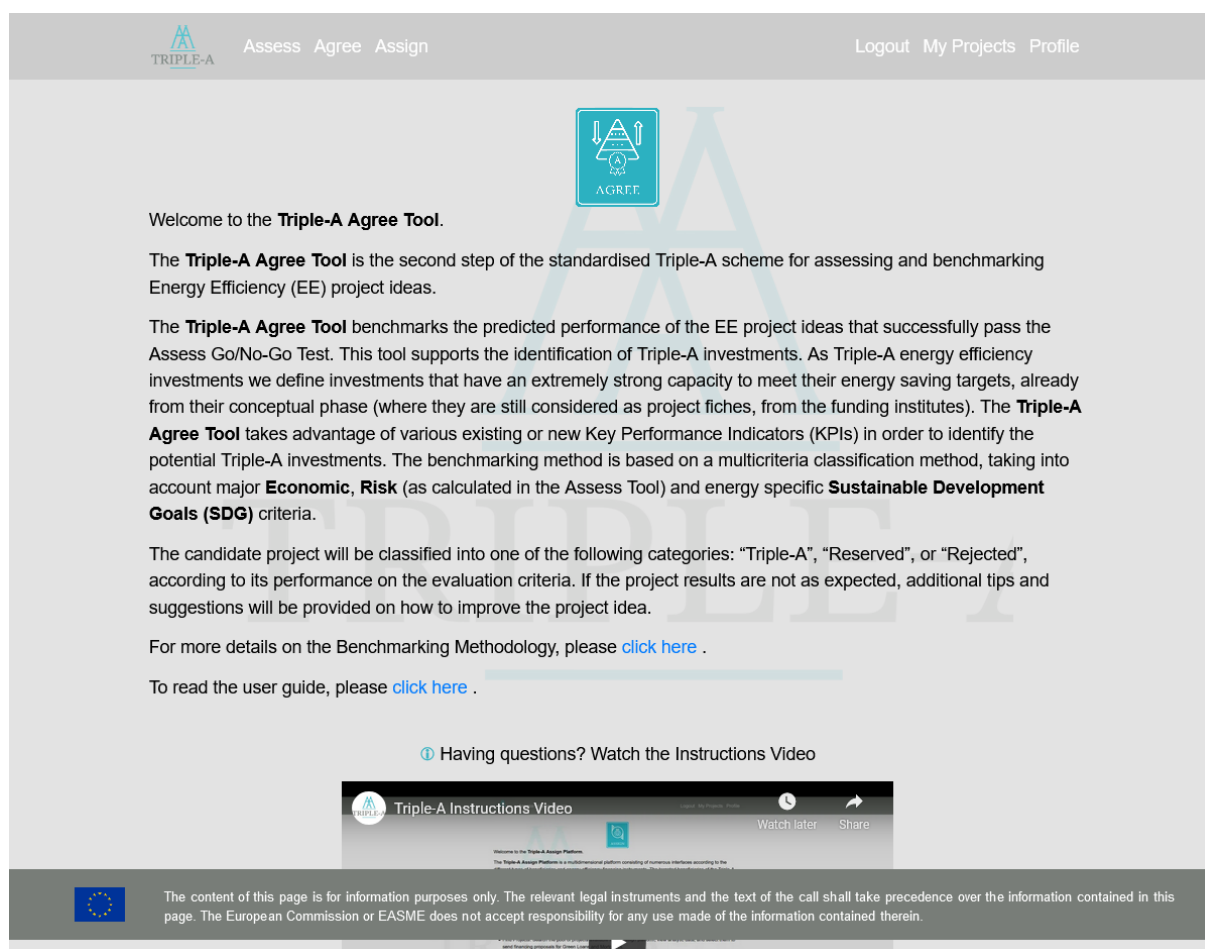


Figure 17: Agree Tool - Homepage

5.2 Input Required

The user starts the Triple-A Agree Tool phase by clicking on the “**Get Started**” button or hitting the button “**Agree**” on the Assess Tool’s results page. Then, the user is navigated to a screen, where all the necessary project-specific data should be filled in. At first, the user should enter the Project Name. If the user has landed directly from the Assess Tool while assessing a specific project, the project name is automatically loaded so they could proceed with the same project to Agree Tool.

The necessary information could be divided into two main categories:

- Project Costs
- Savings

In terms of cost, the user should provide the **total investment cost** of the project, as well as the **annual operating cost**.

In the savings category, there are three fields:

- electricity,
- natural gas, and
- other fuels.

If the investment results in savings in more than one category, the user should fill in all the corresponding fields. In case that the “**other fuels**” option is selected, the user should also fill in the fuel price.



TRIPLE-A Assess Agree Assign Logout My Projects Profile

Home > Agree

Please Provide the Following Information

Project name: Test21

Project Costs

Total investment cost (€) 10000

Annual operating cost (€/year) 100

Annual Expected reduction of CO₂ emissions (tonnes/year) 0

Savings

Annual electricity savings (kWh/year) 20000

Annual natural gas savings (kWh/year) 0

Annual other fuel savings (kWh/year) 0

Annual Monetary Savings €/year(optional)

Annual Other fuel price (€/kWh) 0

Select project scope

Private Project

Public Project

Submit

The content of this page is for information purposes only. The relevant legal instruments and the text of the call shall take precedence over the information contained on this page. The European Commission or EASME does not accept responsibility for any use made of the information contained therein.

Figure 18: Agree Tool - Input Page

The user has the option to select whether the project will be visible to other users, in the Assign Tool. If the project will be market as “**Public**” the project will be saved to the Triple-A Database of projects, and it will be visible to other users (Projects Developers and Investors) in order to be selected under Assign Tools’ activities. If the project is market as “**Private**” it will be visible only by the user that uploaded the project. This functionality enables users to use the Tool to benchmark draft project fiches, or project with sensitive information, that is not permitted to be viewed by other users.

5.3 Criteria and Weights Selection

In this stage, the user selects which criteria will be used for the assessment of the investment. The classification of the project is made based on four criteria:

- Financial Indicator
- Cost Effectiveness
- Triple-A Aggregated Risk
- Sustainable Development Goals (SDG) Criteria

The user may select the financial indicator used, either the **Net Present Value**, the **Discounted Payback Period**, or the **Internal Rate of Return**.

