

New Energy Solutions Optimised for Islands



EUROPEAN ISLANDS FACILITY

D7.2: Report from the survey to collect islands' needs

WP7, D7.2 Report from the Survey to collect islands' needs

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Technical references

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1. Introduction

1.1 Background information about the EU Islands Facility NESOI

The EU Islands Facility NESOI (New Energy Solutions Optimised for Islands) is a four-year Horizon 2020 project funded under call topic LC-SC3-ES8-2019 (European Islands Facility -Unlock financing for energy transitions and supporting islands to develop investment concepts)¹. It began on 1 October 2019 and will finish on 30 September 2023 and is made up of a multi-disciplinary consortium consisting of 10 partners from 7 EU member states. It has a total budget of €10mIn which approximately €3mIn are dedicated to a cascade funding mechanism to provide **direct financial support to EU Islands**. Coupled to consortium capacity building activities, the facility, open to a community of 2400 EU islands, **aims to fund 60 successful energy transition projects**, mobilizing more than **€100mIn of investment to significantly reduce CO2 and GHG emissions by 2023**.

In short, the European Islands Facility NESOI has three key objectives:

1. **Promote and facilitate investments processes for energy transition in the islands,**
2. **Facilitate the decentralization of energy systems,**
3. **Contribute to EU policies and the achievement of 2030 targets.**

1.2 The NESOI survey: A human-centred approach

1.2.1 Purpose

NESOI's first action has been to design and broadly distribute a survey towards European islands, to understand and identify islands' needs, projects readiness and assistance needed in order to **finetune NESOI's Technical Assistance solutions**.

The main objectives of the survey were:

- To gain **information** on the island's current status on **energy transition projects** in order to **better target NESOI's resources**,
- To **serve as a project development template** that allows respondents (islands) to **identify the gaps** in their planning,
- To develop energy project metadata that identifies the **type of projects** currently in development, **common barriers** encountered by the islands and their **financial needs**.

This survey's **final goal** is to support islands in **reaching and succeeding partnership with investors**.



1.2.2 Survey, co-creation and Design Thinking

WP7 is using Design Thinking principles throw-out all its actions and deliverables as a new way of working to thrive in uncertainty. This mindset is being key to adapt to the new situation we are living with the COVID pandemics. More information regarding COVID 19 impact and NESOI's adaptation to the new context can be found in section 4 (Conclusions/Lessons learned/ Next Steps).

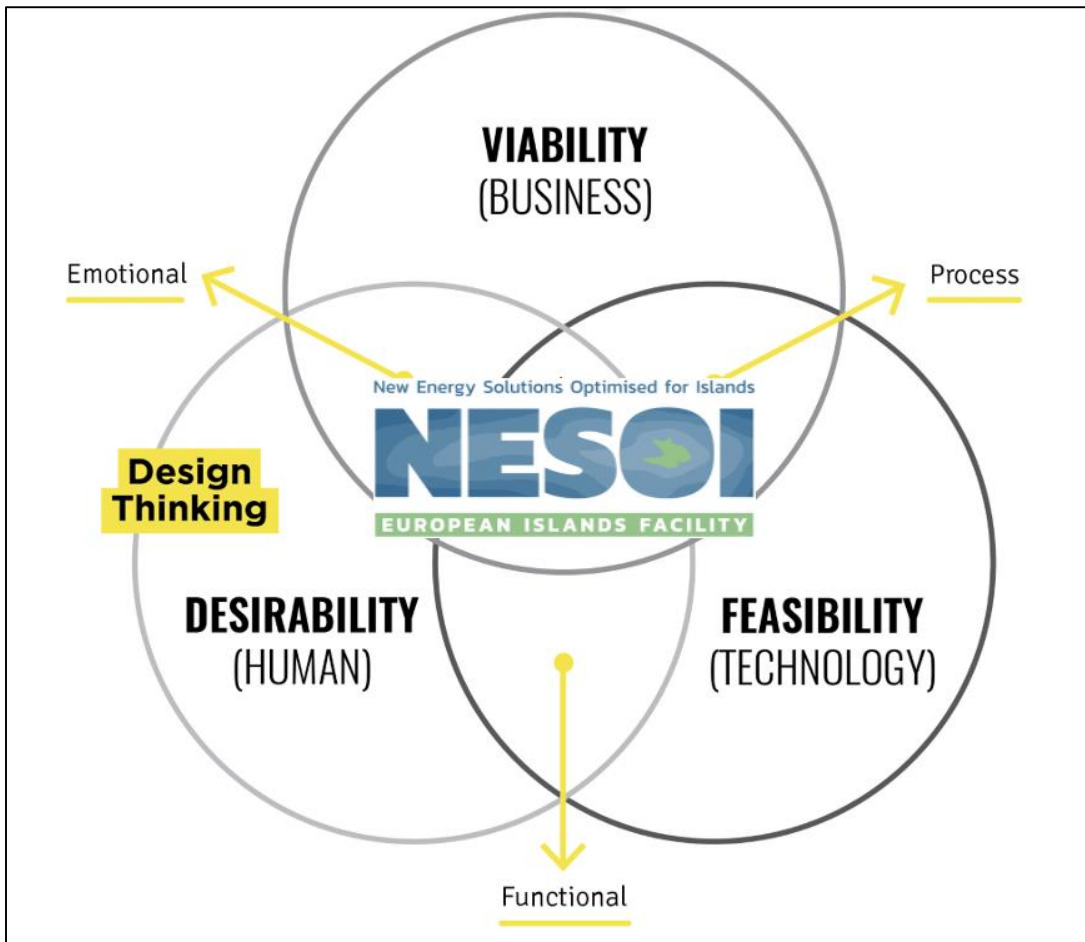


Figure 1: Design Thinking approach in NESOI¹

“Design Thinking is a human-centred approach to innovation that draws from the designer’s toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success.”

Tim Brown, CEO of IDEO

The use of Design Thinking is allowing us to test ideas quickly, to learn from fail, feedback, survey results, network and information received from the field, allowing us to rapidly adapt.

¹ Inspired from <https://www.talsom.com/en/insights/design-thinking-helping-digital-transformation/>.



Below is the linear representation of the design thinking phases we have used to conceive the survey in WP1.

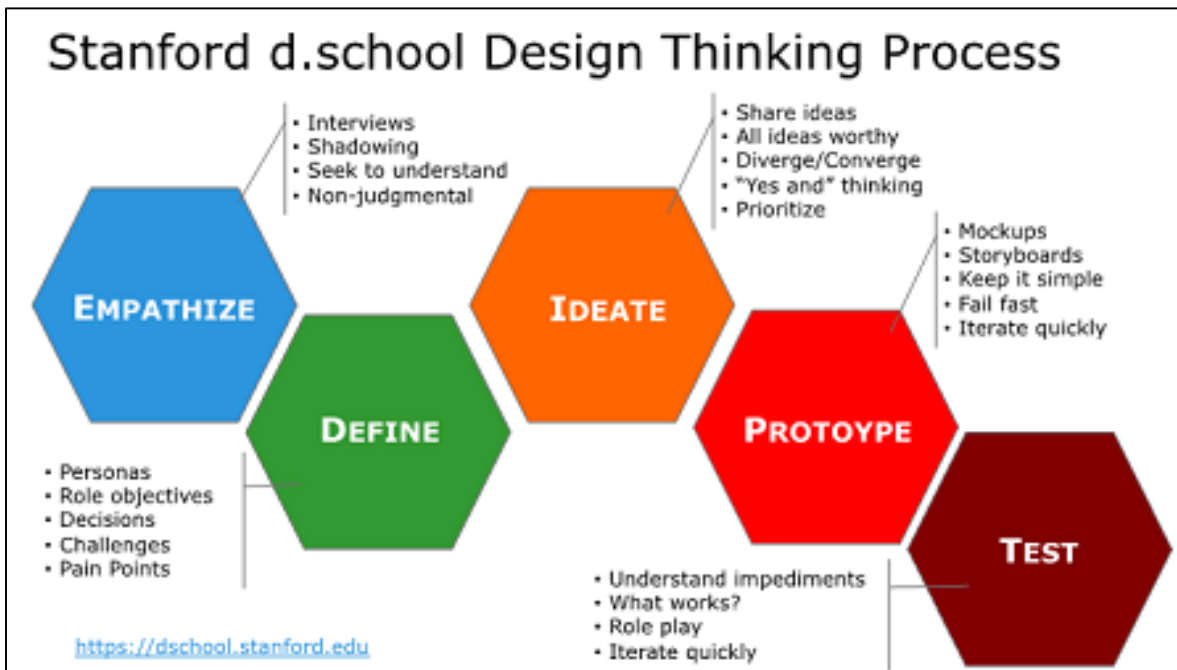


Figure 2: NESOI survey linear application of Design Thinking

The below figure illustrates how we are actually using the same process in a non-linear way to guarantee that we are attentive to the different outcomes coming from the project and also from the global pandemic's crisis.



Figure 3: NESOI survey non-linear application of Design Thinking

Some examples are:

- The need to do more empathy work during and after COVID,
- The fact that the link to the survey is still working in case we identify projects with great potential to go to market;
- NESOI teams' constant interactions with the European Commission, with Public Authorities, with Municipalities, with Public companies and islands associations are also being opportunities to learn early, test again and be as close as possible to NESOI's objective: To have at least 30 good projects for the first round of calls.



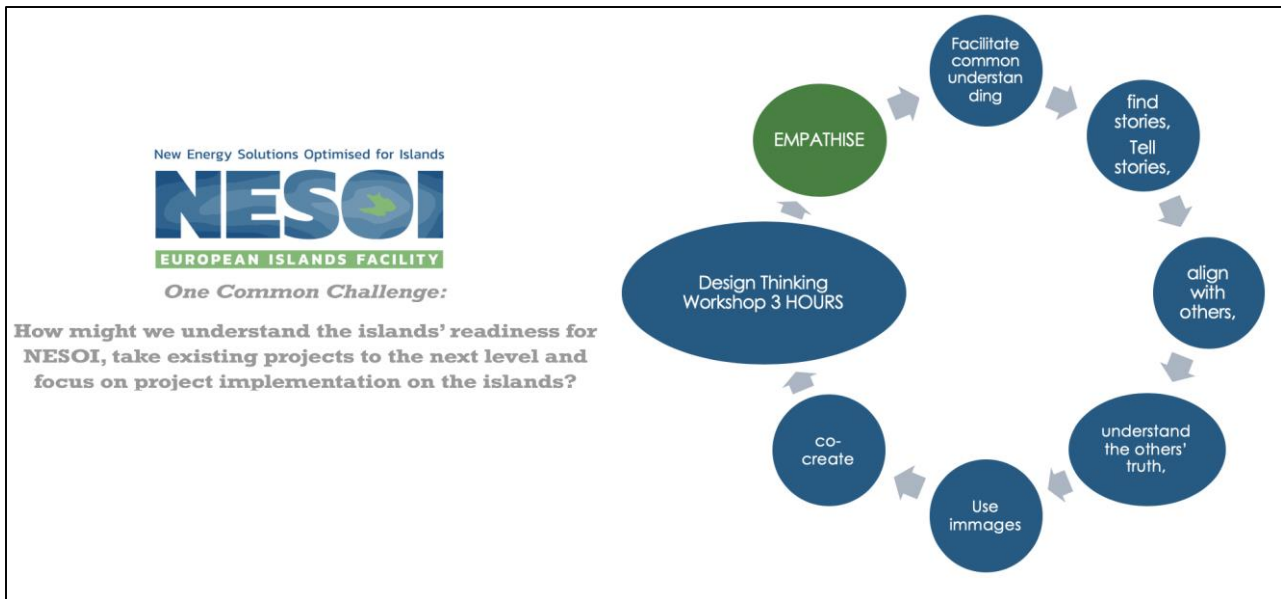


Figure 4: How NESOI WP7 is using Design Thinking to adapt to new contexts.

1.2.3 Structure and approach

The survey was structured along two sections:

- The first, “Island Level Section” is devoted to gather **general information on islands**, their commitment towards energy transition and an energy projects’ brief overview.
- The second, “Project Level Section”, aims at understanding in higher detail which projects are in the process of being developed on the island or want to be developed by island authorities or investors. This section is the most relevant being **strictly related to projects features**, thus useful to achieve the abovementioned objectives of the survey itself.

The survey, together with dedicated introductory calls, represented the first approach from NESOI to islands. Professionalism, technical support and availability to listening were the main aspects that the consortium wanted to transfer to interlocutors. In order to achieve this goal, the survey was based on:

1. Heterogeneous questions able to gather information on the current context of the islands and their starting points; their motivation and technology awareness and their current projects' pipeline.
2. Prevalence of multiple choices to support the respondents in the answering process and to facilitate the comprehension of each question.
3. Possibility to answer both online and offline in order to adapt the survey experience to respondents' availability and allows them to gather information from other people or documents.

The resulting survey was a very detailed document that probably took to respondents more than 20 minutes (as originally indicated in the communication) but guided them in the answering process in a successful way. The quality of the answers was high and



satisfactory as the majority of the respondents filled the sections 1 and 2 by providing answers to each of the points. Missing answers are rare, and they mainly concern the economic-financial information about, for instance, the availability of funds, equity amount and pay-back time.

Thanks to the level of details of the answers, NESOI partners can optimize the choice of tools and mechanisms to support EU islands in implementing their energy transition projects. The answers received influence both the selection of the critical technologies to meet islands' needs and the underpinning business models"

1.2.4 Distribution

The survey was distributed mid-February 2020, using three main channels as illustrated by Figure 5.

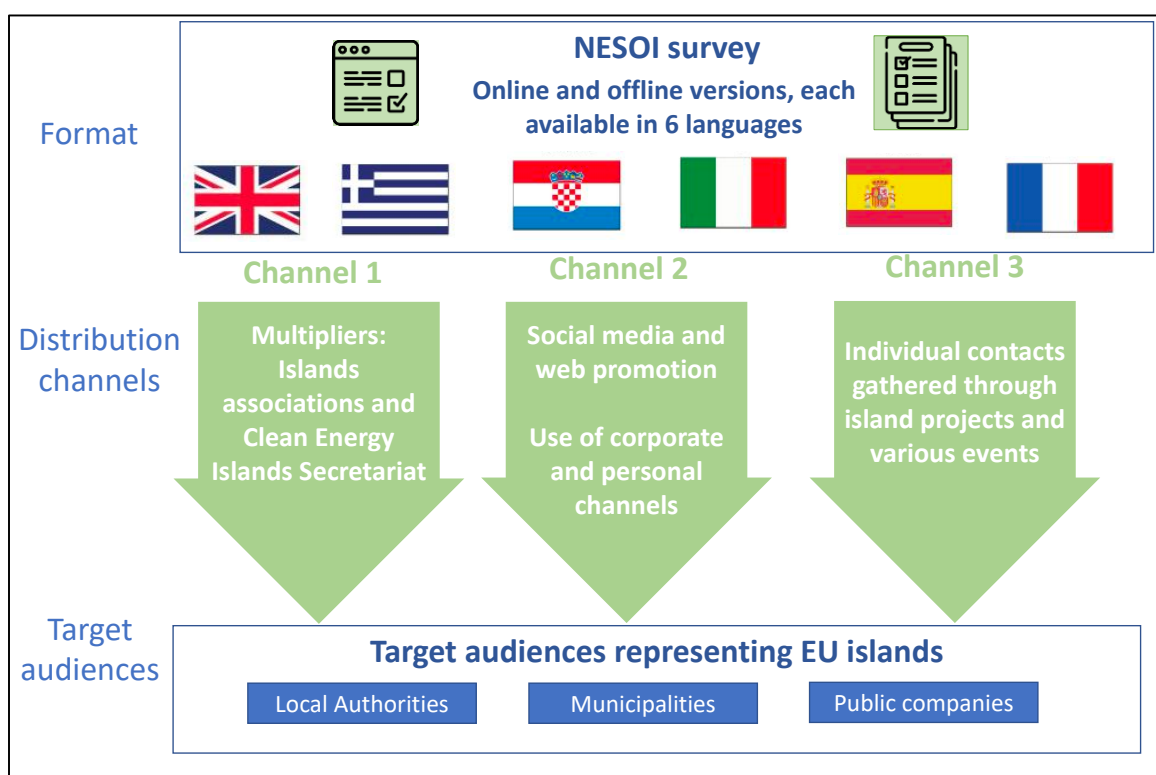


Figure 5: NESOI survey targets, distribution channels and format

1) Multipliers: The Clean Energy Secretariat and 14 Islands associations collaborated on the distribution of the Survey. They are: CPMR (Conference of Peripheral Maritime Regions), ESIN (European Small Islands Federation), SIF (Scottish Islands Federation), FEDERANE (European Federation of Agencies and Regions for Energy and the Environment), DAFNI (Network of Sustainable Greek Islands), Les Iles du Ponant - France, FÖSS (The National Association of Finnish Islands), Croatian Otočni Sabor, Association of Danish Small Islands, Ancim (Associazione Nazionale Comuni Isole Minori), SMILO (Small Islands



Organisation) and Sustainable islands. 3 **Clusters**, such as UNIEM (Unione Nazionale Imprese Elettriche Minori), OCTA (Association of the Overseas Countries and Territories of the European Union) and CPMR (Conference of Peripheral Maritime Regions) have kindly relayed the survey to their members.

