

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



## *WEB-BASED TOOLS OF THE TRIPLE-A PROJECT*

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## THE PROJECT



**Naming of the project:** Reinforcing the chain of indicators set in the investments for Energy efficiency at an early stage of project development. <https://www.aaa-h2020.eu/>

The project is implemented with the support of the EU Horizon 2020 program.

Leading role in the team have researchers from the National Technical University of Athens, and among the members of the consortium are two large European banks - the Greek Piraeus Bank SA and the Dutch ABN AMRO Bank N.V. The other participants are national agencies and consulting companies from a total of 8 countries in Europe.

# THE PROJECT



## Partners

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	

# THE PROJECT



**Main goal:** To find common ground between the main participants (project owners - funding institutions) in the "Energy Efficiency" market and the identification of "Triple-A" projects, so that both parties are convinced of the potential of investment to meet the objectives. **For owners–** implementation of energy efficiency projects financed under favorable (acceptable) conditions and **for funding institutions** – sustainable return and profit from the provided funds!

**Main target group:** The key ministries for the branch, the financing institutions (banks, funds, investment companies), the investors (project owners), the consultants, the designers.

**Project outputs:** Standardized "Triple-A" model for comparison and evaluation of projects in the field of energy efficiency, including Standardized database with "Triple-A" projects for energy efficiency (by sectors, countries and appropriate financial mechanisms).

**„Triple-A“ projects:** Projects showing from the initial phase that they promote sustainable growth and at the same time have an extremely strong capacity to meet their financial commitments by achieving the set goals for energy savings and / or reducing greenhouse gas emissions.

# WEB-BASED INSTRUMENTS OF TRIPLE-A



## Stages of realization of the model:

The Triple-A scheme includes three key stages and three web-based tools. The online-based tools for evaluating EE investment projects have been developed by an international team:

**Stage 1 (Assess)** - Preliminary assessment - Go / No-Go (passes or not to the next stage). At this stage, the potential of the projects and the risks related to their implementation are assessed through a web-based tool based on screening criteria adopted by the Taxonomy of the European Union.

**Stage 2 (Agree)** - based on selected key performance indicators and the assessed risks, an in-depth assessment of the projects that have passed the first stage is made.

**Stage 3 (Assign)** - linking feasible Triple-A ideas to possible funding schemes.

# WEB-BASED INSTRUMENTS OF TRIPLE-A



## Assess:

The economic sectors included in the Triple-A Scheme have been identified since the start of the project:

- ❖ Buildings (residential, administrative, industrial);
- ❖ Industry (production of hydrogen, aluminum, cement, development of low-carbon technologies, production of fertilizers and nitrogen compounds, production of other organic and inorganic materials);
- ❖ Transport (Purchase of new commercial vehicles and new public transport vehicles);
- ❖ Modernization of regional / municipal energy networks;
- ❖ Modernization of outdoor lighting.

# WEB-BASED INSTRUMENTS OF TRIPLE-A



## Assess

The first stage of the Triple-A Scheme starts with a preliminary evaluation of the projects based on screening indicators set in the EU Taxonomy. They play the role of eligibility criteria and give an idea of whether the project ideas comply with the definitions of sustainable activities and whether the set technological parameters meet the minimum requirements for energy efficiency.

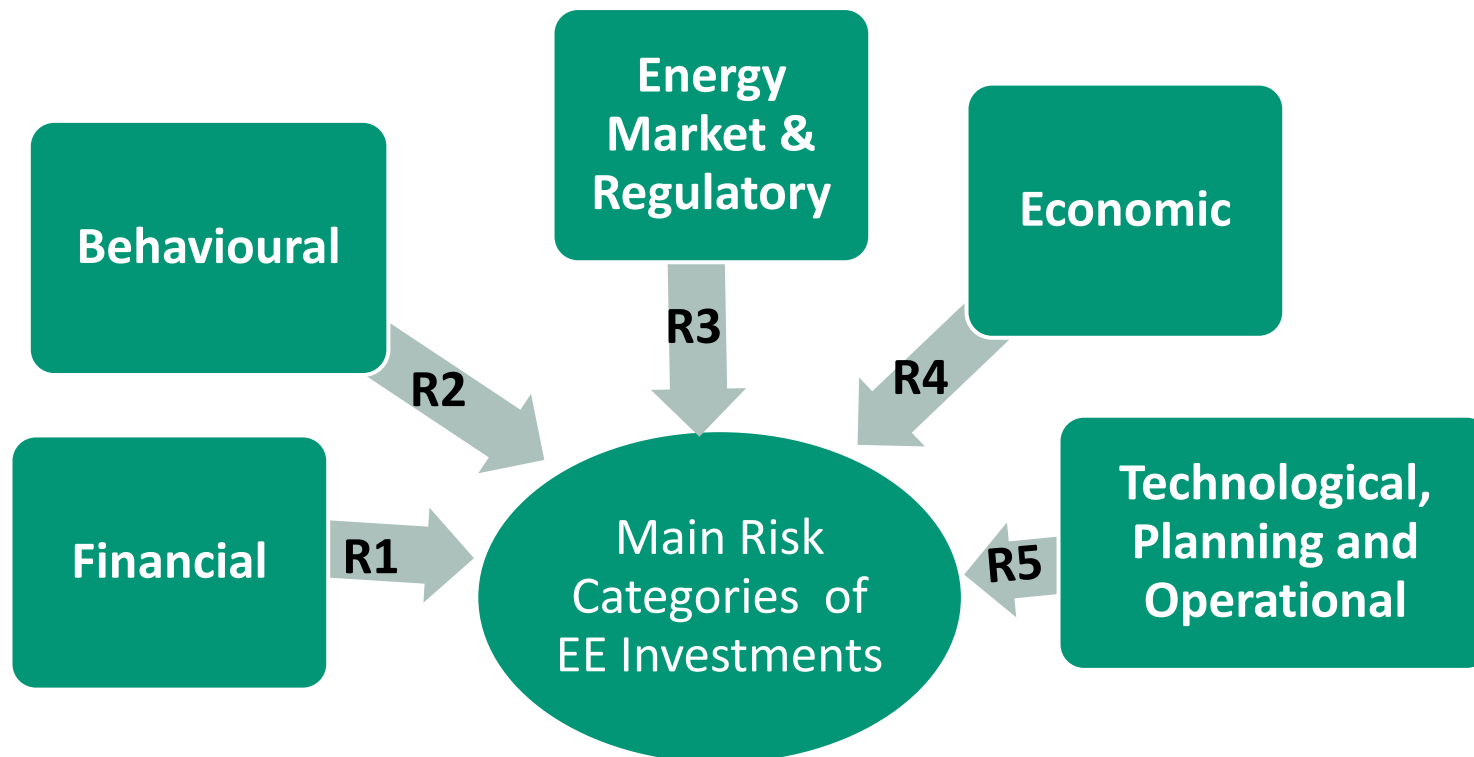
The Taxonomy criteria also include financial eligibility indicators such as minimum investment amount, redemption period, RoI or IRR.