The financial indicators are calculated based on the following parameters:

- Electricity and Natural Gas Prices: Eurostat statistics -revised every 6 months (latest revision: 2021 1st six-month period)
- Discount Rate: 4% (used in Net Present Value and Discounted Payback Period)

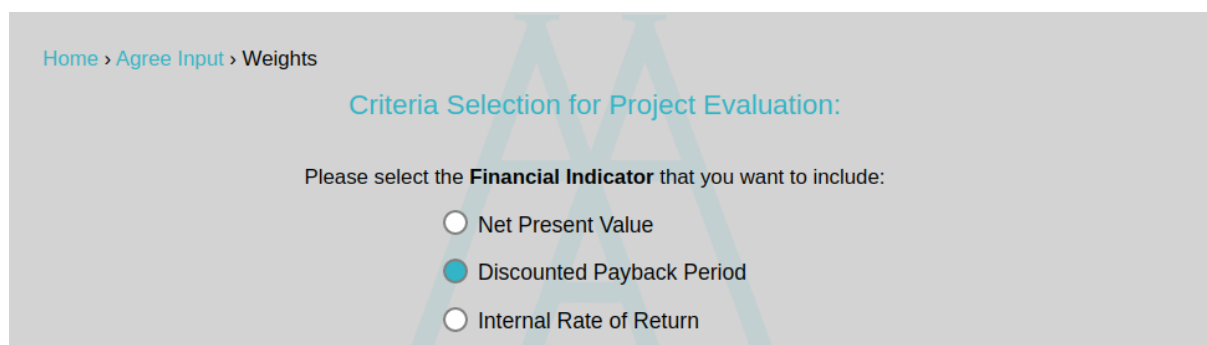


Figure 19: Agree Tool - Financial Indicator

After the user has selected which financial indicator will be used as the fourth criterion in the Triple-A Agree classification process, the final step includes the definition of the weight for each criterion. Therefore, for each criterion, there is a dropdown list, and the user should select the importance of each factor in a 5-degree scale with the following options:

- Very High
- High
- Medium

- ▲ Low
- ▲ Very Low

The criteria that are considered more significant should be rated with higher importance to affect the result to a greater extent.

Please select the **Criteria Weights** according to the importance of each criterion:

Financial Indicator Weight:

Avoidance Cost Weight:

Aggregated Risk Weight:

ESG Weight:

Figure 20: Agree Tool - Weights Selection

5.4 Agree Tool Results

After the procedure's completion, the user is notified of the emerged benchmarking class of the project, as shown in Figure 21. An analytic breakdown of the project's data and KPIs results are presented.

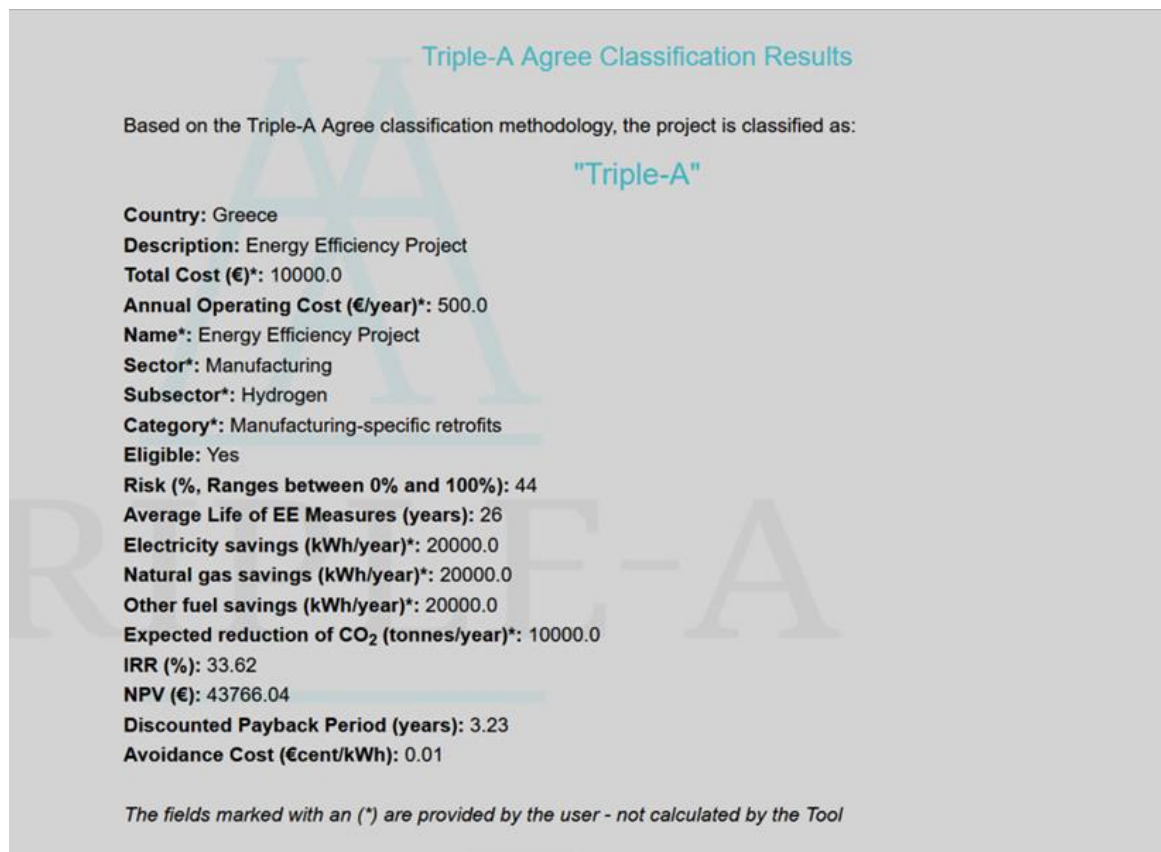


Figure 21: Agree Tool - Results

6 The Triple-A Assign Tool

6.1 Basic Information

The Triple-A Assign Tool is a multidimensional platform consisting of numerous interfaces according to the different beneficiaries and EE financing instruments.

Financing bodies benefit from the Assign Tool as it provides them with access to a pool of profitable, pre-evaluated Triple-A projects. Also, projects could be aggregated by investors to create a Green Bond portfolio, while they can explore a database of Green Bonds that have been published to the Tool. Financers could view the companies and the projects included in the bond, check characteristics of the Green Bond, and further communicate with the Green Bond issuer.

As far as project developers are concerned, they will be notified of financing requests from potential investors, along with details regarding the proposed financing schemes and investor's contact data.

It has to be noted that only the project indicated as **"Public"** (see Paragraph 5.2) will be included in the databases and functionalities presented below.

6.2 Financing Bodies Interface

From the Assign Tool Homepage Tool (Figure 22) for Energy Efficiency Companies/ Project Developers, users could get directed into the following interfaces and perform the actions described below.