2) Social media and web promotion: The survey was promoted on all NESOI digital channels as follows:

- **Web:** a dedicated survey page was created with instructions in 6 languages (EN, FR, IT, ES, GR, HR). An accompanying news item with a call to action was also shared on the website linking to the relevant webpage.



Figure 6: News item on NESOI website

- **Social media:** from the 13th of February onwards a specific social media campaign for Twitter and LinkedIn was created to advertise the survey under the #NESOIsurvey hashtag. The posts about NESOI survey were shared on Twitter via @nesoi_energy 19 times. On LinkedIn, the NESOI survey was mentioned 17 times on the official NESOI profile.
- **Online interaction:** All partners were invited to retweet and share the posts through their own social networks. Following this, ad-hoc survey posts were created advertising the deadline extension and ongoing status of the results. The Twitter campaign generated approximately 130 retweets and likes when counted the interaction on the posts. LinkedIn campaign gathered 190 reshares and likes.



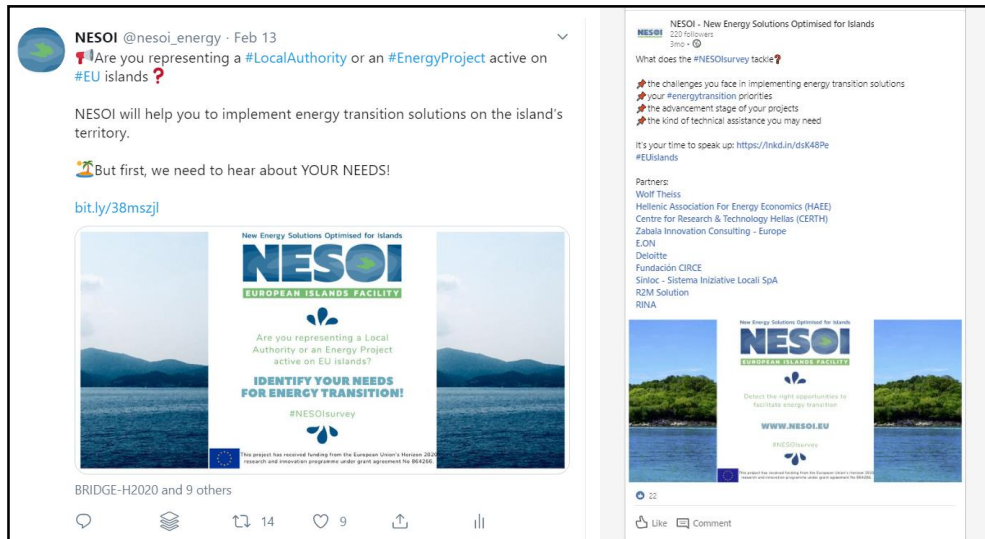


Figure 7: NESOI survey campaign on social media

- **Newsletter:** News of the survey were featured in four newsletters:
 - The ETIP SNET Newsletter which counts over 2000 subscribers with a stake in the European Energy sector;
 - ZABALA EU newsletter;
 - Clean Energy for EU Islands Secretariat newsletter;
 - The 1st newsletter of NESOI.

3) Individual contacts: The NESOI partners have activated their own contacts and communicated with them one by one. The total number of individual contacts established amounts to **658**. These lists of contacts became NESOI’s database for **distribution of the questionnaire, awareness and empathy** with islands aiming troubleshoot existing ideas and informing on how to further detail their project.

To reach the targeted audience as much as possible, six languages were used: **English, Spanish, French, Italian, Croatian and Greek**. Assistance to respondents was also given in these 6 different languages, in order to identify gaps and offer support when possible or needed.

Table 1: NESOI respondent’s Assistance contact by language

Country	Company	Phone	Email
Spain	CIRCE	+34 976 976 854	nesoi@fcirce.es
Italy	SINLOC	+39 049 8456 911	nesoi@sinloc.com
Greece	CERTH	+30 2311257750	djoannid@iti.gr
Croatia	WOLF	+38 51 49 25 400	nesoi@wolftheiss.com
France	R2M	+33 06 35 15 10 90	nesoi@r2msolution.com
Rest of UE	CIRCE	+34 976 976 854	nesoi@fcirce.es



One important learning point for NESOI was that **English cannot cover all other EU languages** (languages not supported by NESOI), like all Northern Europe countries for example.

In order to **improve the European coverage** of the survey, meetings with different **local associations and local authorities offering assistance and guidance to fill in the survey** were organized by SINLOC, RINA, CERTH and WOLF with the following associations:

1. CPMR, (Conference of Peripheral Maritime Regions),
2. ESIN (European Small Islands Federation),
3. SIF (Scottish Islands Federation),
4. FEDERANE,
5. DAFNI,
6. Network of Sustainable Greek Islands,
7. Croatian Otočni Sabor,
8. Association of Danish Small Islands,
9. Associazione Nazionale Comuni Isole Minori,
10. SMILO,
11. Sustainable Islands Platform.

NESOI has also chosen to invest time and effort in one-to-one calls by using personal contacts of WP7 partners. This effort was also done cross WP to ensure the quality and the completeness of the survey.

This strategy worked very well for Greek islands, who have received 130 projects, following this one-to-one call effort. The quality of the replies received from Greek islands is also very complete and detailed.

A second quality re-call is planned for May and June to all survey respondents, in order to understand if the answers to the survey sent before the COVID pandemics are still valid.

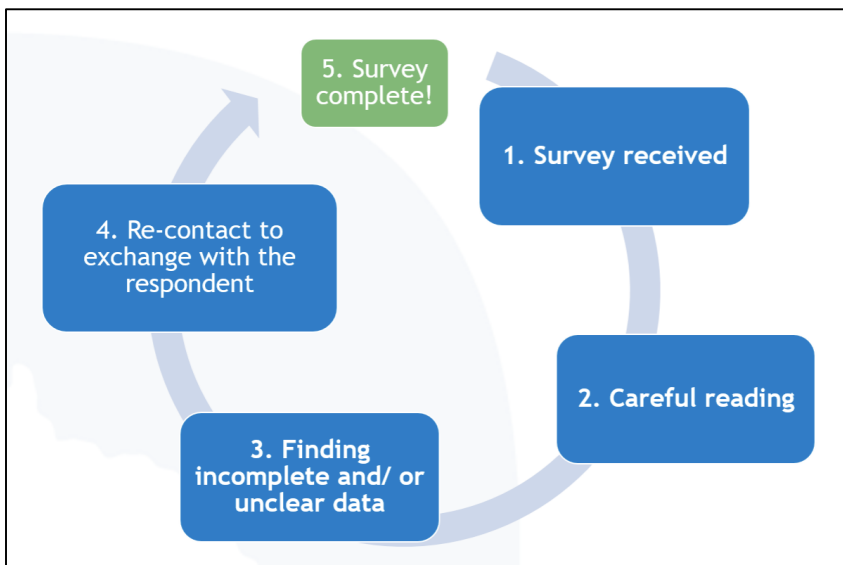


Figure 8: NESOI survey completeness and quality process



NESOI has chosen to use EU Survey, the European Commission's official survey management tool. This choice was based on the fact that EU Survey provides a wide variety of elements used in forms. The fact that this tool is hosted at the European Commission's Department for digital services (DG DIGIT), and that it is free of charge to all EU citizens were strong points to base NESOI's decision for this choice.

All the translation for NESOI's supported language (English, Spanish, French, Italian, Croatian and Greek) were made by NESOI's partners.

- Online format, using the EU Survey tool:

https://ec.europa.eu/eusurvey/runner/NESOI_Survey_Section1_ENGLISH%20

The screenshot shows the online survey interface. At the top, it says 'EU Survey'. The main heading is 'SECTION 1: ISLAND LEVEL'. Below this, there is an introductory paragraph: 'The objective of this first section is to position the state of the island from an "energy status" point of view. Thus, this section will serve to get an idea of the islands' strategies and structures for its energy transition. In this first section, the following issues are presented:'. This is followed by a bulleted list of issues: 'State of your island's planning process on energy transition and decarbonization.', 'Existence of energy agency or similar institution to support these plans and/or project.', 'Drivers to implement energy programs/plans/projects.', 'Sources connected with mainland/other islands.', 'List and key drivers of existing energy transition project pipelines.', and 'Availability and/or knowledge of different sources of finance.'. Below the list, it says 'Please note that there are issues that are multiple choice.'. The next section is 'Question 1 - Planning processes'. It asks 'Please indicate, which is the current state of your island's planning process on energy transition and decarbonization?' and 'Select one of the following options:'. There are four radio button options: 'a. We do not have a strategic plan on energy', 'b. We have a Sustainable Energy Action Plan (SEAP) or a Sustainable Energy and Climate Action Plan (SECAP)', 'c. We have a Clean Energy Transition Agenda (CETA)', and 'd. An energy related strategic plan is being developed - Please give more information in the comment box below'. At the bottom, there is a text box for 'If your answer is d, please provide some explanations'.

Figure 9: NESOI survey, look and feel using the online EU Survey tool

- Offline format, using an editable document on the project website that respondents could download, fill in and send back to the NESOI team:

The screenshot shows a PDF document titled 'SECTION 1: ISLAND LEVEL'. It contains the same introductory text and bulleted list of issues as the online version. Below the list, it says 'Please note that there are issues that are multiple choice.'. The next section is '1. Please indicate, which is the current state of your island's planning process on energy transition and decarbonization? Select one of the following options (please delete non-selected options):'. There are four radio button options: 'a. We do not have a strategic plan on energy.', 'b. We have a Sustainable Energy Action Plan (SEAP) or a Sustainable Energy and Climate Action Plan (SECAP)', 'c. We have a Clean Energy Transition Agenda (CETA)', and 'd. An energy related strategic plan is being developed- Please give more information in the comment box.'. Below these options, there is a 'Comment:' field. The next section is '2. If you have in place one or more of the above stated strategic plans on energy, please indicate its current implementation stage? Select one of the following options (please delete non-selected options):'. There is one radio button option: 'a. The majority of projects included in the plans has already been implemented (approximately >70% of total investments planned)'. The document is displayed in a browser window with a toolbar at the top.

Figure 10: NESOI survey, look and feel using the offline survey document



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 864266



1.3 Answers received to the survey

The survey was sent to **658** contacts and we have received **128** replies to section 1 - ISLAND LEVEL and **235** replies to section 2 - PROJECT LEVEL.

Coverage of the answers received by NESOI on the “Island Level Section” by country: Croatia, Greece, Italy, Spain, Denmark, France, Portugal, Finland, UK, Ireland, Malta, Cyprus, Estonia and Germany.



Figure 11: Geographical location of respondents to NESOI survey

Table 2: Number of answers received to the survey by country

	Greece	Spain	Croatia	Italy	France	Portugal	Denmark	UK	Ireland	Germany	Cyprus	Finland	Malta	Estonia	TOTAL
Number of respondents to SECTION 1	46	21	19	11	9	5	4	4	2	2	2	1	1	1	128
Number of islands concerned	47	11	15	8	10	2	3	3	2	2	1	1	1	1	107
Number of projects listed in SECTION 2	149	23	11	21	13	3		11		3		1			235



1.4 Structure of the present report

The present report consists in the consolidation and analysis of the feedback received from EU stakeholders to the NESOI survey.

It is structured according to the structure of the survey itself, with two main chapters corresponding to each of the two survey sections. For each survey question, a similar structure is adopted in the present report:

- First, the **question** is reminded, including when applicable the choices suggested;
- Second, **analytics** are provided in the form of pie, bar or scatter charts;
- Third, a **qualitative review and analysis** of the answers received followed by a short basic conclusion and discussion paragraph are proposed.

Finally, a concluding chapter explains the main findings and lessons learned from the survey and the next steps to be undertaken.



2. Section 1 of the survey: island level

1.5 Question 1 - Planning processes

1.5.1 Question

Respondents were invited to indicate which is the current state of their island's planning process on energy transition and decarbonization. The following choices were suggested:

- We do not have a strategic plan on energy;
- We have a Sustainable Energy Action Plan (SEAP) or a Sustainable Energy and Climate Action Plan (SECAP);
- We have a Clean Energy Transition Agenda (CETA);
- An energy related strategic plan is being developed.

Free comments were allowed. Respondents were also invited to upload their strategic plans.

1.5.2 Analytics

123 respondents provided an answer to this question. The breakdown of answers is shown by Figure 12.

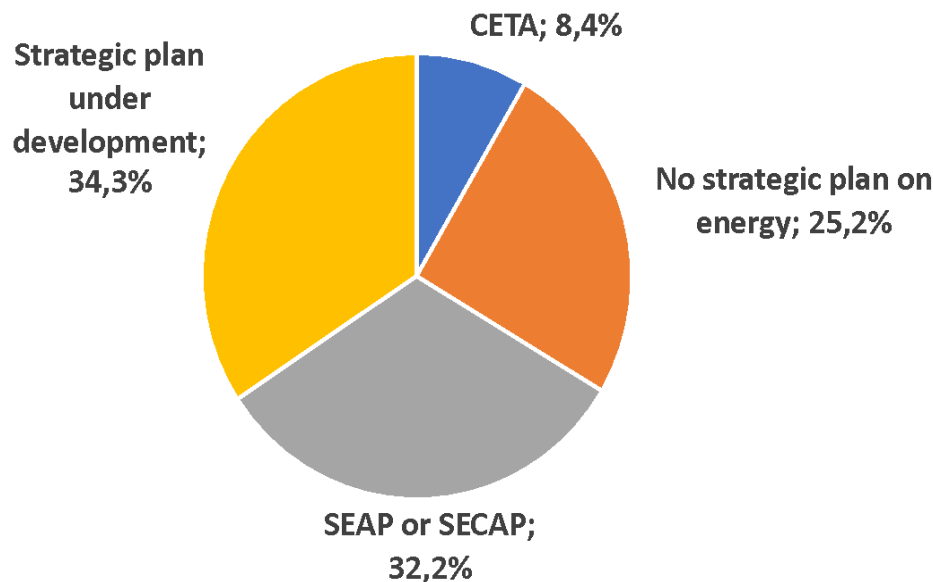


Figure 12: Existence of strategic energy transition plans - Values in % on total number of answers (Section 1, Question 1)

Furthermore, 49 respondents uploaded their strategic plans.



1.5.3 Further analysis

A considerable percentage is represented by strategic plans under development. Approx. the same percentage concerns the respondents with a SEAP or SECAP in place. The respondents that can't refer to a strategic plan on energy is still quite high, representing 25% of answers received.

1.6 Question 2 - Strategic plans' implementation stage

1.6.1 Question

Respondents having in place one or more of the above stated strategic plans were invited to indicate their current implementation stage. The following choices were suggested:

- The majority of projects included in the plans has already been implemented (approximately >70% of total investments planned);
- Only a few projects included in the plans have been implemented (approximately <30% total investments planned);
- None of the projects included in the above stated plans has already been implemented;
- Currently planning to implement the first projects included in the plans.

1.6.2 Analytics

94 respondents provided an answer to this question. The breakdown of answers is shown by Figure 13.

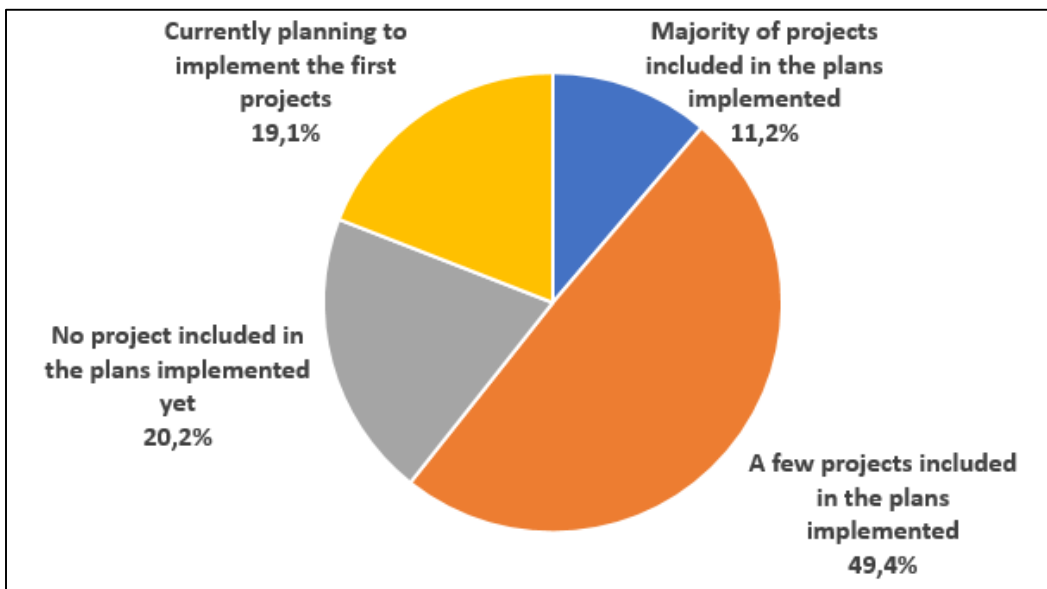


Figure 13: Implementation stage of strategic plans - Values in % on total number of answers (Section 1, Question 2)



1.6.3 Further analysis

It appears that the cases where the majority of the planned projects have been implemented represent the lowest percentage at 11,2%. For the 49,4% of respondents a few projects have been implemented so far and for 19,1% projects are under planning phase. The percentage of respondents declaring that none of the planned projects from plans have not been realized, is quite high at 20,2%.

