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Support to the Renovation Wave in Cyprus:
Policies to alleviate Energy Poverty

Deliverable 4: Final Report

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MINISTRY OF ENERGY
COMMERCE AND INDUSTRY



European
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1. Introduction

This report is addressed to DG REFORM and the Ministry of Energy, Commerce and Industry (MECI) of Cyprus, in relation to EY's engagement to provide technical support for to the renovation wave in Cyprus: Policies to alleviate Energy Poverty. This document comprises Deliverable 4: *Final Report*.

This document includes:

- A short summary of the purpose and the content of the project;
- A summary of all the tasks undertaken over all deliverables, the main results obtained, along with the lessons learned throughout the project;
- A Q&A document for end users;
- All deliverables prepared in the context of the project and associated recommendations are annexed.

2. Summary of the project purpose and content

2.1 Summary

The primary objective of this project is to develop policies and measures to address and alleviate energy poverty in Cyprus. Specifically, the objectives are:

- Undertake a current state assessment to map the state of energy poverty and vulnerable consumers in Cyprus by selecting a set of criteria and assess local legislation, policies and measures;
- Analyse best market practices from other Member States (MS) in the areas of energy poverty and vulnerable consumers to be used as inputs in Cyprus' action plan;
- Develop a composite indicator and estimate the number of households affected by energy poverty
- Provide a new definition for vulnerable consumers;
- Determine whether local legislation is compliant with EU Directives;
- Examine whether new policies and measures are needed to comply with EU provisions;
- Develop an action plan to tackle energy poverty by recommending policies and measures;
- Propose new or adjust existing incentives to improve energy efficiency of owned and rented energy poor households;
- Propose measures to raise awareness and other informative and behavioural issues on how people can save energy by changing their behaviour; and
- Propose a methodology for estimating energy efficiency savings resulting from the implementation of energy efficiency measures.

3. Summary of project tasks & lessons learned

3.1 Deliverable 1: Inception Report

3.1.1 Tasks Description

- **Kick-off meeting preparation** - Circulated a detailed agenda and the proposed methodology to DG REFORM and MECI and developed initial project plan, charter, and RACI matrix. A list of the required data/information was compiled and utilized to draft a communication plan, with project progress indicators and drafted the plan considering the vision, needs and issues.
- **Kick-off meeting** - Held the KoM over MS Teams within the first two weeks after contract signature where the key stakeholders and project governance were introduced. The project vision, scope, and identified needs were presented, reviewed and agreed upon methodology,

plan, charter, and RACI matrix. Information and document requests, progress indicators, risks, and constraints were discussed.

3.2 Deliverable 2: Report on Energy Poverty in Cyprus and redefinition of Vulnerable Customers

3.2.1 Tasks Description

Current State Assessment

Legal and Compliance Analysis

The legal and compliance analysis focused on identifying the EU and national legal obligations related to energy poverty identified through desktop research and following engagement with the various competent authorities and stakeholders. The main activities of the task included a comprehensive analysis of relevant EU directives and Regulations and National Laws and Decrees, summarised in table below. This involved gathering information from various reputable sources and reviewing legal materials to establish a well-rounded legal framework. A crucial part of the task was identifying legal gaps, highlighting areas needing enhanced legal clarity or compliance and where additional legal measures might be necessary. This step was essential in ensuring legal conformity and identifying areas for potential improvement in legal frameworks.

EU Directives and regulations

<p>Directive 2019/944/EU</p> <ul style="list-style-type: none"> ▶ Article 5 - Market-based supply prices ▶ Article 28 - Vulnerable customers ▶ Article 29 - Energy Poverty ▶ Article 59 - General objective of regulatory authority 	<p>Directive 2023/1791 on Energy Efficiency (RECAST)</p> <ul style="list-style-type: none"> ▶ Article 2 - Definition of Energy Poverty ▶ Article 3 - Energy Efficiency first Principle. ▶ Article 5 - Public Sector leading on energy efficiency. ▶ Article 8 - Energy Savings Obligation. ▶ Article 9 - Energy efficiency obligation schemes. ▶ Article 22 - Information and awareness raising ▶ Article 24 - Empowering and protecting vulnerable customers and alleviating energy poverty ▶ Article 25 - Heating and cooling assessment and planning ▶ Article 30 - Energy Efficiency National Fund, Financing and Technical Support 	<p>Directive 2018/2001 on the promotion of the use of energy from renewable sources</p> <ul style="list-style-type: none"> ▶ Article 18 - Information and Training . ▶ Article 21 - Renewable Self-Consumers . ▶ Article 22 - Renewable Energy Communities. ▶ Article 23 - Mainstreaming renewable energy in heating and cooling 	<p>Regulation 2023/955 on the Climate Social Fund</p> <ul style="list-style-type: none"> ▶ Article 2 - Definitions on Energy Poverty and Vulnerable Households. ▶ Article 4 - Social Climate Plan. ▶ Article 6 - Content of Social Climate Plans. ▶ Article 7 - Principles of Governing the Fund. ▶ Article 8 - Eligible Measures and investments to be included in the Social Climate Plans.
<p>Regulation EU 2018/1999 on the Governance of Energy Union and Climate Change</p> <ul style="list-style-type: none"> ▶ Article 3 - Integrated national energy and climate plans ▶ Article 24 - Integrated Reporting on Energy Poverty 		<p>Directive 2018/2002/EU on Energy Efficiency</p> <ul style="list-style-type: none"> ▶ Article 7 - Energy savings obligation 	