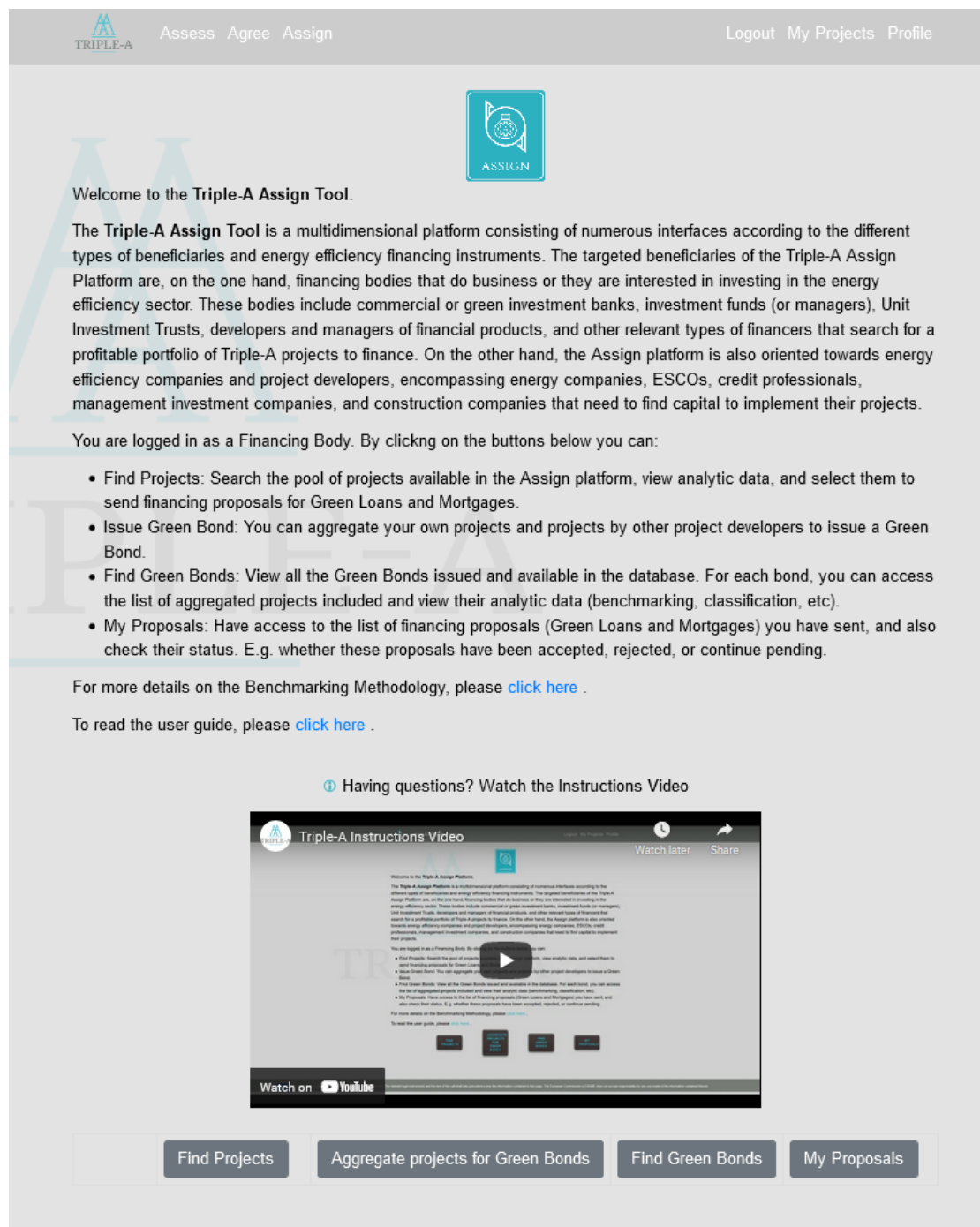


Figure 22: Assign Tool - Homepage for Financing Bodies

6.2.1 Find Projects

In this interface, financing bodies could search the available pool of projects in the Assign Tool, view the analytic data, and select them for sending financing proposals for Green Loans and Mortgages.

The page provides a table listing all available projects in the Assign Tool (Figure 23). The tables provide the following detailed information regarding the projects shown:

- ▲ Project Name
- ▲ Country
- ▲ Sector
- ▲ Region
- ▲ Sector
- ▲ Subsector
- ▲ Description
- ▲ Project Owner
- ▲ E-mail
- ▲ Phone Number
- ▲ Total Investment Cost
- ▲ Annual Operating Cost
- ▲ Electricity Savings
- ▲ Natural Gas Savings
- ▲ Other Fuel Savings
- ▲ Net Present Value
- ▲ Discounted Payback Period
- ▲ Internal Rate of Return
- ▲ Total Risk
- ▲ Expected Reduction of CO₂ emissions
- ▲ Avoidance Cost
- ▲ Project Rating

Project Database

for Energy Efficiency Financiers



Below you can find all projects that have successfully passed the Assess and Agree Tool.
If you are interested to send a financing proposal for a project, click on the project name.

Show entries

Project Name	Country	Sector	Risk	Subsector	Category
Project 1	Bulgaria	Transportation	0.5	Transportation	Public Transport
Project 2	Greece	Manufacturing	0.4	Aluminium	Manufacturing-specific retrofits
Project 3	Italy	Buildings	0.3	Non-Residential	HVAC&R Retrofits
Project 4	Lithuania	District Energy Networks	0.5	District Heating/ Cooling Distribution	District Energy Networks retrofits/ exp
Project 5	Germany	Buildings	0.6	Residential	Building Envelope Retrofits
Project 7	Spain	Outdoor Lighting	0.51	Outdoor Lighting	Outdoor Lighting retrofits

Showing 1 to 6 of 6 entries

<
>

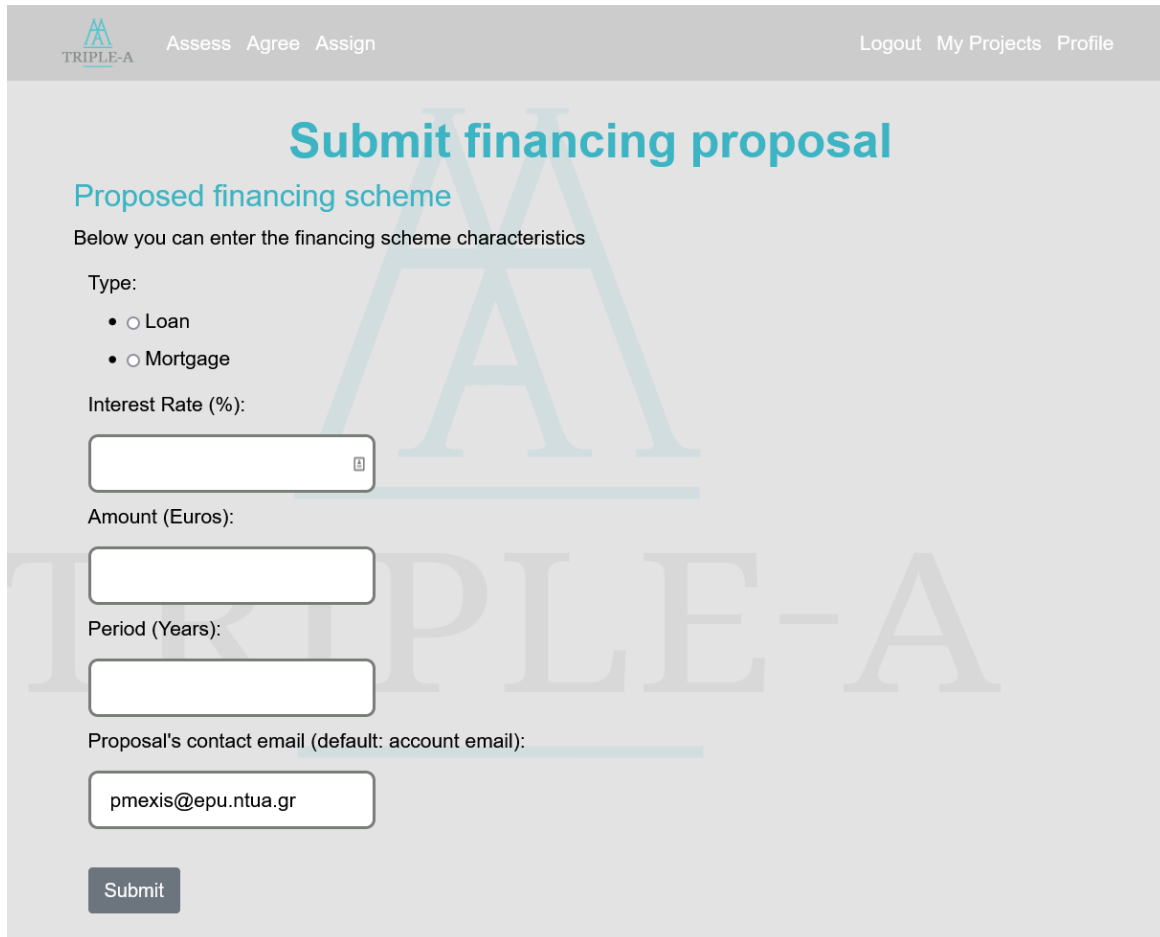
Figure 23: Assign Tool - Project Database

Each project name presented in the Table is a hyperlink. When clicked, the user is directed to the finance proposal submission interface for the selected project (Figure 24). The interface enables the financier to submit a financing proposal for a project and set the preferred loan parameters. The platform accepts any type of financing proposal, e.g., the investor is not obliged to cover the project's total cost. They could partially finance the project and choose the preferred percentage of leverage.