1.7 Question 3 - Energy transition projects already implemented

1.7.1 Question

Respondents were invited to indicate whether or not the following energy transition projects had already been implemented, in a complete, significant or marginal way:

- Energy Efficiency of public lighting,
- Energy Efficiency in public building,
- Energy Storage System on existing carbon fuel driven power plants,
- Energy Storage System on existing Renewable Energy power plants,
- Electric Mobility solutions and charging infrastructures,
- Renewable Energy power plants.

1.7.2 Analytics

An average of 122 respondents provided an answer for each category of energy solution. The breakdown of answers is shown by Figure 14.

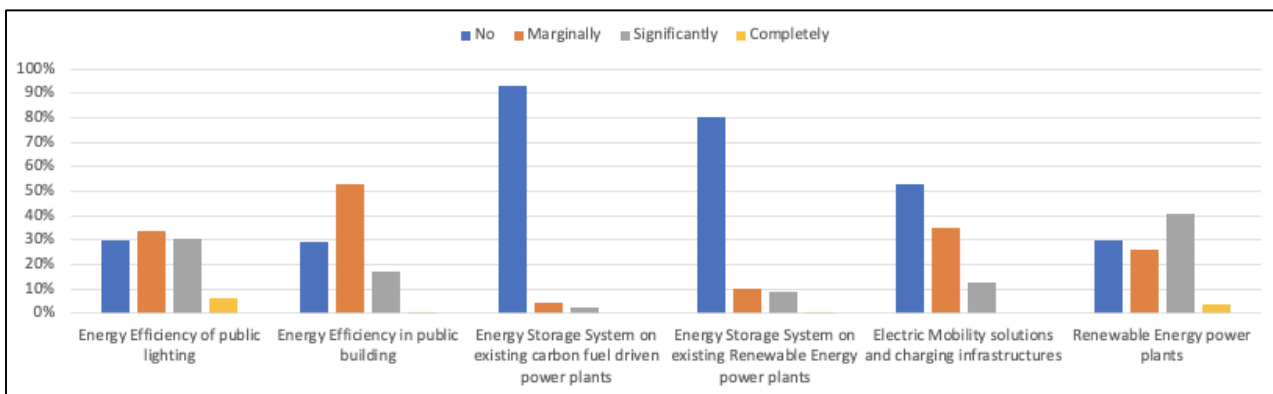


Figure 14: Types of projects already implemented - Values in % on total number of answers (Section 1, Question 3)

1.7.3 Further analysis

Six main typologies of projects have been chosen to investigate their rate of implementation in the respondents' islands.

- Efficient public lighting and renewable energy plants represent the two categories where respondents reported significant level of implementation, respectively 30,6%



and 40,7% on the total number of answers received. Nevertheless, there is still room for action for both typology as 63,4% (lighting) and 55,6% (RES) of answers showed that implementation in these two domains was none or marginal;

- Energy storage systems applied both on existing carbon fuel power plants and on RES are the less implemented so far - respectively 93,0% and 80,5% of answers on these categories of projects corresponded to no implementation;
- Electric mobility is also a category where respondents reported no or marginal implementation (52,6% and 34,8% of total answers);
- Concerning the interventions of energy efficiency in public building, the most of answers (52,6%) reported a marginal implementation; no implementation for 29,3% and significant implementation for 17,3%.

1.8 Question 4 - Energy Agency

1.8.1 Question

Respondents were questioned about the existence of an Energy Agency or similar institution supporting the above-mentioned plans and/or projects. The following options were proposed:

- Yes, a local agency that is part of the Local Authority,
- Yes, at local level, but it is independent from the Local Authority,
- Yes, at regional level,
- Yes, at national level,
- No.

Respondents could provide multiple answers.

1.8.2 Analytics

110 answers gathered for this question break down as shown by Figure 15.

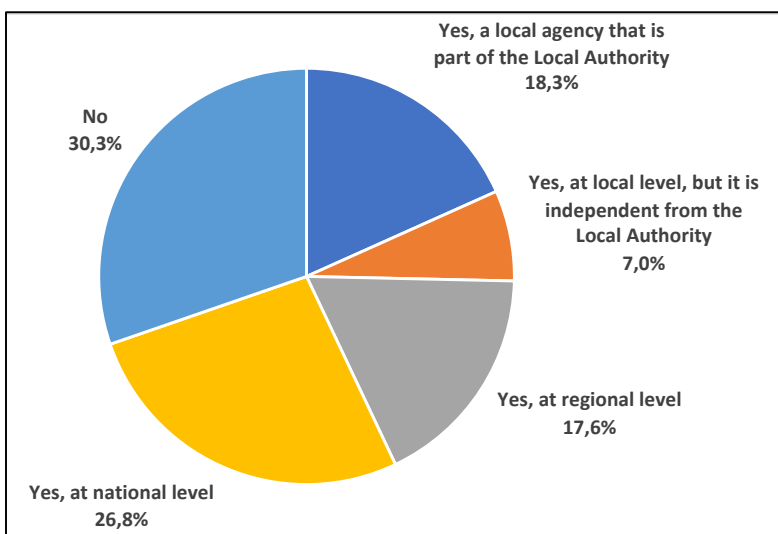


Figure 15: Types of Energy Agencies - Values in n. of answers (Section 1, Question 4)



1.8.3 Further analysis

30,3% of answers were negative, then quite a considerable number of respondents don't have the support of an energy agency. Many of the respondents can benefit from a support from local, regional or national agencies: 25,4% at local level; 17,6% at regional level and 26,8% at national level.

1.9 Question 5 - Competencies of the Energy Agency

1.9.1 Question

Respondents having indicated an Energy Agency at the previous question were invited to select the competences provided by the Energy Agency to support the projects mentioned in Question 3.

This selection was made, in order to cluster and subsequently understand what the main needs of the islands on the level of consultation are amongst:

- a. Program Management
- b. Engineering
- c. Procedural and legal
- d. Economic and financial
- e. R+D+I project participation (research, development and innovation)

Respondents could provide multiple answers.

1.9.2 Analytics

Figure 16: Main competencies of Energy Agencies - Values in n. of respondents (Section 1, Question 5) 108 respondents answered this question by indicating one or more competencies per each energy agency.

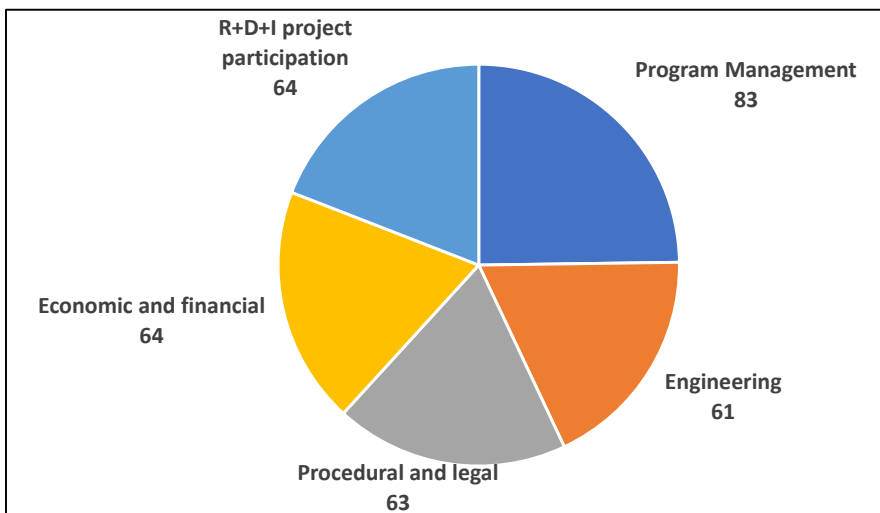


Figure 16: Main competencies of Energy Agencies - Values in n. of respondents (Section 1, Question 5)



1.9.3 Further analysis

The support provided by local, regional and national energy agencies is distributed amongst the 5 dimensions of Program Management (chosen by 83 respondents), Engineering (61), Procedural and Legal (63), Economic and Financial (64) and RDI (64) in a quite balanced way with a predominance of Programme Management. On average, each of the 108 respondents provided 3 competences per energy agency.

1.10 Question 6 - Main drivers to energy transition programmes

1.10.1 Question

Respondents were invited to select the main drivers to implement energy programs, plans or projects on the island. Three choices were allowed, ranked by decreasing order of importance, amongst:

- Environmental benefits,
- Living cost reduction,
- Energy production cost reduction,
- Improve the quality of energy supply,
- Job creation,
- Improve island image (i.e. better branding to attract tourists),
- Economy competitiveness,
- Comply with regulation and/or nation objectives/commitments,
- Other.

1.10.2 Analytics

118 respondents provided an answer to this question by indicating their ranking of top 3 drivers for the energy transition programmes

Allocating 3 points to the most important driver indicated by each respondent, 2 points for the second driver and 1 point to the third driver, the different drivers proposed are ranked by decreasing order of importance as illustrated by Figure 17.

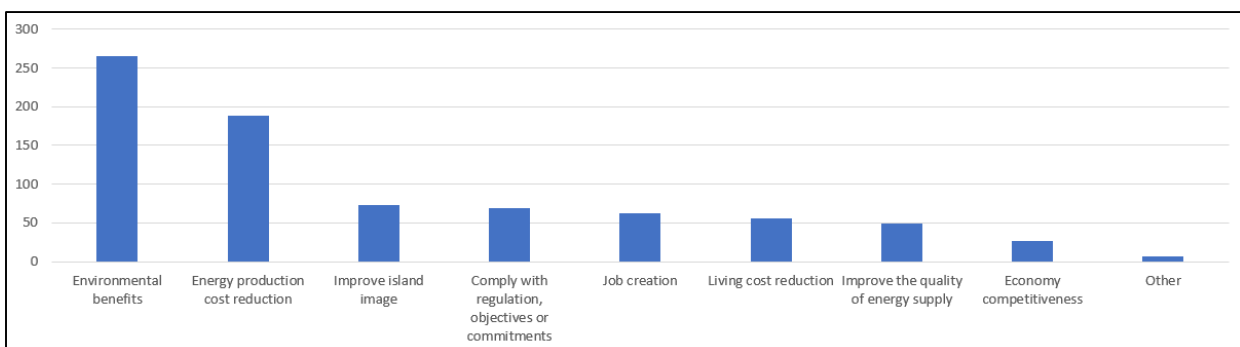


Figure 17: Main drivers to energy transition programmes - Values in points allocated to the respondents' ranking (Section 1, Question 6)



1.10.3 Further analysis

Almost all respondents quoted “Environmental benefits” as an important driver. The second most chosen driver is “Energy production cost reduction” selected by 82 respondents. These two drivers have been put as first choice in the ranking by respectively 46 and 45 respondents. The other proposed drivers related to the image of the island, the regulatory compliance and job creation received more than 60 points in the ranking (respectively 73, 69, 63): in particular, the factors of “image” and “regulation” have been chosen by a lower number of people, but they have been considered as more important than the “job” factor. The drivers related to “living cost reduction” and “improvement in quality of supply” had approx. 50 points; while the factor of “economy competitiveness” is the less voted in absolute terms.

1.11 Question 7 - Connections with mainland or other islands

1.11.1 Question

Respondents were invited to whether their island’s energy sources were connected with mainland or other islands through electricity, gas or other infrastructure. This is an important criterion to understand the technical needs of the islands and the possible business models.

1.11.2 Analytics

109 respondents provided an answer to this question. Regarding those having not responded the question, we assume that the energy system of their island is not connected with mainland nor another island. Figure 18 shows the corresponding numbers.

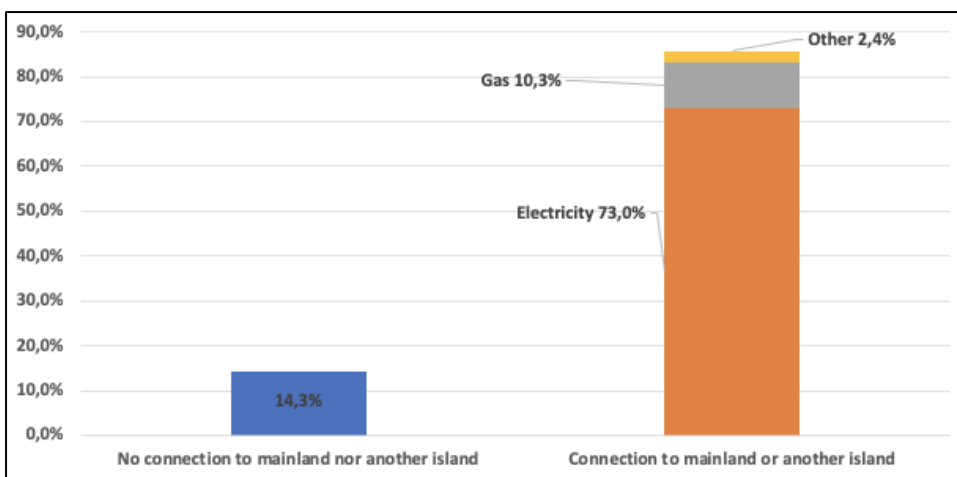


Figure 18: Connection to mainland or another island (Section 1, Question 7)

1.11.3 Further analysis

Electricity connections are the most common infrastructure on the basis of the answers received by the respondents (73,0% on total answers). Gas connection represent 10,3% of



the answers. Respondents that chose “Other” meant connections for diesel, drinking water, heat or LNG.

1.12 Question 8 - Financing available

1.12.1 Question

Respondents were questioned about the kind of financing available in their territory to finance the development of energy transition projects. They were invited to indicate their confidence or knowledge level in a scale from 1 (low) to 4 (very high) for each case, for the following types of funds:

- Local funds,
- Regional funds,
- National funds,
- European funds,
- Private funds,
- Fiscal incentives,
- Alternative financing instruments (crowdfunding, crowdlending, equity funds, etc.).

They were also invited to indicate the name of the corresponding funding lines, if they knew them.

1.12.2 Analytics

On average approx. 112 respondents indicated their awareness on the typology of funding available on their territories. In this average, fiscal incentives and alternative instruments are not included as a lower number of respondents was able to provide an answer: respectively 79 and 66 respondents. This was probably due to the fact that these instruments are less familiar than other kind of financial mechanisms.

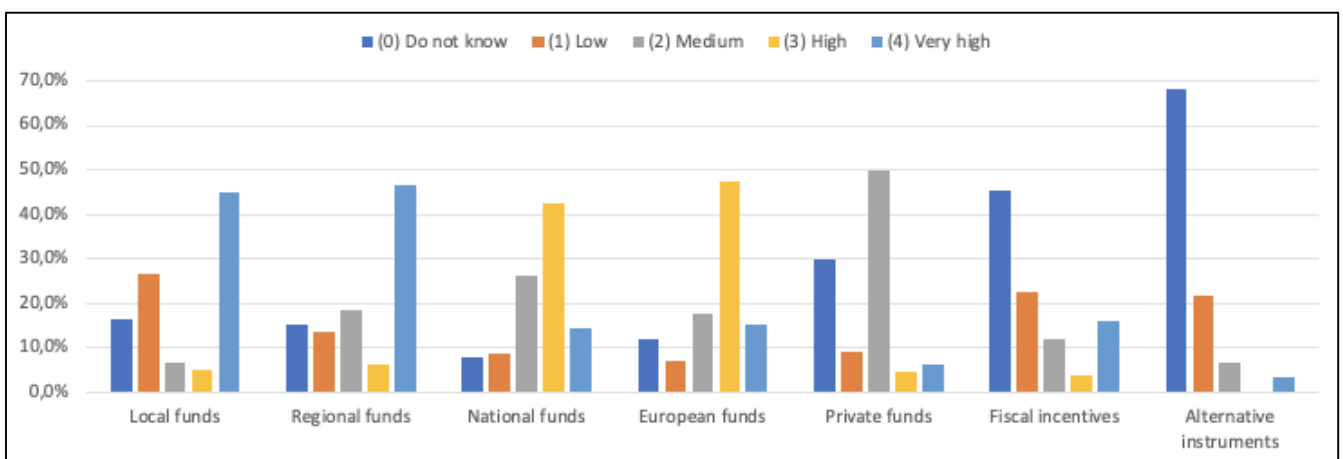


Figure 19: Knowledge / confidence level about financing available - Values in % on total answers (Section 1, Question 8)



Weighting their answers with 0 if they did not know, 1 for a low level of confidence or knowledge, 2 for a medium level, 3 for a high level and 4 for a very high level, the respondents' average answers can be summarized as shown by Figure 20.