National Law and Decrees

<p>N. 130(I)/2021 Law for the Regulation of the Electricity Market 2021</p> <ul style="list-style-type: none"> Article 3 - Protection of vulnerable customers and energy poverty Article 4 - CERA's general objectives Article 129 - Protect vulnerable customers Article 130 - Energy poverty 	<p>N. 107(I)/2022 Law for the Promotion and Encouragement of use of Renewable Energy Sources</p> <ul style="list-style-type: none"> Article 19 - Information and training Article 34 - Integration of energy from renewable sources in heating and cooling Article 38 - Self-consumers of energy from renewable sources <p>R.A.A. (Κ.Δ.Π.) 286/2016 - Special Tariff</p> <ul style="list-style-type: none"> Article 1 - Special tariff categories Article 2 - Retrospective effect 	<p>N. 57 Energy Efficiency Law of 2009</p> <ul style="list-style-type: none"> Article 11 - Considerations on energy efficiency measures <p>Cyprus Ministerial Cabinet Decision</p> <ul style="list-style-type: none"> Additional Categories for Vulnerable Customers 	<p>R.A.A. (Κ.Δ.Π.) 289/2015 Energy Poverty and Vulnerable Customers Categories</p> <ul style="list-style-type: none"> Article 3(1) - Criteria of energy poor Article 4(1) - Categories of vulnerable customers Article 5 - Measures for the protection of vulnerable customers and energy poverty Article 6 - Retrospective effect <p>N.183(I)/2004 - Regulate of the Purchase of Natural Gas Law</p> <ul style="list-style-type: none"> Article 6h & 6u - Vulnerable Customers Law Article 40.1.b) & 40.2.d) Article 40.8 & 40.9 - CERA disconnection
<p>R.A.A. (Κ.Δ.Π.) Imposition of Public Service Obligations 307/2023</p> <ul style="list-style-type: none"> Special Tariff CODE 08 <p>Replaces R.A.A. 286/2016</p>	<p>R.A.A. (Κ.Δ.Π.) Energy Poverty Criteria 308/2023</p> <ul style="list-style-type: none"> Article 3 - Criteria for Energy Poverty 	<p>R.A.A. (Κ.Δ.Π.) 309/2023 Defining The Concept Of Vulnerable Customers And Their Categories</p> <ul style="list-style-type: none"> Article 3 & 4 - Criteria and Categories of Vulnerable Customers <p>Replaces R.A.A. 289/2015</p>	<p>R.A.A. (Κ.Δ.Π.) 310/2023 Measures To Address Energy Poverty And To Protect Vulnerable Electricity Customers</p> <ul style="list-style-type: none"> Article 3 - Measures for combating energy poverty and the protection of vulnerable customers <p>Replaces R.A.A. 289/2015</p>

Key takeaways from both EU Directives, Regulations and National Laws and Decrees were also highlighted and presented along with a compliance analysis. The key takeaways are presented below:

EU Directives and Regulations - Extract from Key Takeaways

- Definitions of vulnerable customers and energy poverty could include elements of income, share of energy expenditure to disposable income and energy efficiency of home.
- Definition for energy poverty: "Energy Poverty means a household's lack of access to essential energy services that provide basic levels and decent standards of living and health, including adequate heating, hot water, cooling, lighting, and energy to power appliances, in the relevant national context, existing disposable income, high energy expenditure and poor energy efficiency of homes".
- Measures for tackling EP could include social/energy policy measures relating to electricity bills, investment in Energy Efficiency of residential buildings, consumer protection and disconnection safeguards
- MS should prioritize energy efficiency to vulnerable, energy poor, low-income households and people living in social housing.
- MS shall establish and achieve a share of the required amount of cumulative end-use energy savings to these target groups.
- Where a MS has not estimated the share of households in EP, they can use the arithmetic average of following indicators to do so:
 - Inability to keep home adequately warm;
 - Arrears on utility bills;
 - Total population living in a dwelling with a leaking roof, damp walls, floors or foundation, rot in window frames or floor;
 - At-risk-of- poverty rate.