The financing proposal is submitted through a form that requires the following parameters:

- ▲ Type of financial product (Green Loan/ Mortgage)

- Interest Rate (%)
- Amount (€)
- Term (years)



The screenshot shows the 'Submit financing proposal' interface. At the top, there is a navigation bar with the TRIPLE-A logo, 'Assess Agree Assign' buttons, and 'Logout My Projects Profile' links. The main heading is 'Submit financing proposal' in large blue text. Below it, the section 'Proposed financing scheme' is highlighted. A sub-heading states 'Below you can enter the financing scheme characteristics'. The form includes a 'Type:' section with radio buttons for 'Loan' and 'Mortgage'. There are input fields for 'Interest Rate (%)', 'Amount (Euros)', and 'Period (Years)'. A text field for 'Proposal's contact email (default: account email):' contains the email 'pmexis@epu.ntua.gr'. A 'Submit' button is located at the bottom left of the form area.

Figure 24: Assign Tool - Financing Proposal Form

Once the financing proposal form is successfully filled and submitted, the user is redirected to a confirmation page. From this point, the user could navigate directly back to the **“My proposals”** interface (See Section 6.2.3) by clicking on the respective button (Figure 25).

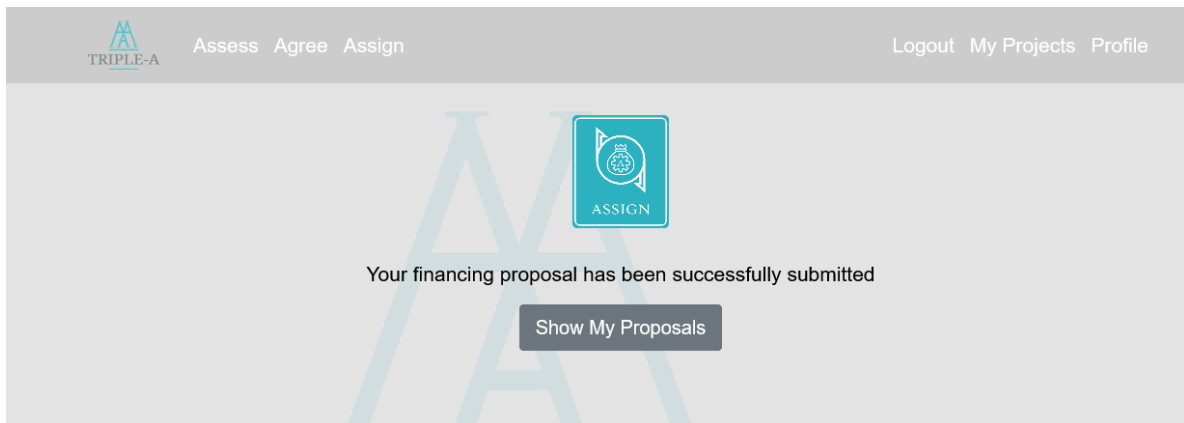


Figure 25: Agree Tool - Proposal Submission Confirmed

6.2.2 Aggregate Projects

This is a dedicated interface for investors who opt to aggregate projects and create a portfolio to proceed to a Green Bond issuance underwriting procedure.

The interface is divided into two sequential steps.

Step 1

The user can find a table with all available projects in the Triple-A Assign database. The table provides data regarding the project. Each Project Name in the table acts as a hyperlink to the analytic overview of the project (Figure 36). The user could select the projects, via the tables' checkbox functionality, that desire to be included in the bond to be issued.

Step 2

The user should define the parameters of the Green Bond that they want to publish. The parameters are:

- Type of interest (floating rate, fixed)
- Fixed → Percentage (%)
- Floating rate → range: Maximum - Minimum (%)
- Interest period (month, quarter, 6 months, annual)
- Maturity (years)
- Issuer
- Rating
- Rating Agency

Once the user clicks "**Submit**", the request to include the projects to a Green Bond is being sent to the Project Developers of the projects that are going to be included in the bond.

Green Bonds

Issue Platform

Step 1:

Select Projects to include

Show entries

Search:

Select	Project	Country	Region	Sector	Description	Cost	Total Risk	Benc
<input type="checkbox"/>	TestProject	Greece	Athens	Buildings	Air Conditioning Upgrade	1000	0.5	Triple-
<input type="checkbox"/>	TestProject1	Germany	Berlin	Manufacturing	null	2000	0.6	Triple-

Showing 1 to 2 of 2 entries

Previous
1

Step 2:

Define Bond Parameters

Interest Period:

Month

Maturity(%):

0

Type of Interest:

Floating

Rating:

Minimum Interest(%):

0

Rating Agency:

Maximum Interest(%):

0

Fixed Interest(%):

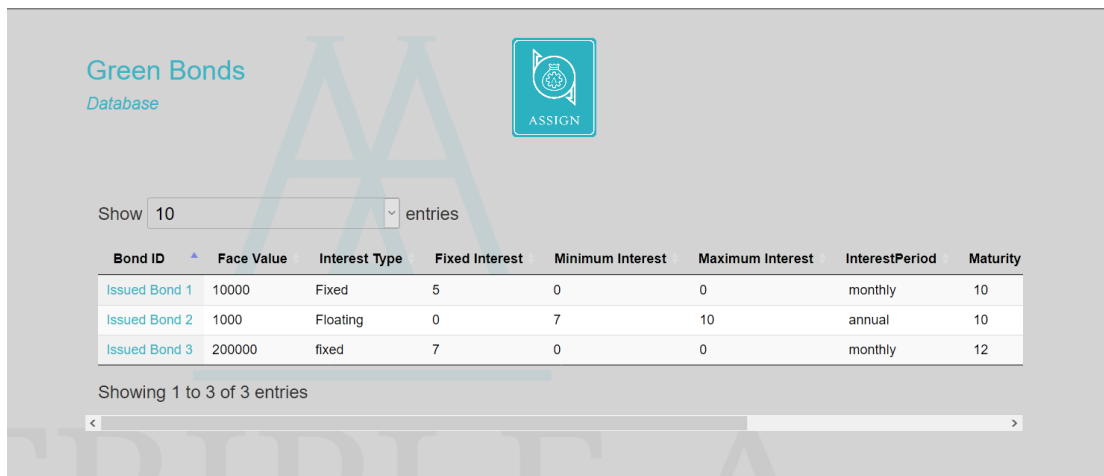
0

SUBMIT

Figure 26: Assign Tool - Green Bonds Issue Interface

6.2.3 Green Bonds Database

Under this section, financing bodies could view a table that includes all the Green Bonds issued and available in the database.