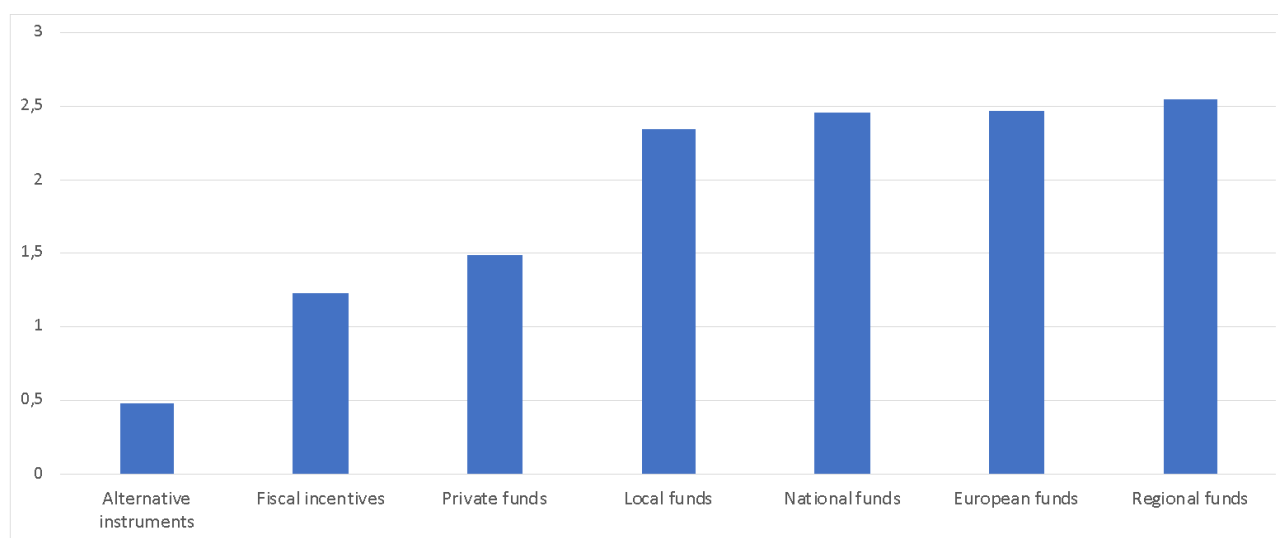


Figure 20: Knowledge / confidence level about financing available - Values in points allocated to the respondents' ranking (Section 1, Question 8)

1.12.3 Further analysis

As shown in the graphs above, public funds benefit from satisfactory percentages of awareness from respondents: local and regional funds recorded more than 45,0% of answers in the “Very High” choice. National and European funds recorded more than 40,0% of answers in “High”.

The knowledge about private funds has been defined as “Medium” based on the 50,0% of the answers, while 30,0% indicated not to have any knowledge.

There is low awareness on fiscal and alternative instruments: 68,0% of the respondents has no or low knowledge of fiscal incentives and 90,0% of respondents declared not to know anything about them.

1.13 Question 9 - Main energy transition projects

Respondents were invited to fill in a table of all of the projects they would submit in subsequent Section 2 - also possibly including more projects which have less detailed information, but that need anyway Technical Assistance to be structured.

This question was split into several sub-questions.



105 respondents reported the number and main information of their projects, a total of 363 projects have been counted.

1.13.1 Number of projects per respondent

Figure 21 shows how many projects each respondent has indicated.

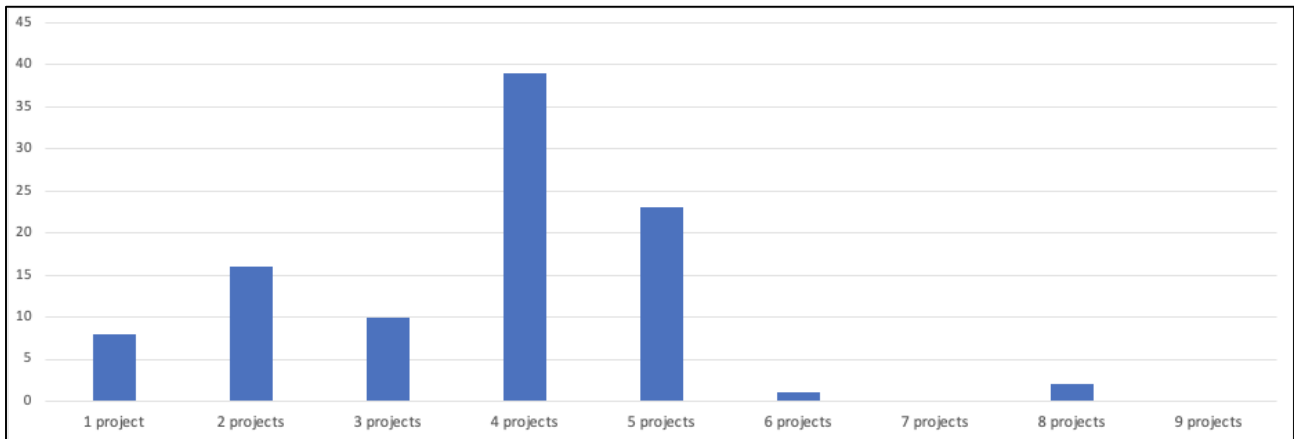


Figure 21: Number of projects per respondent (Section 1, Question 9)

1.13.2 Organization in charge (project promoter)

Question

Respondents were asked which type of project promoter was in charge of each project, amongst the following options:

- Local authority (municipality, region, etc.),
- Private subject,
- Energy company,
- Association,
- Other.

Analytics

The 363 projects indicated by the 105 respondents present the following breakdown in terms of type of project promoters (see Figure 22).



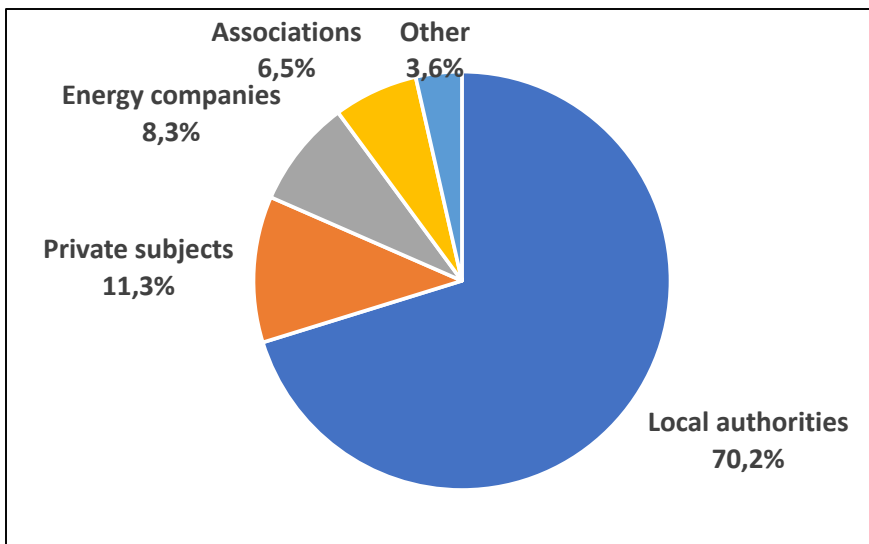


Figure 22: Types of project promoters - Values in % on total answers (Section 1, Question 9)

Further analysis

Local authorities are the most common project promoters based on 70,2% of the answers, followed by private subjects (11,3%), energy companies (8,3%) and associations (6,5%). In the category “Others”, a few respondents indicated local group of citizens acting together for the community.

1.13.3 Main technologies

Question

Respondents were asked to indicate the main technology/energy efficiency intervention used in their project(s), amongst:

- Retrofitting of existing buildings' envelope
- HVAC systems (Heating, Ventilating and Air Conditioning)
- Lighting
- Industrial heat production
- Electrical equipment
- Electricity generation and distribution
- Electricity production from RES
- Thermal energy production from RES
- Co-generation plants
- Low carbon vehicles acquisition
- Deployment of charging infrastructure for electric vehicles
- Urban sustainable mobility measures
- Facility monitoring, consumption accounting and energy management
- Energy storage
- Other.



Analytics

The 363 projects indicated by the 105 respondents present the following breakdown in terms of type of energy efficiency intervention (see Figure 23).

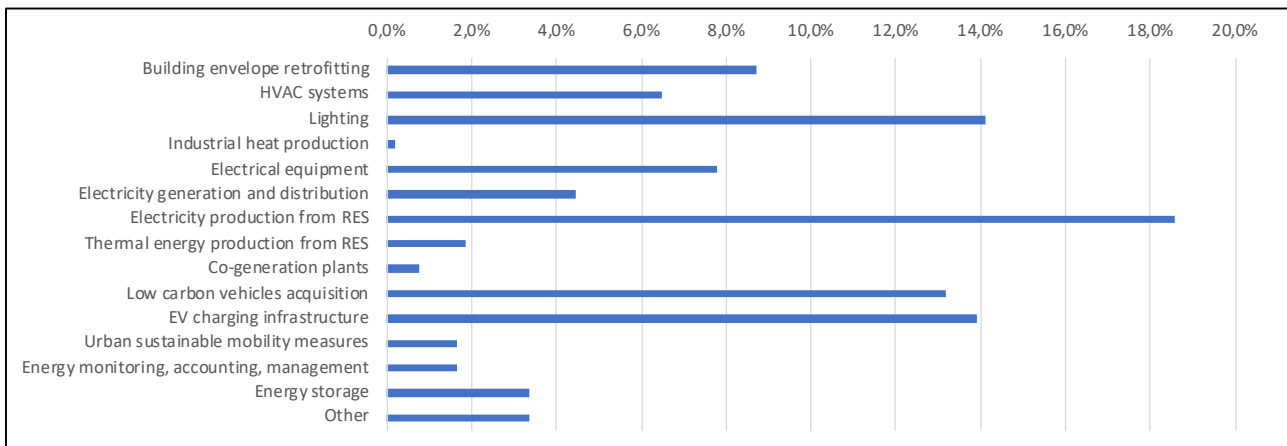


Figure 23: Typology of energy related measures included in Respondents' projects - Values in % on total answers (Section 1, Question 9)

Further analysis

The overview on the foreseen field of intervention for the ongoing/future projects of respondents shows a good balance between different kinds of energy measures with a prevalence of installation of RES (18,6% / 100 interventions), efficient lighting (14,1% / 76 interventions), and investments linked to electrical vehicles (for charging infrastructure: 13,9% / 75 interventions; for vehicles: 13,2% / 71 interventions).

Above Figure 14 presented energy storage and electric vehicles projects as not or marginally implemented so far, but this seems to change in the future: respondents have electrical and sustainable mobility projects and energy storage in their plans as shown in the figure above, with respectively 28,8% / 155 interventions related to sustainable and electric mobility and 3,3% of answers / 18 interventions for energy storage.

The category "Other" includes biogas projects for transport and home heating, biofuel for ferries, nearly zero energy hotels.

1.13.4 Timing

Question

Respondents were asked to indicate the estimated start year of their project(s), between 2020 and 2024.

Analytics

The number of projects foreseen to start each year between 2020 and 2024 is indicated by Figure 24.



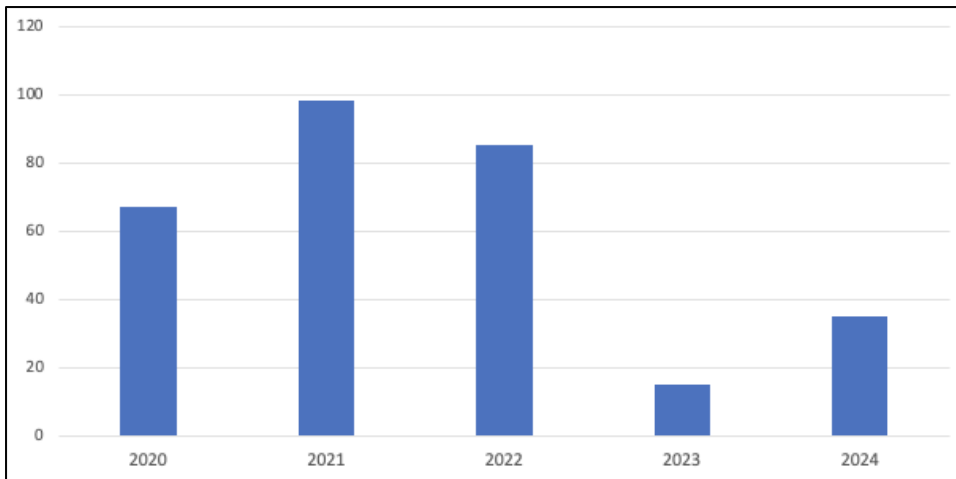


Figure 24: Number of projects per estimated start year (Section 1, Question 9)

Further analysis

83,3% of respondents' projects start in the period 2020-2022. The reason behind the lower number of projects recorded in 2023 and 2024 has probably been influenced by the structure of the question itself that asked the respondents to report all projects to be "activated" by 2023.

Various interpretation of the term "start" could also occurred as it could refer to the design phase as well as construction phase, then additional details will be clarified during the one-to-one calls that the consortium will carry out.

1.13.5 Implementation status

Question

Respondents were asked to specify the status of their project(s), by choosing among:

- No planning activity started,
- Prefeasibility study,
- Early stage design,
- Executive design,
- Permitting,
- Procurement.

Analytics

For 309 projects, the respondents indicated the respective project status. The breakdown is as follows (see Figure 25).



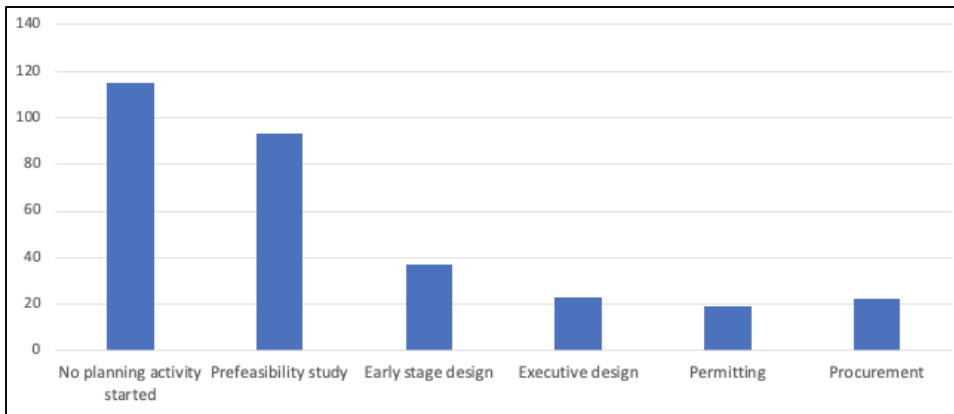


Figure 25: Number of projects per implementation status (Section 1, Question 9)

Further analysis

67,3% of the respondents indicated that their projects are at an early stage, meaning that no planning activities started or only the prefeasibility study did. This may be strictly related to the availability of financial resources for the investments which in the most of cases is not there, as it will be shown in Section 2 analysis.

As explained, the respondents have been asked to report projects to be activated by 2023: it is quite surprising that the majority of projects are at such an early stage given that they should be ready by 2023. The direct contact with the respondents will allow to understand if there is a delay in the project timing, if the delay is due to the lack of financial resources or to other factors.

1.13.6 Legal structure

Question

Respondents were asked to specify the legal structure adopted for their project(s), by choosing among:

- Public tender,
- Private initiative,
- PPP/concession,
- Other.

Analytics

The 363 projects indicated by the 105 respondents present the following breakdown in terms of type of legal structure (see Figure 26).



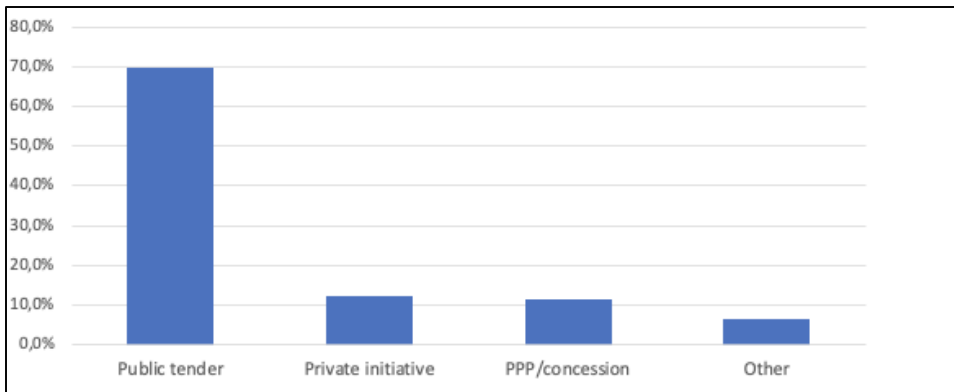


Figure 26: Projects per type of legal structure - Values in % on total answers (Section 1, Question 9)

Further analysis

Public tender is the main legal structure (69,6% of the answers) indicated by the respondents. This outcome is consistent with the information provided by Figure 22 where it is shown that the majority of projects is promoted and managed by local authorities.

1.13.7 Overall investments, funding available and funding needed

Question

Respondents were asked to indicate for each project, in euros:

- The overall investments,
- The funding available,
- The funding needed.

Analytics

Respondents provided financial information about 60 projects. For each of them, they indicated the overall investment related to the projects. However, many information seems to be missing for the funding available and the funding needed. The corresponding overall investments amount to 1,443 M€ and, on the basis of the collected data, the indication of the funding available is 125 M€ and the funding needed is 250 M€.

Projects are categorised according to their size as follows:

- Projects with overall investments lower than 100 K€;
- Projects with overall investments between 100 K€ and 499 K€;
- Projects with overall investments between 500 K€ and 1,99 M€;
- Projects with overall investments between 2 M€ and 9,99 M€;
- Projects with overall investments greater than 10 M€.

The number of projects in each category, together with the corresponding total amount of overall investments, are illustrated by Figure 27. The corresponding shares between funding needed and funding available are illustrated by Figure 28.