7. MS may require energy obligated parties to achieve a share of their energy saving obligation from these target groups.
8. Ensure information on available energy efficiency improvement measures, individual actions and financial and legal frameworks are transparent, accessible and widely disseminated to all relevant market actors and promote and facilitate an efficient use of energy by final consumers.
9. MS shall use a range of instruments and policies to promote behavioural change such as: fiscal incentives, access to finance/vouchers/grants/subsidies; publicly supported energy consumption assessments and targeted advisory services and support for households, in particular vulnerable, EP, people living in social housing; information provision accessible to people with disabilities; exemplary projects; workplace activities; training activities; digital tools; engagement strategies.
10. Create a supportive framework including: one-stop-shops; energy audits and energy consumption assessments; communication of easy to achieve and cost-effective changes in energy use; dissemination of information on energy efficiency measures and financial instruments.
11. Economic and social policies should give priority to vulnerable, EP, low-income households and people living in social housing and there should be a monitoring and reporting mechanism for such measures.
12. Support these target groups by:
 - a. implementing energy efficiency improvement measures to mitigate distributional effect from other policies such as taxation measures;
 - b. Make best use of available public funding;
 - c. Carry out early, forward looking investment into energy efficiency improvement measures before distributional effects from other policies show effect;
 - d. foster TA and roll-out of enabling funding and financial tools (on-bill schemes, local loan-loss reserve, guarantee funds, funds targeting deep renovations and renovations with minimum energy gains);
 - e. foster TA for social actors to promote vulnerable customer's active engagement in the energy market and positive changes in their energy consumption behavior;
 - f. ensure access to finance, grants or subsidies bound to minimum energy gains.
13. Establish a network of experts from various sectors (health, building sector, social sectors) to develop strategies to support local and national decision makers in implementing energy efficiency improvements and financial tools aiming at alleviating EP.
14. Network of experts shall also: advice on national definitions, indicators and criteria of EP and vulnerable; develop or improve relevant indicators and data sets; advice on methods and measures to ensure affordability of living costs, the promotion of housing cost neutrality or ways to ensure public funding invested in EE benefits owners and tenants (including vulnerable and EP); advice on measures to prevent or remedy situations in which particular groups are more affected or more at risk of being affected by EP or more susceptible to the impacts of EP based on their income, gender, demographics, health, inclusion in a minority group.
15. Regional and local authorities shall prepare local heating and cooling plans at least in municipalities having population >45,000. This should include analysis of heating and cooling appliances and energy efficiency measures that can be implemented in worst performing buildings and vulnerable households.
16. Information should be made available to all relevant actors (consumers, builders, installers, suppliers etc.).
17. Put in place enabling framework to address accessibility of renewables self-consumption, address unjustified barriers to financing of projects and unjustified regulatory barriers for renewables including for tenants.
18. Policy measures to fulfil obligation of Obligatory Parts to achieve energy savings. MS shall take into account the need to alleviate energy poverty.

19. Assess the number of households in EP and if number is significant, MS shall include in their NECP a national indicative objective to reduce EP and quantitative information on the number of households and information on policies and measures addressing EP.

National Legal Framework - Key Takeaways

1. Legislation definition requirements on vulnerable customers and energy poor is harmonized with EU directive through several Decrees which include relevant parameters (income, family status, health conditions). However, there is no actual definition but rather categories/criteria that are identified through relevant Decrees.
2. Legislation measures are harmonized with EU directive as they include protection measures such as the prohibition of electricity supply disconnection and social benefits (provision of financial support and special electricity tariff) as well as measures to improve energy performance.
3. Legislation is harmonized around information provision on support measures to be made available to all interested parties.
4. Legislation allows for policy measures, including fiscal measures or other financial incentives, to be made available.
5. Vulnerable customers parameters include: health conditions, income conditions, disability. There are no parameters on energy expenditure and energy efficiency of homes.
6. Energy poor parameters include: recipients of financial support. There are no parameters on expenditure against income nor on energy performance of properties.
7. Measures for vulnerable customers and energy poor include: financial incentives thorough subsidies, financial incentives for energy efficiency improvements, prohibition of disconnection.
8. The National Legislations do not include official indicators for energy poverty which consider energy expenditures and energy efficiency.