Bond ID	Face Value	Interest Type	Fixed Interest	Minimum Interest	Maximum Interest	InterestPeriod	Maturity
Issued Bond 1	10000	Fixed	5	0	0	monthly	10
Issued Bond 2	1000	Floating	0	7	10	annual	10
Issued Bond 3	200000	fixed	7	0	0	monthly	12

Showing 1 to 3 of 3 entries


Figure 27: Assign Tool - Green Bonds Database

The table provides detailed information regarding the bond:

- ▲ Bond ID
- ▲ Face Value (€)
- ▲ Type of interest (floating rate, fixed)
- ▲ Fixed → Percentage (%)
- ▲ Floating rate → range (%)
- ▲ Interest period (month, quarter, 6 months, annual)
- ▲ Maturity (year)
- ▲ Issuer
- ▲ Rating
- ▲ Rating Agency

The Bond ID is a hyperlink that navigates to a dedicated interface, in which all projects included in the Green Bond are presented, along with an analytic breakdown.

Green Bonds
Issue Platform

 ASSIGN

Show 10 entries

Project	Country	Region	Sector	Subsector	Description	EU Taxonomy compliant
Project 1	Bulgaria	Pleven	Transportation	Transportation	Fleet Update	Yes
Project 2	Greece	Peloponese	Manufacturing	Aluminium	Update of machinery	Yes
Project 3	Italy	Milan	Buildings	Non-Residential	Update of A/C systems	Yes
Project 4	Lithuania	Samogitia	District Energy Networks	District Heating/ Cooling Distribution	Description 1	Yes

Showing 1 to 4 of 4 entries

[BACK](#) [ISSUER'S CONTACT INFO](#)

Figure 28: Assign Tool - Green Bond's Projects Breakdown

At this point, the user (Financing Body) could view more information by clicking on the button “**Issuer's Contact Info**”.

6.2.4 My Proposals

In this section, financing bodies could access details regarding the financing proposals (Green Loans and Mortgages) they have sent while also check their status, e.g., whether these proposals have been viewed by the respective Company/ Project Developer.

My proposals

In this page, you can view details regarding the financing proposals you have sent.
By clicking on the project name, you can have access to a detailed project breakdown.

Show entries Search:

Project Name	Type of Finance	Status	Interest Rate	Period	Amount
26 electric cars	loan	pending	5	5	5
26 electric cars	greenbond	No action performed	Not applicable	0	11125305.16
26 electric cars	loan	pending	5	3	1000
asdf	loan	pending	6	4	1000
asdf	greenbond	No action performed	Not applicable	5	227000.0
buildAthens	loan	pending	5	5	10
Iliana	greenbond	No action performed	Not applicable	0	0.0
Imagine	greenbond	No action performed	Not applicable	0	11125305.16
pressf	greenbond	No action performed	Not applicable	6	10000.0
Street lighting A	loan	pending	4	20	1000

Showing 1 to 10 of 17 entries Previous 2 Next

Figure 29: Agree Tool - My proposals

In the “**My proposals**” table, each project name links to an analytic project overview (Figure 36).

6.3 Companies and Project Developers Interface

The homepage of the Assign Tool for Companies and Project Developers is depicted below:

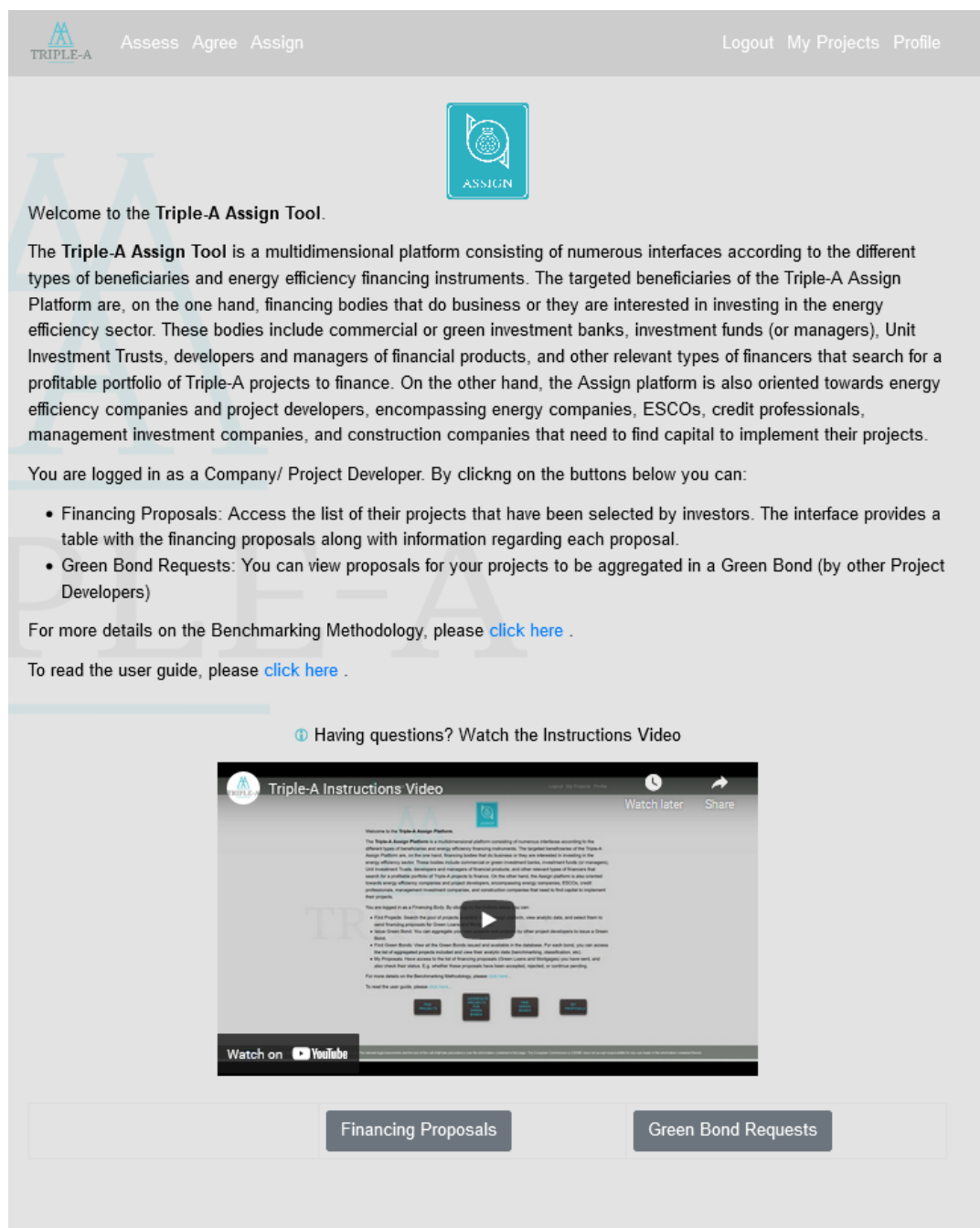
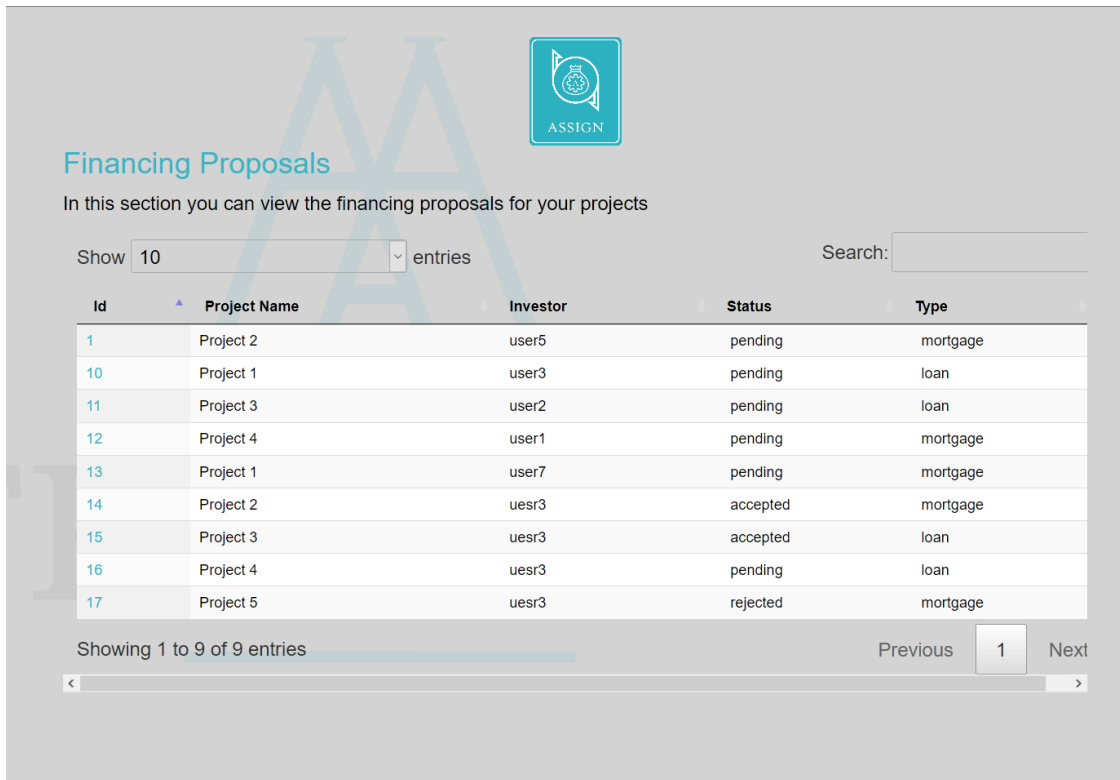