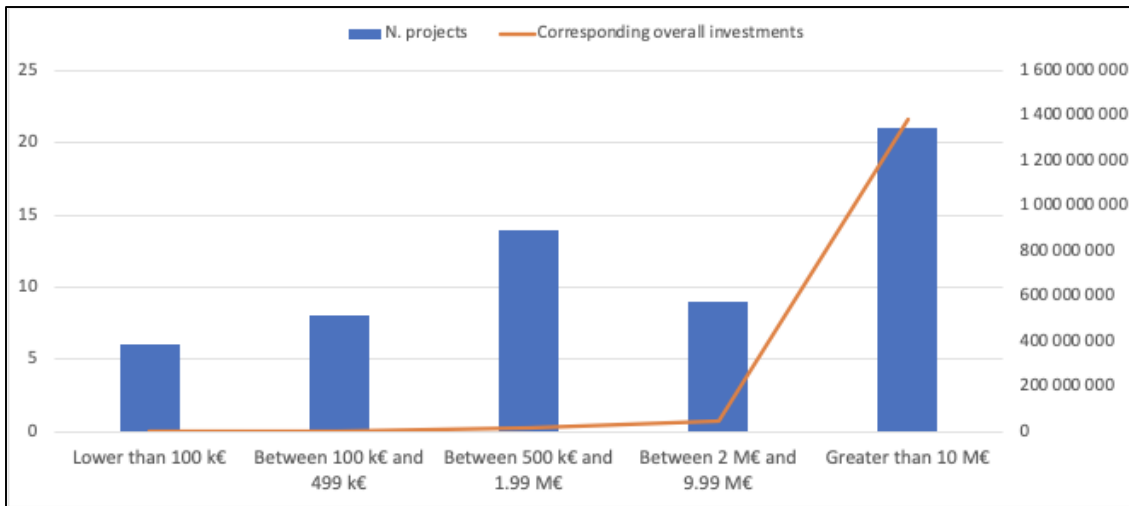


Figure 27: Number of projects per size and corresponding amount of total investments (Section 1, Question 9)

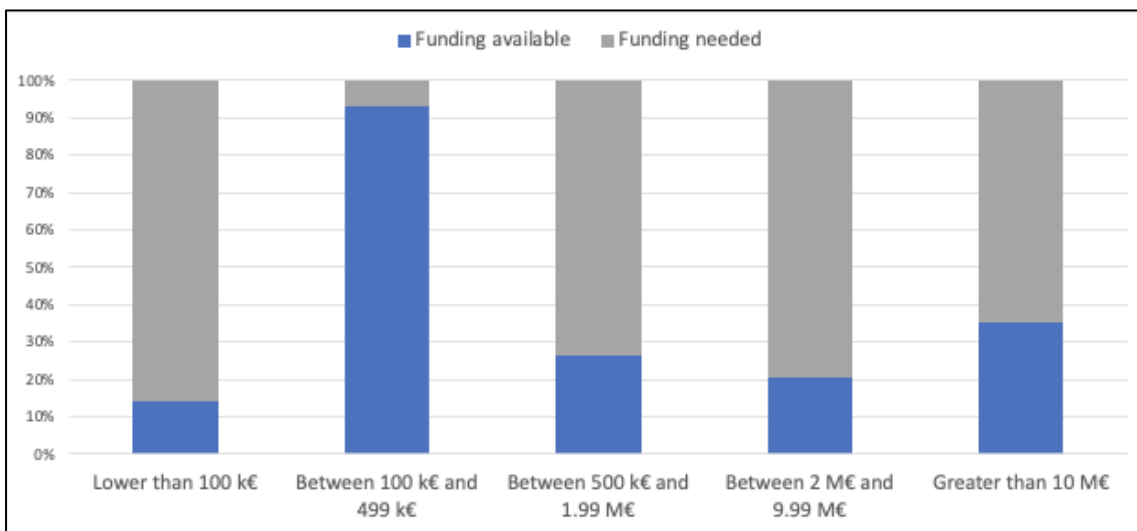


Figure 28: Funding available and needed per size of project (Section 1, Question 9)

Further analysis

The distribution in size of the 60 projects for which the financial information has been disclosed is quite heterogenous, with a prevalence of medium projects between 500k€ and 1,99 M€ (24,1%) and very big projects with a budget higher than 10 M€ (36,2%). The additional information about the available funding and the needed one is partially incomplete as respondents seemed not to be able to provide full data.

56,7% and 43,3% of the respondents didn't provide the amounts of, respectively, the available and needed funding for their projects. Figure 28 shows the answers received for the 60 projects where respondents provided the overall project amount, but the reading could be misleading.

This is another point to be further investigated through dedicated one-to-one contacts.



2 Section 2 of the survey: project level

2.1 Question 3 - Projects' promoters

2.1.1 Question

Respondents were invited to indicate the type of organisation corresponding best to the project promoter, amongst:

- a. Public initiative (tender)
 - i. Local authority
 - ii. Regional government
 - iii. National government
 - iv. Public company
- b. Private initiative
 - i. Energy producer
 - ii. Distributed System Operator (DSO)
 - iii. Citizen/community consortia
 - iv. Other

2.1.2 Analytics

235 respondents provided an answer to this question. The breakdown of answers is shown by Figure 29.

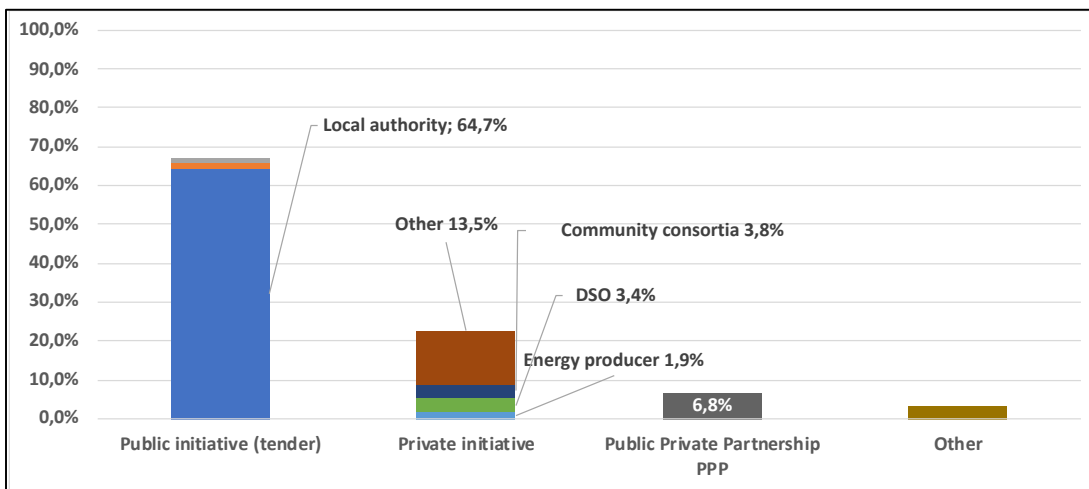


Figure 29: Categories of project promoters - Values in % on total answers received (Section 2, Question 3)

2.1.3 Further analysis

In the majority of cases, the promoters of the projects are Local Authorities (64,7%), followed by PPP Public Private Partnerships (6,8%), community consortia (3,8%) and DSO (3,4%). A percentage of 13,5% of respondents chose the option “Other” and specified



various kind of actors including universities, joint actions from Insular Council, private companies and TSO/DSO, car parks' owners and hospitals.

2.2 Question 4 - Projects' categories

2.2.1 Question

Respondents were invited to indicate the project category and subcategory that better describe their project, from the following detailed list:

- 1) Energy efficiency
 - a) Retrofitting of existing buildings' envelope
 - b) HVAC systems (Heating, Ventilating and Air Conditioning)
 - i) District heating
 - ii) Fuel change
 - iii) Retrofitting of existing heating/cooling installations at single building level
 - iv) Installation of saving systems (free-cooling, evaporative cooling, heat recovery)
 - v) Solar thermal facilities for domestic hot water (DHW), swimming pools, heating or industrial uses.
 - vi) Improvement of thermal insulation (boilers, distribution system, etc.)
 - vii) Replacement of heating units (underfloor heating, low temperature systems)
 - c) Lighting
 - i) Public lighting
 - ii) Public buildings
 - iii) Public and private buildings
 - d) Industrial heat production
 - i) Replacement of industrial heat equipment by fuel change (replacement by gas or by biomass)
 - ii) Replacement of industrial heat equipment with more efficient models
 - iii) Local Industrial waste heat valorisation
 - iv) Replacement of insulation or refractory materials
 - e) Electrical equipment
 - i) Electrical appliances (higher energy rating, etc.)
 - ii) Electric motors (replacement of existing motors with more efficient ones (IE3, IE4), installation of variable speed drives and soft starters)
 - iii) Reactive energy compensation with capacitor banks
 - iv) Replacement of existing electric transformers by high efficiency equipment
 - v) Compressed air systems (replacement of compressors by more efficient models, installation of variable speed compressors or installation of heat recovery systems)
 - f) Electricity generation and distribution
 - i) Higher efficiency diesel generator management
 - ii) Diesel generator replacement
 - iii) Integration of battery at a diesel generator level to enhance the operation efficiency
 - iv) Renovation of transformers and cabinets
 - v) Renovation of cabling
- 2) Renewable energy
 - a) Electricity production



- i) Solar PV
 - ii) Solar thermal
 - iii) Wind
 - iv) Hydro
 - v) Marine
 - vi) Other
 - b) Thermal energy production
 - i) Biomass
 - ii) Biogas
 - iii) Solar thermal
 - iv) Geothermal
 - v) Other
 - c) Co-generation plants
- 3) Sustainable mobility
 - a) Low carbon vehicles acquisition
 - i) For public transport (buses, taxis, etc.)
 - ii) Municipal Fleet
 - iii) Private and/or commercial
 - b) Deployment of charging Infrastructure for electric vehicles
 - c) Urban sustainable mobility measures
 - i) New public transportation infrastructures
 - ii) Vehicle Sharing Platforms (carpooling, carsharing)
 - iii) Installation of bicycle-sharing systems
 - iv) Design and execution of cycle paths (bike path)
 - v) Park and ride facilities
 - vi) Zero or low emission zones
- 4) Energy management
 - a) Facility monitoring, consumption accounting and energy management
 - i) Implementation of energy or environmental management systems (ISO 14.001, ISO 50.001, etc.)
 - ii) Monitoring systems for energy consumption both electrical and thermal
 - iii) Control and automation systems (consumption accounting, management and optimization of electrical consumption, home and industrial automation)
 - b) Energy storage
 - i) Batteries
 - ii) Hydrogen
 - iii) Other

2.2.2 Analytics

233 respondents provided an answer to this question. The breakdown of answers is shown by Figure 30 to Figure 34.



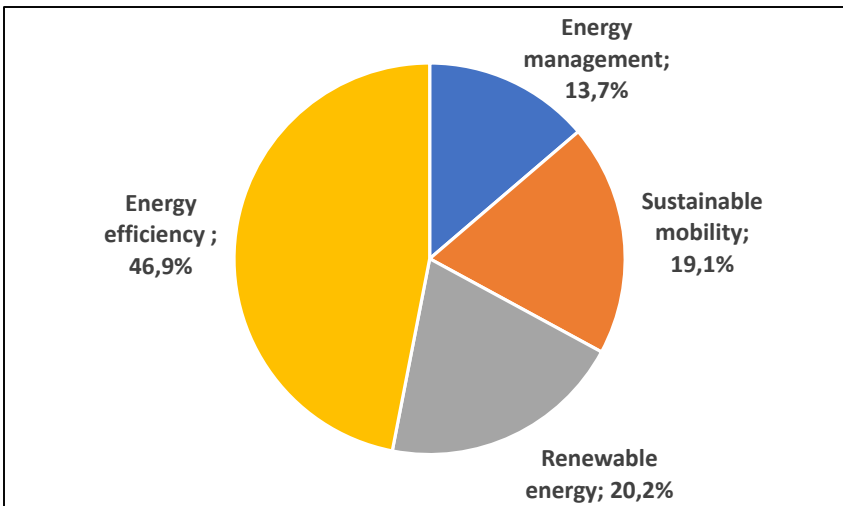


Figure 30: Main categories of projects - Values in % on total answers received (Section 2, Question 4)

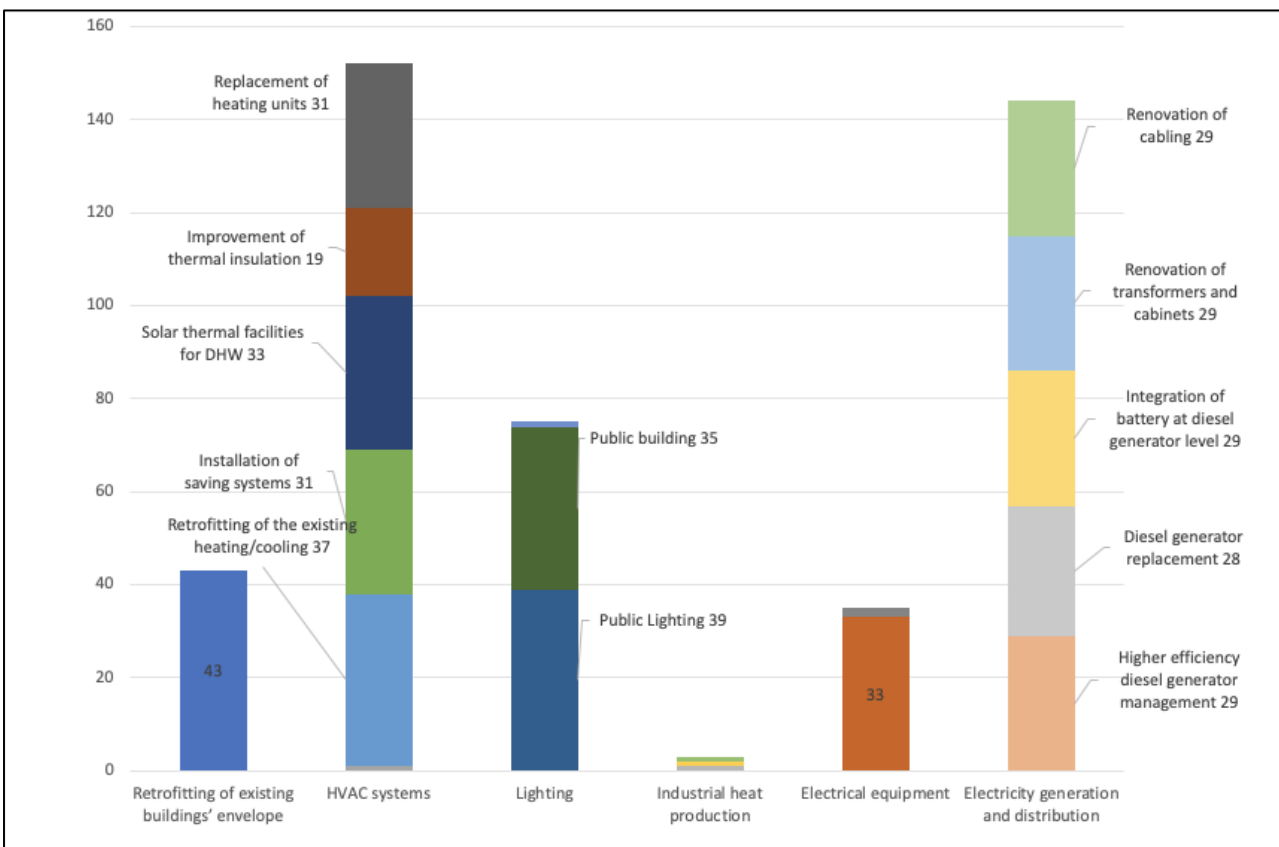


Figure 31: Types of energy efficiency projects - Values in number of projects per type (Section 2, Question 4)



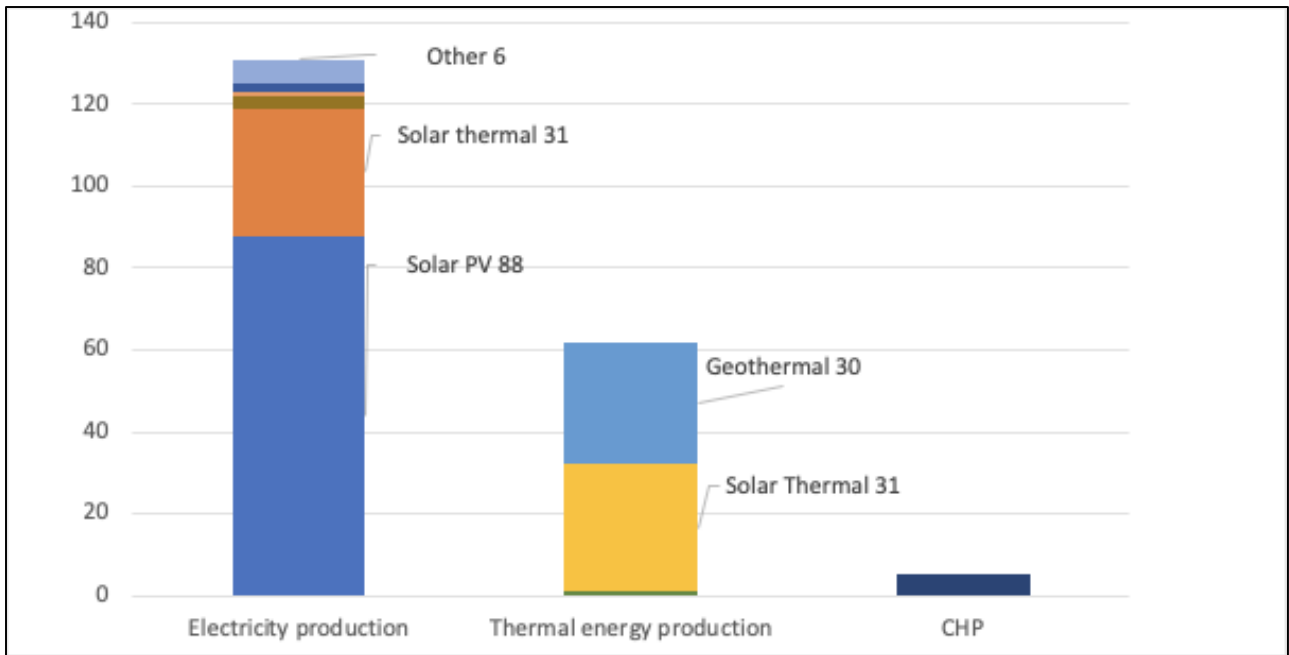


Figure 32: Types of renewable energy projects - Values in number of projects per type (Section 2, Question 4)