Upon completion of the preliminary evaluation, the project will be characterized as Go (the project moves to the next stage) or No-Go (the project does not move to the next stage).



# STEP 1 - ASSESS (2/6)

## RISK CATEGORIES





# STEP 1 - ASSESS (3/6)

## RISK FACTORS PER RISK CATEGORY

**R1** Access to capital, Credit rating of the borrower (criterion with **veto**)

**R2** Rebound effect, Split incentives (criterion with **veto**)

**R3** Energy prices volatility, Weak/unstable legislation or enforcement (criterion with **veto**)

**R4** Tax volatility, Interest rates volatility

**R5** Maturity of the technology (criterion with veto), Capacity to predict accurately the energy savings, Operation and maintenance

# WEB-BASED INSTRUMENTS OF TRIPLE-A



## **Consent for the categorization of projects on the basis of a comparison of set key performance indicators (Agree)**

The second stage of the Triple-A Scheme calculates an overall assessment of the researched projects on the basis of selected key performance indicators and the calculated risk from the previous stage.

The envisaged evaluation indicators are:

- financial (NPV, IRR, Profitability Index, ratio between energy cost savings and maintenance to investment size)
- environmental (greenhouse gas emissions saved, use of local RES in%, etc.)
- social
- managerial
- energy efficiency indicators (energy saved on an annual basis, fuel saved on an annual basis, health and well-being impact indicators)
- The risk calculated in the previous phase of the assessment.

The summarized results of the analysis lead to the categorization (benchmarking) of the projects in one of the following categories:

## WEB-BASED INSTRUMENTS OF TRIPLE-A



- **Triple-A projects** - Projects classified as such have an extremely strong capacity to meet their financial and environmental commitments.
- **Retained projects** - These projects also have good potential for finding funding for implementation, but need improvement.
- **Rejected projects** - Projects that are not suitable for this evaluation model. Some of the key indicators are unsatisfactory - for example  $NPV < 0$ , which makes them unattractive for banks and funds. These are usually projects that are tied to or perform strictly social functions and do not mean that appropriate financial mechanisms or programs cannot be found for their implementation.

## WEB-BASED INSTRUMENTS OF TRIPLE-A

### Tool for linking feasible "Triple-A" ideas with possible funding schemes (Assign)

The third stage of the Triple-A Scheme is a Standardized database with Triple-A energy efficiency projects (by sectors and countries), which allows for linking a specific type of projects with existing financial mechanisms or programs:

So far, the following financial mechanisms have been analyzed:

- Debt-based financing
- Capital financing
- ESCO contracts
- Grants (Subsidies)

The innovative financial mechanisms are expected to be widely used in the instrument:

- Raising funds by issuing green bonds
- Warehouse credit lines - "Warehouse" lending
- Schemes for energy auctions
- EE mortgage
- Property assessment of clean energy

# WEB-BASED INSTRUMENTS OF TRIPLE-A



## Next steps:

- Feedback for the tools presented (answers to a questionnaire about the tools)
- Reports for the risk analysis by country
- Finishing the standart **Triple-A** tools and handbooks
- Testing the tools with real data and project ideas
- Stakeholder capacity improvement actions – trainings, webinars and others
- Generate database with **Triple-A** projects
- Preparing the project files and identifying the fitting financial tools
- Communication and publicity

Thank you for your attention!

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