Figure 30: Assign Tool - Homepage for EE Companies / Project Developers

6.3.1 Financing Proposals

In this section, companies & project developers could access the list of their projects that have been selected by investors and received a financing proposal. The interface provides a table with the financing proposals along with information regarding each proposal. The proposals include:

- (i) Loan proposals
- (ii) Mortgage Proposals



Financing Proposals

In this section you can view the financing proposals for your projects

Show entries Search:

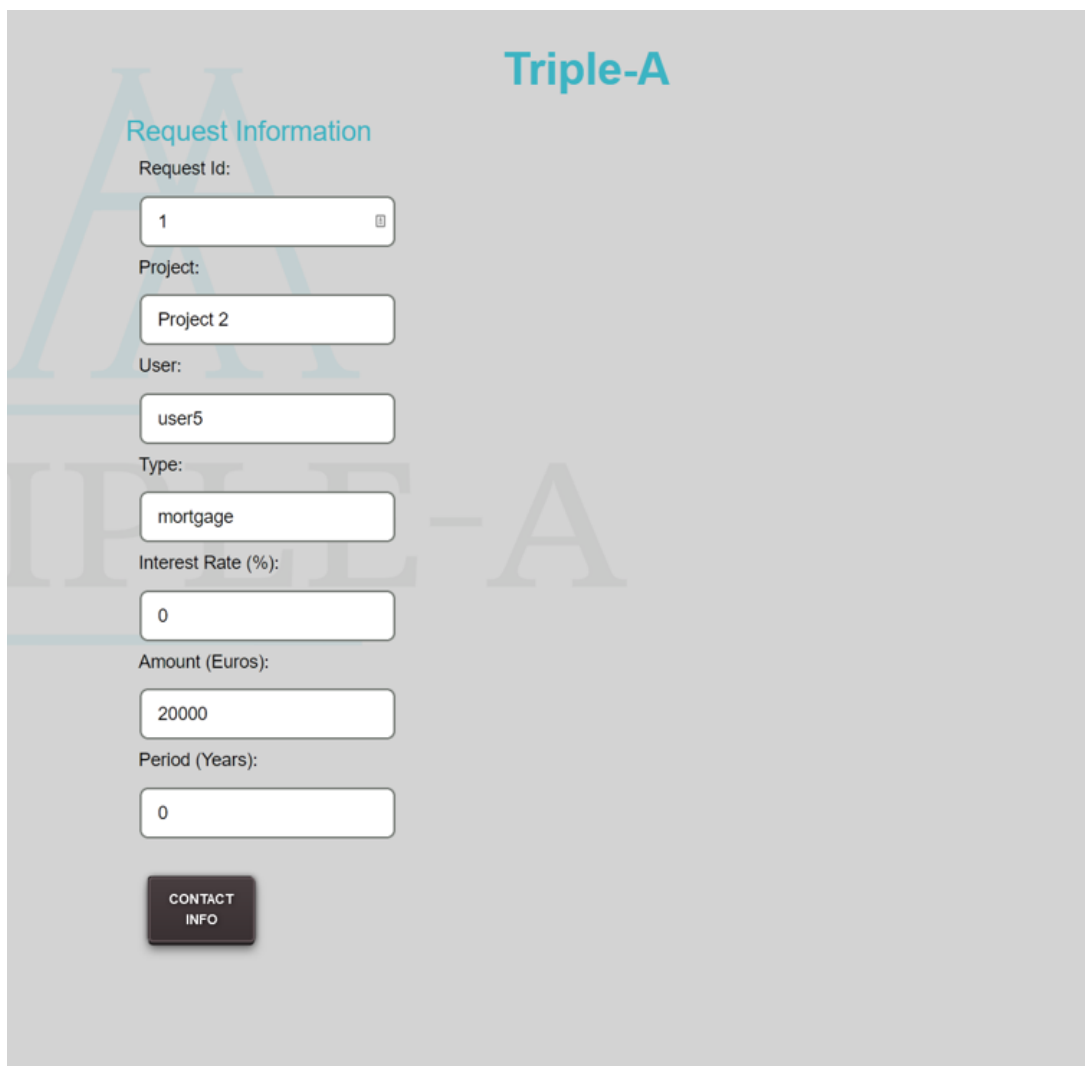
Id	Project Name	Investor	Status	Type
1	Project 2	user5	pending	mortgage
10	Project 1	user3	pending	loan
11	Project 3	user2	pending	loan
12	Project 4	user1	pending	mortgage
13	Project 1	user7	pending	mortgage
14	Project 2	uesr3	accepted	mortgage
15	Project 3	uesr3	accepted	loan
16	Project 4	uesr3	pending	loan
17	Project 5	uesr3	rejected	mortgage

Showing 1 to 9 of 9 entries Previous **1** Next

Figure 31: Assign Tool - Financing Proposals Interface for Companies / Project Developers

The table provides data to the user regarding the type and status of the financing proposal.