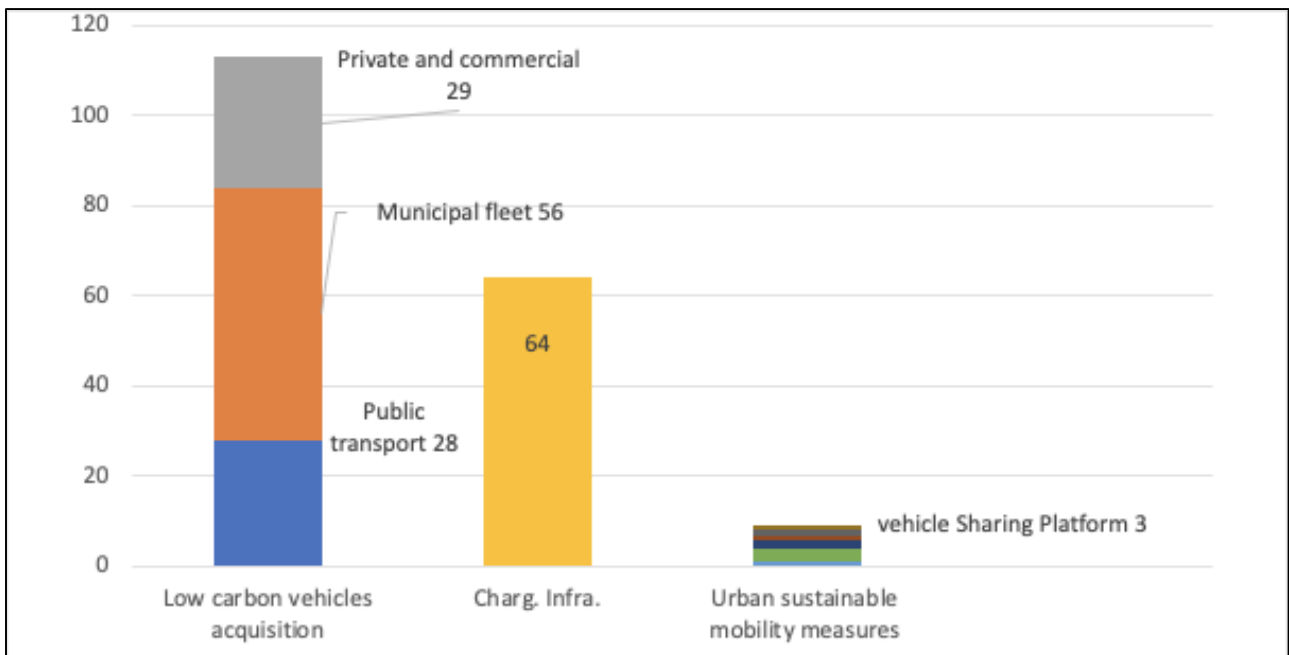


Figure 33: Types of sustainable mobility projects - Values in number of projects per type (Section 2, Question 4)



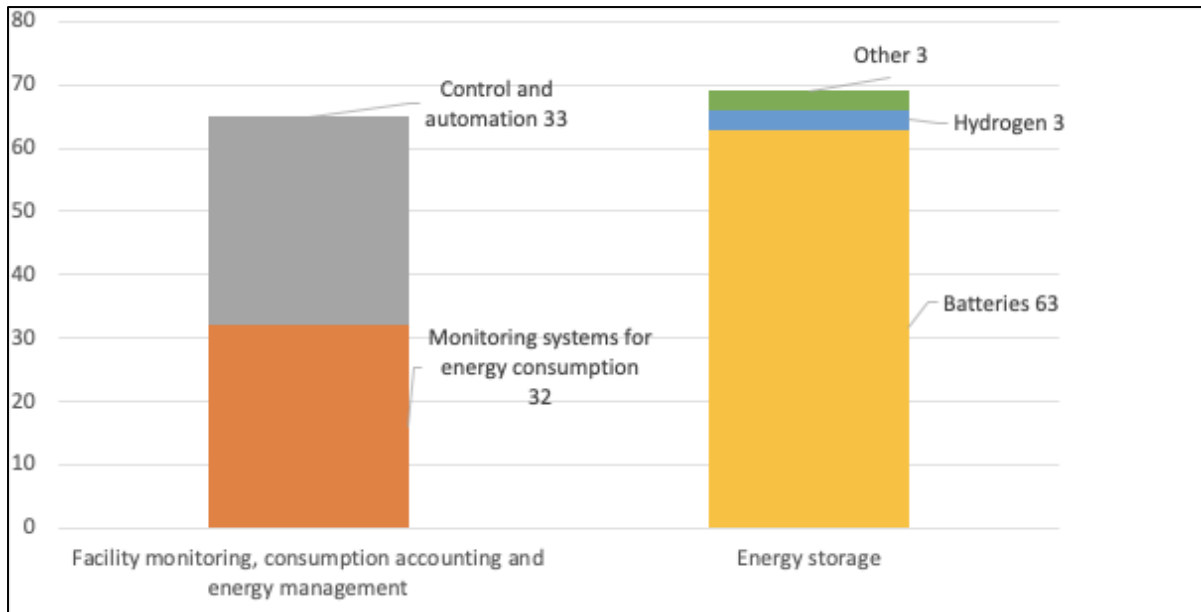


Figure 34: Types of energy management projects - Values in number of projects per type (Section 2, Question 4)

2.2.3 Further analysis

The detailed structure of the survey in Section 2 allowed to understand the typology of projects involved: from one side the data re-confirmed the previous outcome from Section 1, where a promising development trend appeared for RES projects, electrical mobility and related infrastructure, lighting and energy storage. From the other side, it has been possible to appreciate the variety of other energy efficiency projects planned in islands' pipeline:

- 43 projects aim at improving the existing building envelopes;
- 152 projects target the HVAC systems by mainly retrofitting the existing heating/cooling units and by adding solar thermal facilities;
- The improvement in energy efficiency linked to electrical equipment and to the electricity generation and distribution represent very high portions: respectively 37 and 149 projects;
- 62 projects are focused on energy management including installation of control and automation devices (33 projects) and monitoring systems for energy consumption (32 projects);
- Energy Storage mainly means Batteries projects (63 projects);
- Besides the predominant installation of PV panels for electricity (88 projects), thermal facilities seem to have a considerable importance as well both for electricity and thermal energy generation (31 projects each).



2.3 Question 5 - Investment and financial data

2.3.1 Question

Respondents were invited to provide the following investment and financial data:

- a. Overall investment;
- b. Funding currently available;
- c. Funding needed;
- d. Type of funding available:
 - Own funding,
 - Third party grant,
 - Subsidized lending,
 - Market priced lending,
 - Leasing;
- e. Equity funds to be invested by the financial partner;
- f. Approximate expected payback (in years).

2.3.2 Analytics

Respondents provided information on 58 projects by indicating the related overall investments. In a few cases, they were able to indicate the available and needed funding as well (as previously reported by Figure 27 and Figure 28).

Projects involved in the present survey covers different sizes in terms of investments as summarised by the table below: 36% of them (21 projects) require investments higher than 10 M€. In particular 4 of them have expected investments higher than 50 M€.

Table 3: Number of projects and corresponding funding ranges (Section 2, Question 5)

Overall investments	N. projects	Corresponding overall investments	Funding available	Funding needed
Lower than 100 k€	6	115 450	10 000	60 000
Between 100 k€ and 499 k€	8	1 370 845	820 893	59 952
Between 500 k€ and 1.99 M€	14	16 685 000	3 595 000	9 890 000
Between 2 M€ and 9.99 M€	9	43 950 000	8 950 000	35 000 000
Greater than 10 M€	21	1 380 673 462	112 065 479	204 607 983
Total		1 442 794 757	125 441 372	249 617 935

The funds mainly come from third party grants, subsidized lending and own funding with the breakdown shown in Figure 35. The expected payback time of the projects in most of the cases doesn't exceed 10 years (142 projects out of 158 for which this information has been provided).



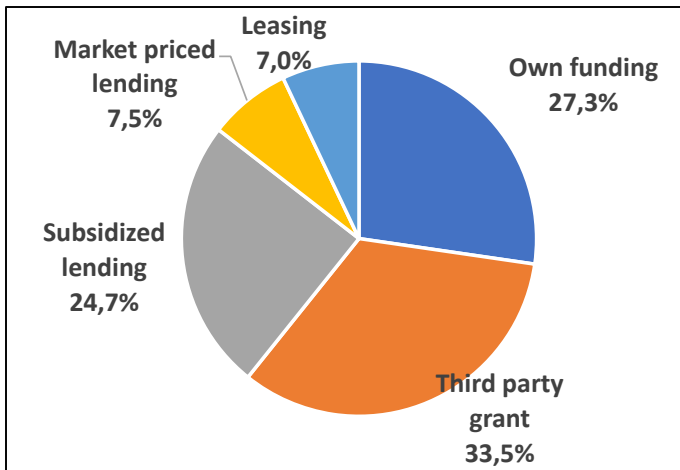


Figure 35: Type of funding available - Values in % on total answers (Section 2, Question 5)

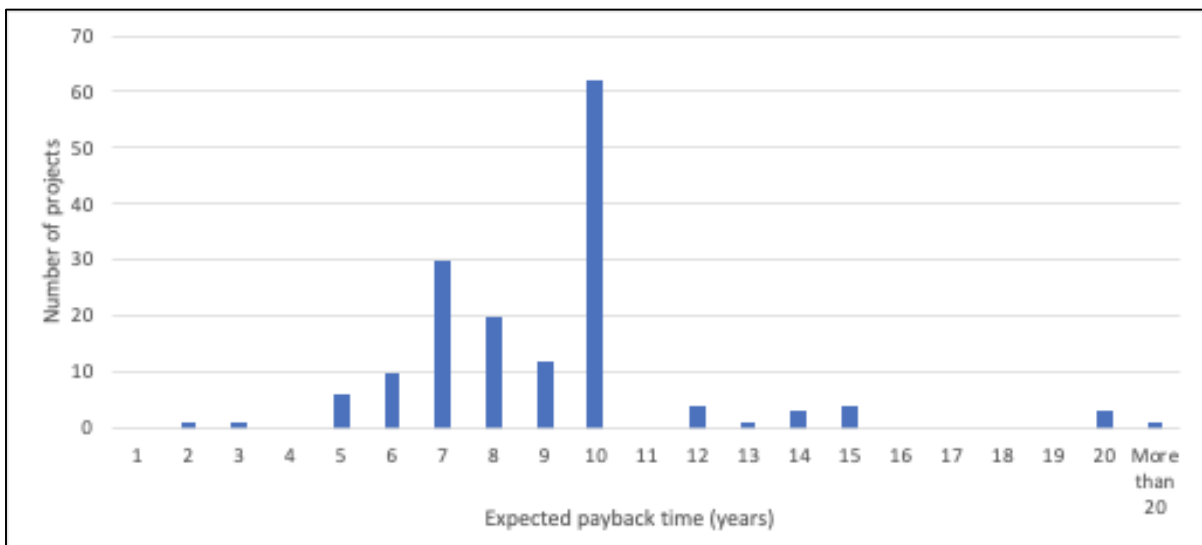


Figure 36: Number of projects per expected payback time (Section 2, Question 5)

A part of respondents was able to indicate the range of financing available as equity in the project as reported in the table below.

Table 4: Equity funds to be invested by the financial partner (Section 2, Question 5)

Values in n. of projects	Lower than 100 k€	Between 100 k€ and 499 k€	Between 500 k€ and 1.99 M€	Between 2 M€ and 9.99 M€	Greater than 10 M€
Equity funds to be invested by the financial partner	2	7	11	3	3



2.4 Question 6 - Technical barriers

2.4.1 Question

Respondents were invited to indicate the technical barriers that might prevent the development of their projects, amongst:

- a. Scope/definition is not agreed. Should be revised
- c. There are doubts about its final results. Third-party verification needed
- d. Lack of enough skilled workforce for Operation & Maintenance
- e. Project's dimension does not correspond with high seasonality
- f. Other

2.4.2 Analytics

157 respondents provided an answer to this question. The breakdown of answers is shown by Figure 37.

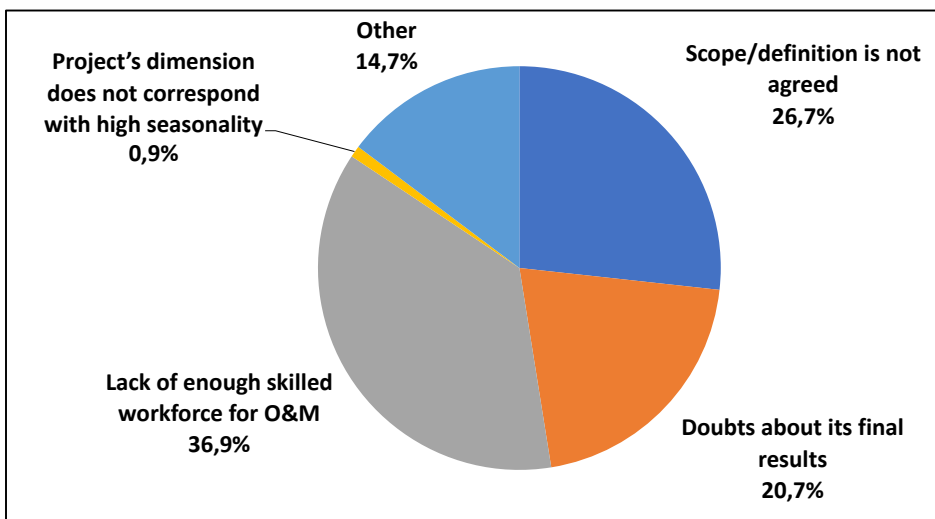


Figure 37: Technical barriers (Section 2, Question 6)

2.4.3 Further analysis

The main technical barrier reported by the respondents concerns the lack of skilled workforce for O&M activities (36,9%). It appears clear from the answers that uncertainty in the project scope and low visibility on final results become barriers as well (respectively 26,7% and 20,7%).

Behind the choice of the option “Other” (14,7%), there are various reasons. Some respondents provided more detailed explanations, e.g.: the complexity and slowness in the processing of the different administrative authorizations; lack of knowledge for the procedure to reach maturity; need for additional technical reports (wind data, soil data reports, etc); grid constraint, etc.



2.5 Question 7 - Public perception barriers

2.5.1 Question

Respondents were invited to indicate the public perception barriers that might prevent the development of their projects, amongst:

- Concern for the resulting quality or security of energy supply
- Possible esthetical (landscape) or environmental impacts (flora, fauna, land use) caused by the project
- Reluctance to change current lifestyle
- Competitiveness conflicts with conventional energy sources-based economy
- Possible increment of prices
- Other

2.5.2 Analytics

179 respondents provided an answer to this question. The breakdown of answers is shown by Figure 38.

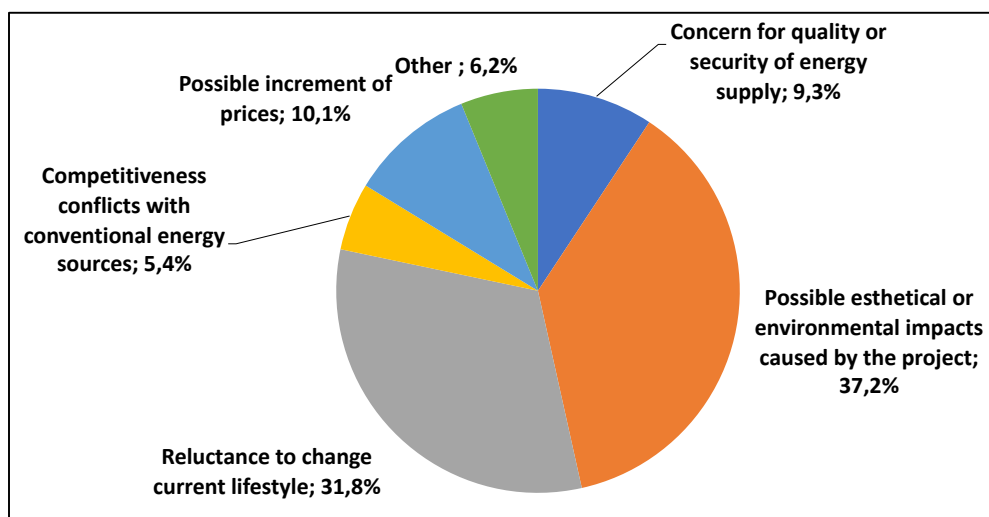


Figure 38: Public perception barriers (Section 2, Question 7)

2.5.3 Further analysis

The more frequent barriers coming from the public perception are the esthetical or environmental impact for 37,2% of respondents and the reluctance to change the current lifestyle for 31,8% of respondents. A fewer number of organisations chose the other barriers: 10,1% thinks that there could be an increase in energy prices; 9,3% of people is concerned about energy supply quality and security and 5,4% sees a potential conflict with the traditional energy sources.