When clicking the Proposal “Id”, the user is redirected to the Proposal Overview page. It should be noted that a single project could be part of many proposals, which the project developer could choose.



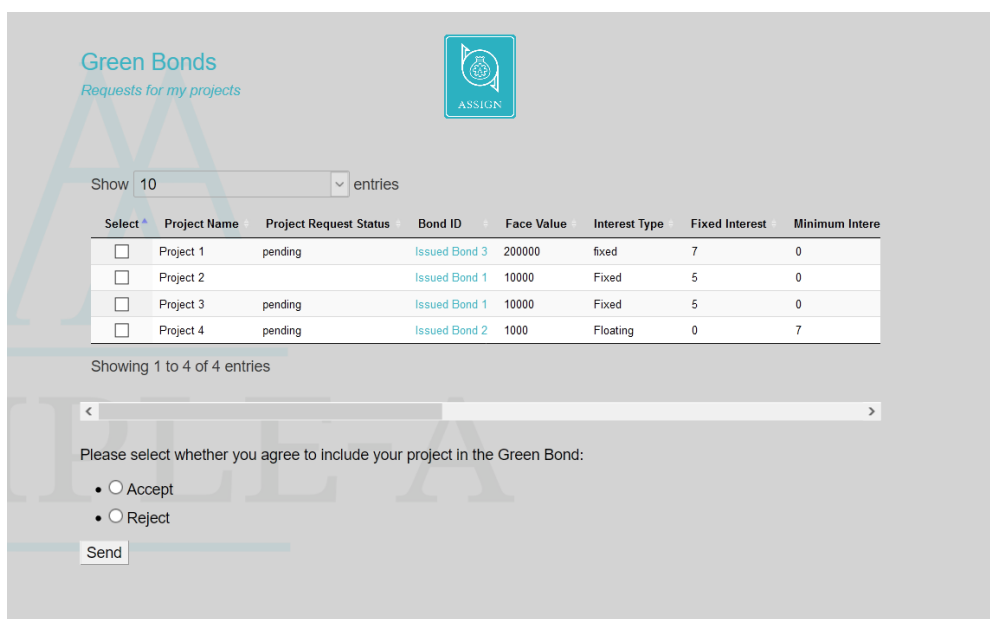
The screenshot shows a web interface titled "Triple-A" with a section "Request Information". It contains several input fields with the following values: Request Id: 1, Project: Project 2, User: user5, Type: mortgage, Interest Rate (%): 0, Amount (Euros): 20000, and Period (Years): 0. At the bottom of the form is a button labeled "CONTACT INFO".

Figure 32: Assign Tool - Proposal Overview

The data presented in this interface include all data submitted by the investor when completing the Financing Proposal form (see paragraph 6.2, section “Find Projects”), along with the Investors’ username. The interface provides the Project Developer with the option to view the investor’s contact information. Please note that the investor gets notified of whether the proposal has been viewed or not. (See paragraph 6.2, section “My proposals”).

6.3.2 Green Bonds Requests

This interface provides a table with requests to include projects in Green Bonds. The Company/ Project Developer could view all the Green Bonds issuance requests that pertain to their projects that have been submitted by other Companies/ Project Developers.



Green Bonds
Requests for my projects

ASSIGN

Show 10 entries

Select	Project Name	Project Request Status	Bond ID	Face Value	Interest Type	Fixed Interest	Minimum Interest
<input type="checkbox"/>	Project 1	pending	Issued Bond 3	200000	fixed	7	0
<input type="checkbox"/>	Project 2		Issued Bond 1	10000	Fixed	5	0
<input type="checkbox"/>	Project 3	pending	Issued Bond 1	10000	Fixed	5	0
<input type="checkbox"/>	Project 4	pending	Issued Bond 2	1000	Floating	0	7

Showing 1 to 4 of 4 entries

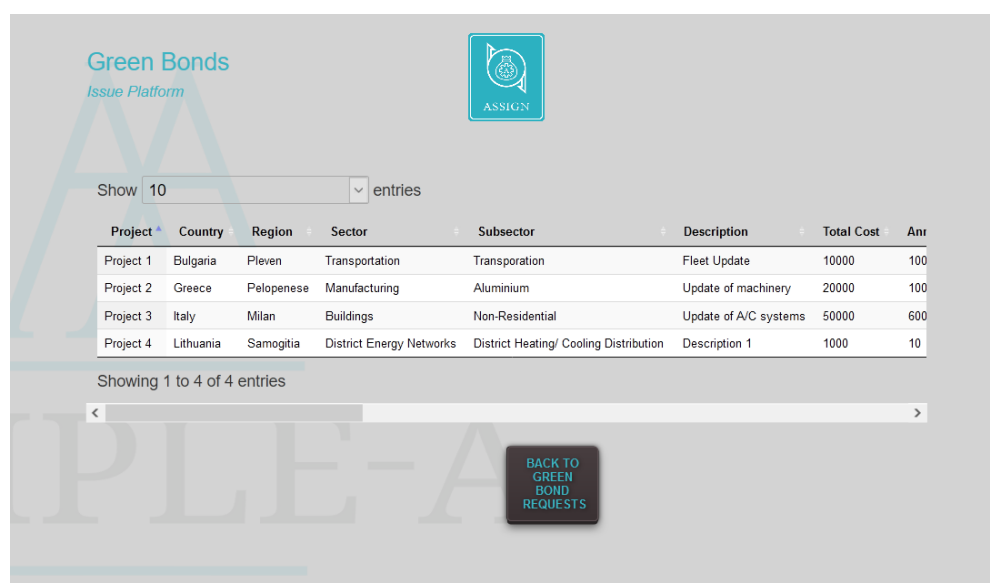
Please select whether you agree to include your project in the Green Bond:

☐ Accept
☐ Reject

Send

Figure 33: Assign Tool - Green Bond's Requests Interface for Companies / Project Developers

The table provides the Green Bond's details, while the Green Bond's ID acts as a hyperlink that redirects to the complete table of projects that are included in the Green Bond, as depicted below. The table displays all the available data for the projects included.