For this question, the option “Other” has been used improperly in almost all cases: many respondents wanted to highlight that there is no such barrier, as usually the islands' population is extremely positive towards this kind of projects.



2.6 Question 8 - Organizational or institutional barriers

2.6.1 Question

Respondents were invited to indicate the organizational or institutional barriers that might prevent the development of their projects, amongst:

- Definition of roles in the project (i.e. implementing body, financier, etc.)
- Decision-making conflicts between local/regional/national entities
- Lack of knowledge about possible collaborating partners, etc.
- Other

2.6.2 Analytics

161 respondents provided an answer to this question. The breakdown of answers is shown by Figure 39.

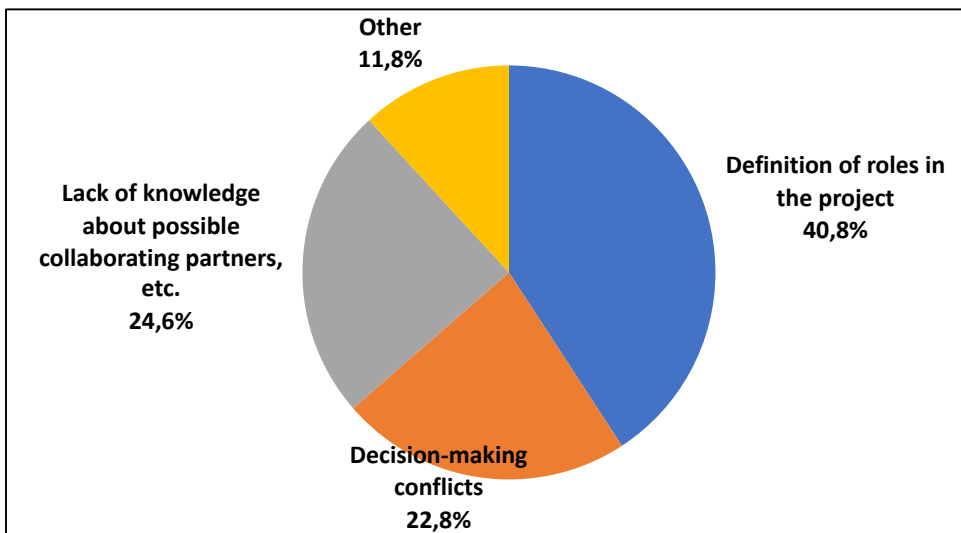


Figure 39: Organizational or institutional barriers - Values in % of total answers (Section 2, Question 8)

2.6.3 Further analysis

The outcome from this question show the uncertainty in roles, partnerships, decisional process that could exist around this kind of projects, as preliminarily anticipated by the results to Question 6.

The barrier related to the capability to define the projects' roles received 40,8% of the answered, followed by the lack of knowledge for collaborating partners (24,6%) and decision-making conflicts (22,8%). The option "Other" mainly includes the following answers: lack of enough personnel to reach maturity; complexity in the authorization phase; insecurity of the roles in the local authorities.



2.7 Question 9 - Legal and procedural barriers

2.7.1 Question

Respondents were invited to indicate the legal and procedural barriers that might prevent the development of their projects, amongst:

- Uncertainty in national legislation or incoherence between local, regional, European legislation
- Legal complexity and / or procedural
- Environmental regulations
- Preserved land
- Other

2.7.2 Analytics

211 respondents provided an answer to this question. The breakdown of answers is shown by Figure 40.

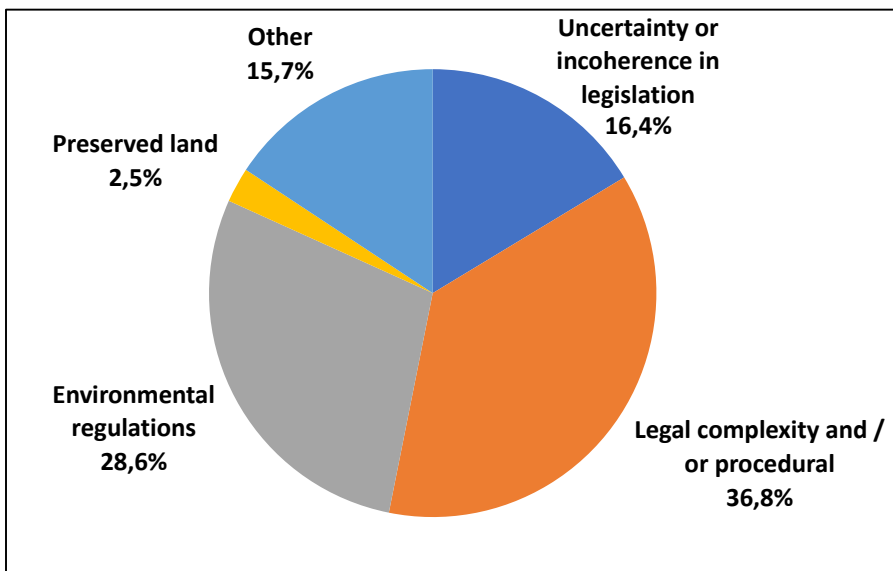


Figure 40: Legal and procedural barriers (Section 2, Question 9)

2.7.3 Further analysis

A percentage of 36,8% of respondents highlighted legal/procedural complexities linked to the projects and representing a barrier to it. This is followed by environmental regulation for 28,6% of the respondents and from the legislative uncertainty for 16,4%. The “Other” choice recorded a high percentage of 15,7% but mainly includes similar aspects already covered by the other options such as: landscape restrictions, strict architectural and spatial planning legislations in traditional settlements, buildings ownership status clarification, etc.



2.8 Question 10 - Economic barriers

2.8.1 Question

Respondents were invited to indicate the economic barriers that have possibly prevented the development of their projects, amongst:

- Competition for capital prioritizes non-energy related investments
- No additional own funds available
- Financial problems due to retroactive changes of renewable energy support schemes
- Lack of substantial private finance
- Other

2.8.2 Analytics

158 respondents provided an answer to this question. The breakdown of answers is shown by Figure 41.

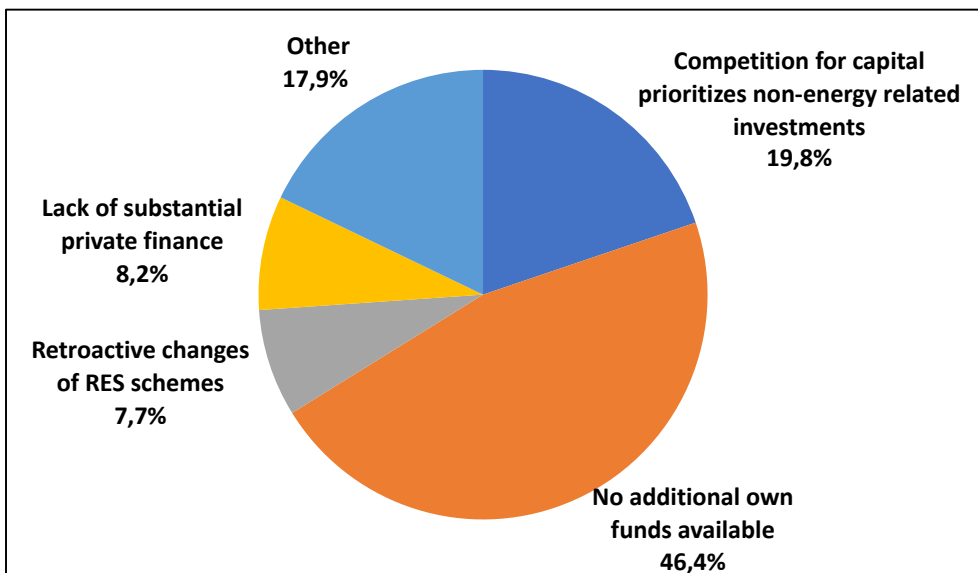


Figure 41: Economic barriers (Section 2, Question 10)

2.8.3 Further analysis

For a high percentage of projects (46,4%) one of the barriers is represented by the lack of own funding to be added to the available funds for the projects. Besides, a percentage of 19,8% indicated that other kind of projects are prioritised instead of energy initiatives. The lack of private finance and the negative retroactive effect on incentives scheme represented a barrier in, respectively, 8,2% and 7,7% of projects. The option “Other” has been chosen for 17,9% of projects and includes barriers like: lack of revenue support scheme for specific RES, incertitude on the rentability of the project, incertitude on the obtaining of Regional funding, high risk projects without the necessary capital.



2.9 Question 11 - Results expected

2.9.1 Question

Respondents were invited to indicate the results expected following their projects' implementation, in terms of:

- Expected energy savings (kWh per year),
- Expected avoided emissions (tCO₂ per year).

2.9.2 Analytics

92 Respondents provided the information related to the expected energy efficiency savings (kWh per year) and avoided emissions (tCO₂ per year) triggered by their projects. For those projects which have savings less than 3 GWh per year (83 projects) the visual distribution of savings is represented by Figure 42.

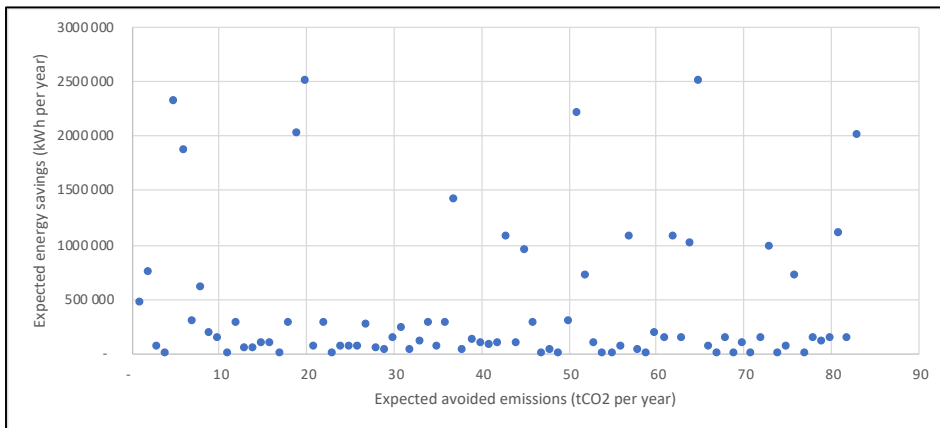


Figure 42: Projects' expected impacts - Energy savings lower than 3 GWh (Section 2, Question 11)

For the other projects with higher energy savings, the visual distribution of avoided GWh and tCO₂ emissions is the following:

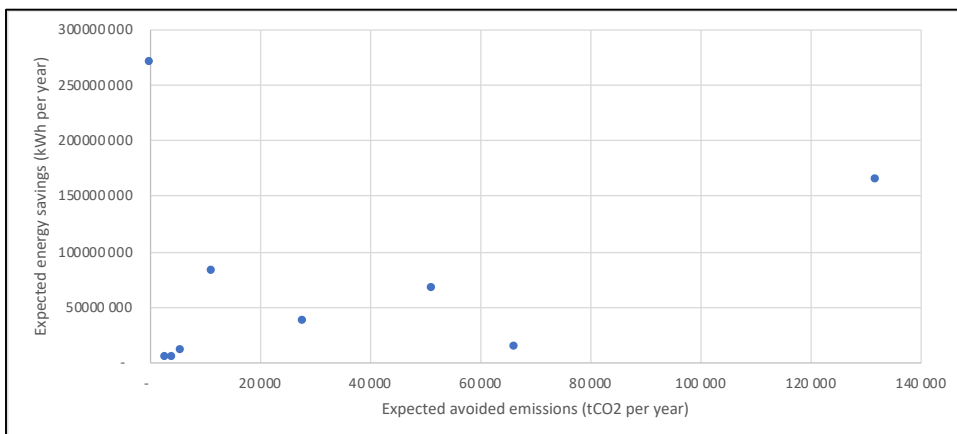


Figure 43: Projects' expected impacts - Energy savings higher than 3 GWh (Section 2, Question 11)



2.10 Question 12 - Projects' implementation status

2.10.1 Question

Respondents were invited to indicate their projects' implementation status (current phase), amongst:

- No planning activity started,
- Prefeasibility study,
- Early stage design,
- Executive design,
- Permitting,
- Procurement.

Furthermore, they were invited to provide, for each project, the expected time from current status to start date (in months).

2.10.2 Analytics

232 respondents provided an answer to this question. The breakdown of answers is shown by Figure 44.

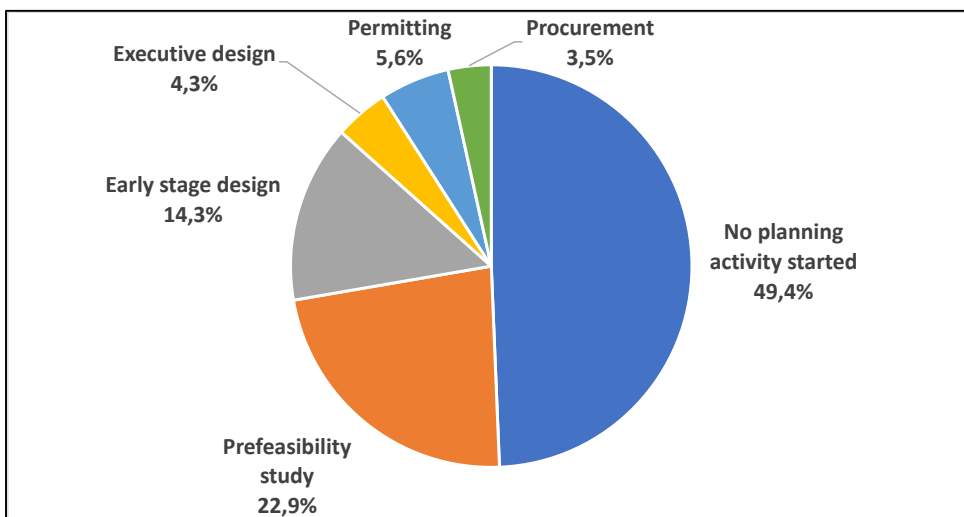


Figure 44: Projects' implementation status (Section 2, Question 12)



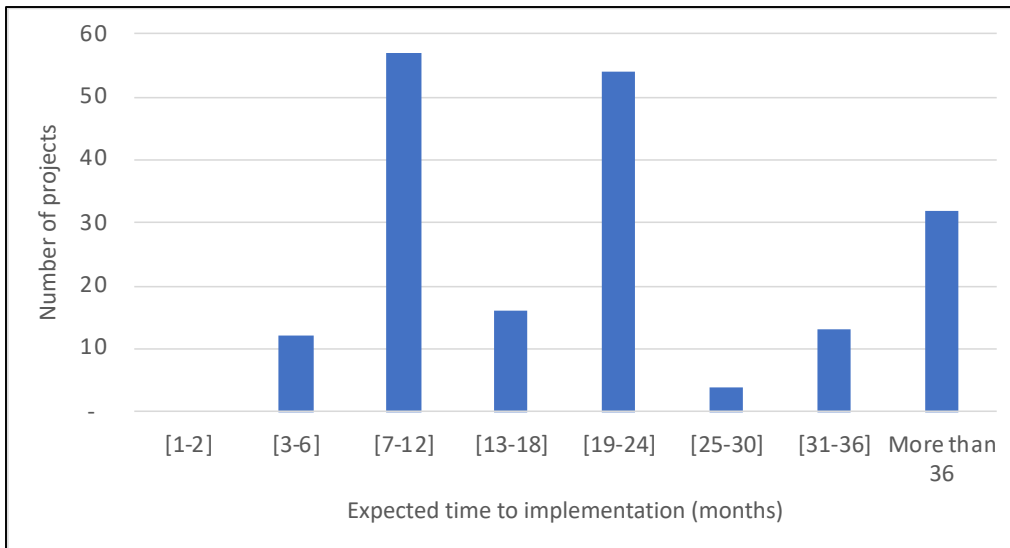


Figure 45: Expected time to implementation (Section 2, Question 12)

It is interesting to see both pieces of information together in a single graph to see their correlation:

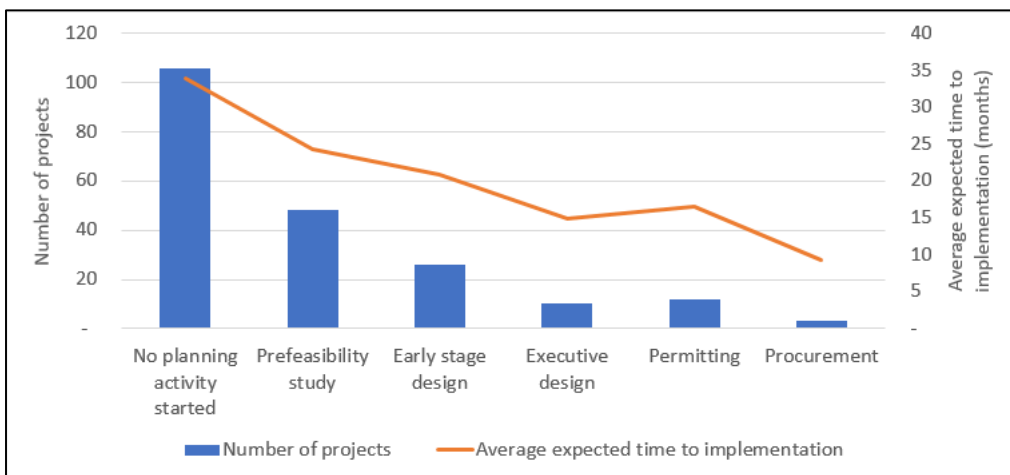


Figure 46: Project status and expected time to implementation jointly (Section 2, Question 12)

2.10.3 Further analysis

As already highlighted in Section 1, most of the projects presented by the respondents are at their very early stages: in fact, 86,6% of the projects have not reached the executive design yet. In particular, 49,4% of the projects have no planning activities started, 22,9% are carrying out the prefeasibility study and 14,3% are at early stage design.



2.11 Question 13 - Financial status

2.11.1 Question

Respondents were invited to indicate the current financial status of your project, amongst:

- a. Funds are already available;
- b. Funds are not already available (all funding to be sourced);
- c. Part of the funds are not already available.

For the answer c, respondents were asked to indicate the approximate share of missing fund as % of total estimated investment.

For answers b and c, respondents were asked to answer the following (if information was available and disclosable):

- d. Public funding third party grant opportunities are being pursued;
- e. Development banks financing opportunities are being pursued;
- f. Private financing opportunities are being pursued or have manifested interest.

In this case, the name of public entities and/or grant lines (d), development banks and subsidised financing lines (e), and potentially interested/targeted investors (f) were asked.

2.11.2 Analytics

231 respondents provided an answer to this question. The breakdown of answers is shown by Figure 47.

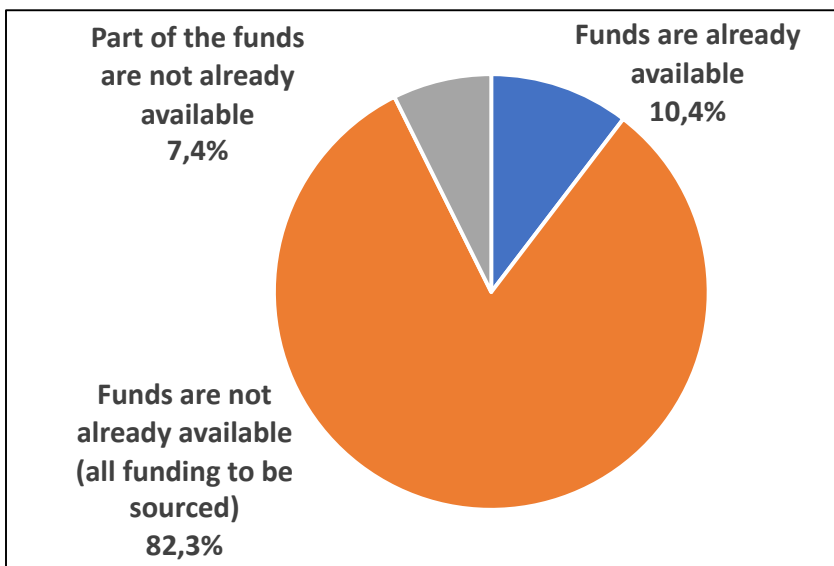


Figure 47: Projects' financial status (Section 2, Question 13)



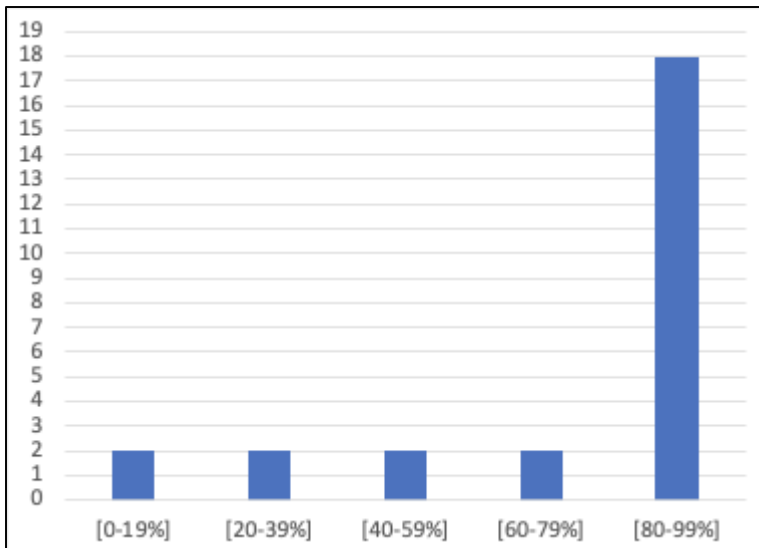


Figure 48: Approximate share of missing fund (Section 2, Question 13)

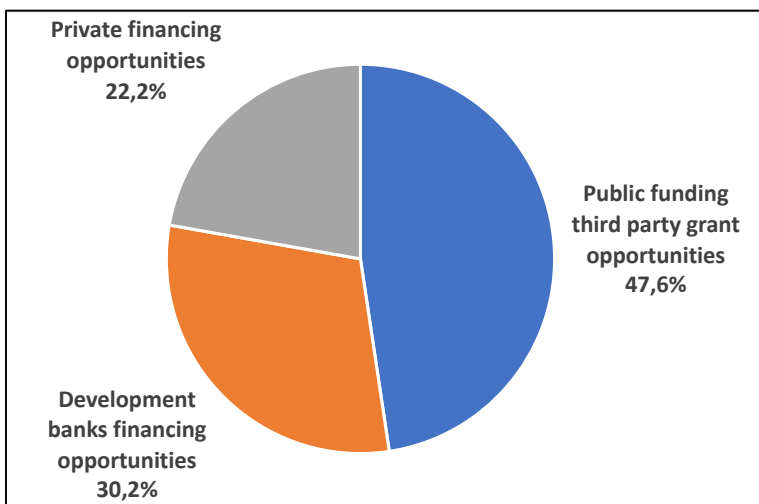


Figure 49: Types of financing opportunities being pursued (Section 2, Question 13)

2.11.3 Further analysis

The availability of funding is the major aspect influencing the respondents' projects: 82,3% of projects don't have the necessary funds yet and are looking for them out in the market. Public funding is the type of financing which is mainly searched, representing 47,6% of the preferences. Development banks financing opportunities and private financing are certainly searched by projects' promoters as well with lower percentages, respectively 30,2% and 22,2%.

On the other side, funds are available for 10,4% of the projects and partially available for 7,4% of the projects.



2.12 Question 14 - Technical assistance needs

2.12.1 Question

Respondents were invited to indicate, in case of technical assistance needs, which of the following expertise would be useful for the activation of their project:

- Technical expertise to better define the project options and costs
- Economic and financial expertise to define sustainability profiles, risk mitigation and implement optimal financing solutions
- Legal and procedural expertise to define optimal contractual arrangements and tendering processes
- None of the above

2.12.2 Analytics

230 respondents provided an answer to this question. The breakdown of answers is shown by Figure 50.

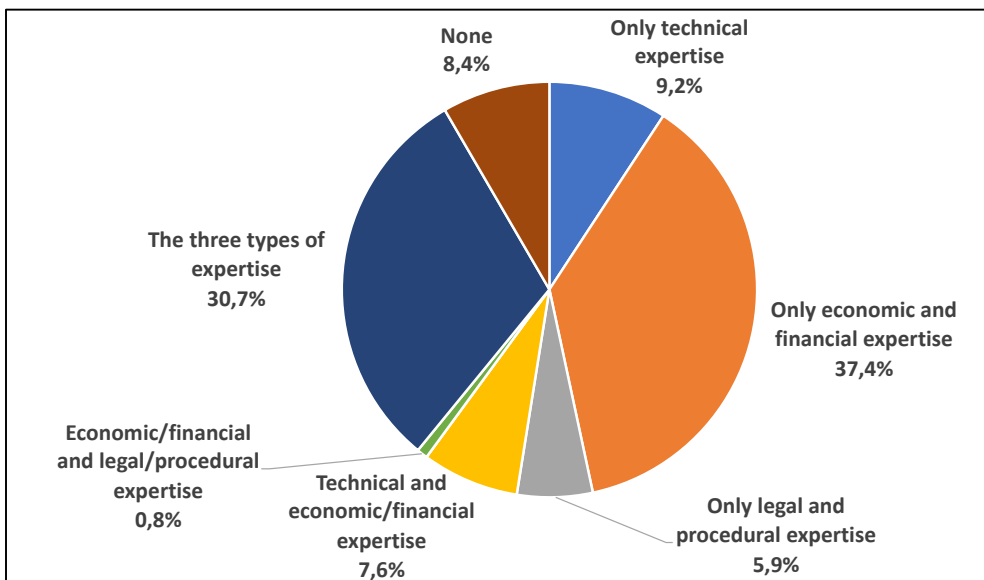


Figure 50: Types of technical assistance needed (Section 2, Question 14)

2.12.3 Further analysis

Through the survey, respondents had the opportunity to express the type of support they mostly need: a considerable amount of them, 37,4%, reported that only the economic and financial expertise is needed. This aspect could be probably linked to the necessity to find the missing financing resources and trigger the further implementation of their projects. Almost a similar share, 30,7%, expressed the need in all three aspects: technical, economic and legal/procedural. A comprehensive assistance on the three subjects will probably help in going farer than the early stage in which most of the projects are at the moment.



3 Conclusions

3.1 Main findings from the NESOI survey

NESOI Survey had a large audience: the 128 respondents coming from 107 different islands provided details for 235 projects. Their answers allow to understand that **59,5% of the involved islands do not have a strategic plan on energy yet** as, in some cases, it doesn't exist (25,2%) or it is under development (34,3%). For those islands having a strategic vision in this domain, **39,3% declared that no project has been concretely realized yet**. In general, **islands can benefit from Energy Agency support: 69,7%** of respondents says that they have an Energy Agency at local (25,3%) or Regional (17,6%) or National level (26,8%) able to provide a balanced range of competences amongst **economic/financial, procedural/legal, engineering, RDI and program management**.

Islands' awareness on public funds (local, Regional, National and EU funds) is considerably high while their **confidence towards private funds, fiscal incentives and alternative instruments seems low** with a prevalence of "do not know" answers.

In relation to the typology of projects already implemented, more than **30% of islands recorded a significant implementation of energy efficiency measures on public lighting and development of RES power plants**. On the contrary, **energy storage systems and electric mobility solutions are the rarest implemented solutions**, for which more than **55%** of respondents declared **not to have any initiative in place**.

Looking at the planned projects, the overview seems to be more heterogenous: **RES plants continue to represent a large portion of total projects** (198 projects, **44,4%** of which represented by solar PV). Different types of energy efficiency measures are included in islands' plans: a total of 461 projects, with a prevalence of efficiency improvement to **HVAC systems (32,9%)** and to **diesel generators, transformers and cabling (32,3%)**.

Sustainable mobility and energy management projects also represent a considerable percentage of planned projects with respectively 188 and 135 initiatives.

The majority of projects are at an **early stage** of development: **49,4% of projects didn't start the planning activity** and **22,9%** is at **prefeasibility** study level. This situation is also linked to the fact that **82,3% of projects still needs to secure the needed funds**.

The respondents were asked to express their opinion on five types of barriers: **technical, public perception, organizational/institutional, legal/procedural and economic**. For each of these barriers the highest percentages were given to **"Lack of enough skilled workforce for O&M"** for **36,9%**; **"Possible esthetical or environmental impacts caused by the project"** for **37,2%**; **"Definition of roles in the project"** for **40,8%**; **"Legal complexity and / or procedural"** for **36,8%**; **"No additional own funds available"** for **46,4%**.



In this context, NESOI can certainly provide valuable support to islands answering to the technical, legal & procedural and economic & financial needs expressed by respondents via the survey. The funding needs of these islands are considerable as, based on respondents' information about **60 projects**, the overall aggregated investment is **higher than 1,4 billion€** with **36,2% of projects** having a **budget greater than 10 million€** each.

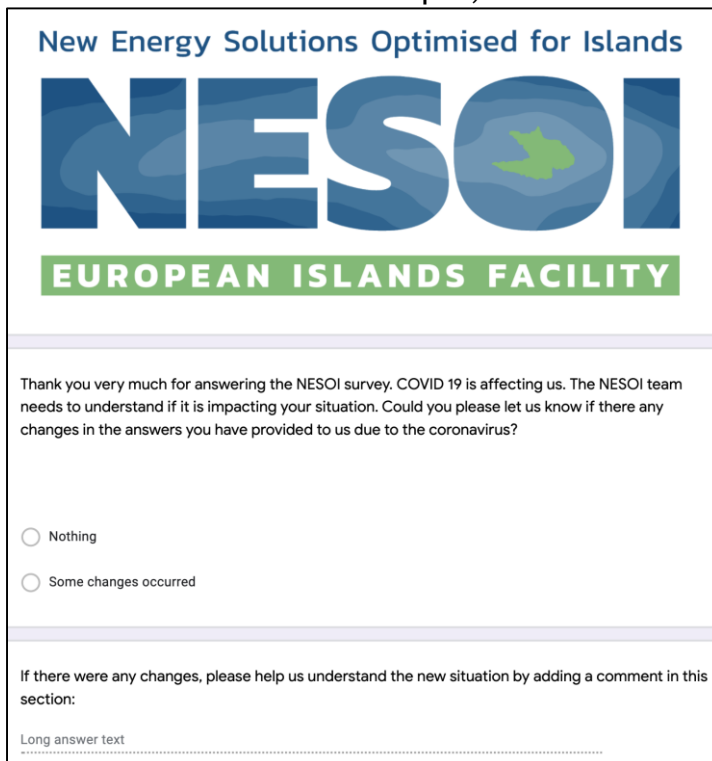
Almost all (91,6 %) of the projects listed in the survey are in need of Technical Assistance. 76,5% of them need at least economic & financial expertise, and 30,7% need the three types of expertise (technical, legal & procedural and economic & financial).

NESOI support in approaching and investigating new sources of funding will be a key additional element.

3.2 Other lessons learned from the NESOI survey experience

Practice and mastering of our capacity to adapt as a group were strong insights from this survey experience, “empathy” being the heartbeat of WP7 activities as explained in the introduction (see Figure 4). Some examples to illustrate this approach are:

1. **Empathy:** Re-contacting the survey respondents to understand if the replies they have sent to us in March or April, are still valid due to COVID 19 impact.



New Energy Solutions Optimised for Islands

NESOI

EUROPEAN ISLANDS FACILITY

Thank you very much for answering the NESOI survey. COVID 19 is affecting us. The NESOI team needs to understand if it is impacting your situation. Could you please let us know if there any changes in the answers you have provided to us due to the coronavirus?

Nothing

Some changes occurred

If there were any changes, please help us understand the new situation by adding a comment in this section:

Long answer text

Figure 51: Quick questionnaire sent to survey's respondents

2. **Understanding the other's truth:** One-to-one meetings with personal contacts, islands associations and any other person interested in knowing more about NESOI.



All the inputs coming from these conversations helped us to adapt our approach when needed and also to create the NESOI SURVEY FAQ for the common questions (<https://nesoi.eu/content/faq>).

3. **Facilitating common understanding:** by connecting regularly with WP7 partners and with our coordinator who constantly shares inputs coming from our Project Officer.
4. **Facilitating common understanding and reach:** Having the option of an offline survey based on the fact that many people like to print and share the questions with several people within their teams' institutions in order to build a shared reply.
5. **Co-create, find stories and use stories:** Choosing to create a more complex and complete survey, so that NESOI is not one more project with statistics but a project bringing concrete change in terms of energy transition allied with market intelligence and business opportunities to be exploited by islands and investors. As a consequence, we have received feedback from island's local authorities and associations about the fact that many had difficulties to answer the questions, mostly because questions are too complex and technical. NESOI's reaction to this situation is to support with advices any person having difficulties to answer to the survey.
6. **Empathy again:** Survey is still open due to the COVID 19 sanitary crisis priority. There is no date to stop receiving information; this way we keep our doors opened to add very good projects at any time.
7. **Building a common understanding of the situation to consequently plan and execute the next steps:** The success achieved with Greek islands (number and quality of projects submitted) is strongly related to the fact that there was a downloadable offline option. On the other hand, answers to offline surveys are extremely time-consuming and complex to be processed. This means that we have underestimated the time we would spend on this task. The conclusion was that the extra effort was fundamental to the quantity and quality of answers we have received.

3.3 Next steps

The next steps, following the survey, is to organise and promote the first round of NESOI call for projects (foreseen in fall 2020).

From a WP7 perspective, capacity Building workshops were foreseen to promote the facility towards EU islands, build awareness for investible energy transition projects and help them prepare their candidature to the facility. Those face-to-face workshops aim to provide attendees with advices about how to develop an energy transition plan, how to engage citizens locally, what is expected by investors, which technologies suit best, etc.



It was planned to hold the workshops in 6 different locations, making use of 6 different languages (English, Greek, Croatian, Spanish, Italian and French) in order to be accessible to the highest number (including overseas islands).

The COVID 19 sanitary crisis impacts the organisation of those workshops. A solution currently under discussion is to transform these face-to-face workshops into virtual meetings.





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