Green Bonds
Issue Platform

ASSIGN

Show 10 entries

Project	Country	Region	Sector	Subsector	Description	Total Cost	Amr
Project 1	Bulgaria	Pleven	Transportation	Transportation	Fleet Update	10000	100
Project 2	Greece	Peloponese	Manufacturing	Aluminium	Update of machinery	20000	100
Project 3	Italy	Milan	Buildings	Non-Residential	Update of A/C systems	50000	600
Project 4	Lithuania	Samogitia	District Energy Networks	District Heating/ Cooling Distribution	Description 1	1000	10

Showing 1 to 4 of 4 entries

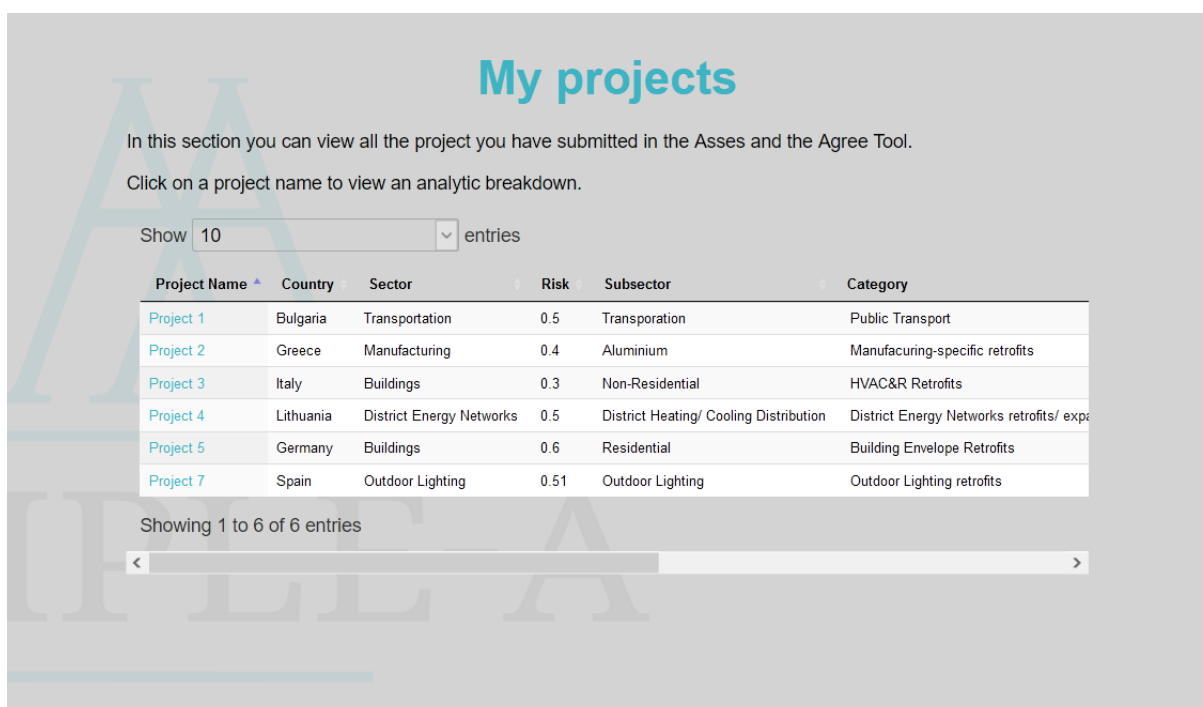
BACK TO GREEN BOND REQUESTS

Figure 34: Assign Tool - List of Projects Included in a Green Bond

From the Green Bond's requests interface (Figure 33), the project developer can select proposals from the tables' checkbox and either accept or reject the proposal. It should be noted that a single project can be part of many Green Bond proposals, of which the project developer can choose.

7 “My Projects” Interface

This interface provides the user with the complete lists of projects that have been submitted to the Assess and the Agree Tools. The “**My projects**” interface could be found on the top right corner of the Triple-A Tools container (Figure 3).



My projects

In this section you can view all the project you have submitted in the Asses and the Agree Tool.

Click on a project name to view an analytic breakdown.

Show entries

Project Name	Country	Sector	Risk	Subsector	Category
Project 1	Bulgaria	Transportation	0.5	Transporation	Public Transport
Project 2	Greece	Manufacturing	0.4	Aluminium	Manufacuring-specific retrofits
Project 3	Italy	Buildings	0.3	Non-Residential	HVAC&R Retrofits
Project 4	Lithuania	District Energy Networks	0.5	District Heating/ Cooling Distribution	District Energy Networks retrofits/ exp
Project 5	Germany	Buildings	0.6	Residential	Building Envelope Retrofits
Project 7	Spain	Outdoor Lighting	0.51	Outdoor Lighting	Outdoor Lighting retrofits

Showing 1 to 6 of 6 entries

< >

Figure 35: Triple-A Tools - “My Projects” Interface

Each project name that appears in the table is a hyperlink to an analytic overview of the project. The overview includes all the project’s data entered in by the user in the Assess and the Agree Tools and the risk assessment, the calculated key performance indicators, and the benchmarking result (Figure 36).

Project Overview

Project name: <input type="text" value="Project 1"/>	Country: <input type="text" value="Bulgaria"/>	Region: <input type="text" value="Pleven"/>
Sector: <input type="text" value="Transportation"/>	Subsector: <input type="text" value="Transporation"/>	Short description of the project: <input type="text" value="Fleet Update"/>
Project Owner: <input type="text" value="user1"/>	Email: <input type="text" value="email1@email.com"/>	Phone Number: <input type="text" value="9999999"/>
Total Investment Cost: <input type="text" value="10000.0"/>	Annual Operating Cost: <input type="text" value="100.0"/>	
Electricity Savings: <input type="text" value="1000.0"/>	Natural Gas Savings: <input type="text" value="2000.0"/>	Other Fuel Savings: <input type="text" value="0.0"/>
Net Present Value: <input type="text" value="-9476.32"/>	Discounted Payback Period: <input type="text" value="212.31"/>	Internal Rate of Return: <input type="text" value="-0.23"/>
Total Risk: <input type="text" value="0.5"/>	Expected Reduction of CO2 Emissions: <input type="text" value="3000.0"/>	Avoidance Cost: <input type="text" value="3.33"/>
Project Rating: <input type="text" value="Reject"/>		
RETURN		

Figure 36: Triple-A Tools - Analytic Overview of a Submitted Project

Preface












Triple-A has a very practical result-oriented approach, seeking to provide reliable information answering on three questions:

- How to **assess** the financing instruments and risks at an early stage?
- How to **agree** on the Triple-A investments, based on selected key performance indicators?
- How to **assign** the identified investment ideas with possible financing schemes?

The Triple-A scheme comprises three critical steps:

- **Step 1 - Assess:** Based on Member States (MS) risk profiles and mitigation policies, including a Web based database, enabling national and sectoral comparability, market maturity identification, good practices experiences exchange, reducing thus uncertainty for investors.
- **Step 2 - Agree:** Based on standardised Triple-A tools, efficient benchmarks, and guidelines, translated in consortium partners' languages, accelerating and scaling up investments.
- **Step 3 - Assign:** Based on in-country demonstrations, replicability and overall exploitation, including recommendations on realistic and feasible investments in the national and sectoral context, as well as on short and medium term financing.

Who We Are

	Participant Name	Short Name	Country Code	Logo
1	National Technical University of Athens	NTUA	GR	
2	ABN AMRO Bank N.V.	ABN AMRO	NL	
3	Institute for European Energy and Climate Policy Stichting	IEECP	NL	
4	JRC Capital Management Consultancy & Research GmbH	JRC	DE	
5	GFT Italy srl	GFT Italy	IT	
6	CREARA Consulting SL	CREARA	ES	
7	Adelphi Research Gemeinnützige GMBH	adelphi	DE	
8	Piraeus Bank SA	PB	GR	
9	University of Piraeus Research Center	UPRC	GR	
10	SEVEN, The Energy Efficiency Center	SEVEN	CZ	
11	Public Investment Development Agency	VIPA	LT	
12	National Trust Ecofund	NTEF	BG	