Policies and measures analysis

In addition to the legal and compliance analysis, a detailed analysis of the existing policies and measures with regards to energy poverty and vulnerable customers was presented following desktop research and extensive stakeholder engagement. Cyprus offers several measures for vulnerable and energy poor customers which were categorized as follows:

1. Special electricity tariff Code-08 (20% less than the normal electricity price);
2. Targeted financial incentives for the installation of domestic PV Systems with «net-metering»;
3. Financial Initiatives for home energy efficiency improvements;
4. Continuity of electricity supply during critical periods;
5. Allowances/subsidies from the Welfare Benefit Management Service of the Deputy Ministry of Labour Directorate Management of Welfare Allowances-ΥΔΕΠ;
6. Other Measures and policies.

Additionally, this task presented general observations on wider state policies, such as the Social Policy Strategy (2022-2027), Gender Equality, National Minimum Wage, factors affecting disposable income, as well as barriers to building renovations and their interaction with energy poverty, and barriers for implementing Energy Service Companies (ESCOs).

Collection and Analysis of Best Practices

The collection and analysis of best practices involved examining how other EU Member States have

defined energy poverty, as well as policies and measures they are implementing to alleviate it. This task included defining parameters to identify countries with best practices, and a detailed examination of elements such as:

- Definitions and Criteria;
- Indicators;
- Policies and Measures;
- Monitoring and Reporting;
- and the presence of national Strategy on Energy Poverty.

The EU MS considered were: Spain, France, Austria, Netherlands, Denmark, Greece and England.

Future State Establishment

Estimation of energy poor households in Cyprus

The task presented a recap on the current state in Cyprus along with EU wide commentary on energy poverty and relevant indicators used in various MS as well as indicators recommended through the European Commission and the Energy Poverty Advisory Hub. The indicators were analysed based on a set of criteria and were complemented with commentary on their replicability and applicability in Cyprus. Recognizing data limitations, EY proposed a composite indicator that takes into account income, energy expense and energy performance of buildings and acquired relevant data from the Cyprus Statistical Service (CyStat).

Based on the analysis and following discussions on various indicators, the following composite indicator was proposed and agreed with MECI. Energy Poor Households in Cyprus are those that meet the following requirements:

1. Household (HH) equivalized income net of energy expenses is below the At Risk Of Poverty (AROP) threshold, as this is defined each year by CyStat; **AND**
2. HH Energy Expense / Income is greater than the national median (~4%); **AND**
3. HH have with a low energy performance (it is assumed that the majority of households in Cyprus that received a building permit to 2007 which is when minimum energy performance requirements were introduced are of low energy efficiency).

The limitations of the analysed dataset were presented and explained to MECI along with recommendations of how it can be improved in the future. **The total number of energy poor households was estimated to be 50,290 households, which makes up 15.1% of households in Cyprus. The number of energy poor people was estimated as 116,324. This number includes Hidden Energy Poverty which was estimated to be 1.1%.**

The demographics for the energy poor households were also identified and presented. This included information on age, family size and household composition, citizenship, climate zones, degree of urbanization, dwelling type, tenure status and year of construction. Key findings on demographics were:

- Almost half of the Energy poor Households (48%) have at least one person over 65 years old and one third of (33%) are occupied only by elderly people over 65 years old
- Almost one third of the Energy Poor population (29%) is over 65 years old
- 25% of the Energy Poor Households have just 1 person and 48% have 2 people
- 80% of Energy Poor Households have no children and 9% of Households have 1 child
- 75% of Energy Poor Households are households with Cypriots and 25% are households with Migrants (Greece, Romania, Bulgaria, Asian countries)

- 57% of the Energy Poor population are women (over 14 years old)
- 78% of Energy Poor Households are in mountainous and semi-mountainous zones and 17% in Coastal zones
- 39% of Energy Poor Households are detached houses and the 33% are semi-detached or terraced houses
- 16% of Energy Poor Households are apartments or flats in buildings with 10 or more dwellings and 8% are apartments or flats in buildings with less than 10 dwellings
- 80% of Energy Poor Households are owned outright or are provided free of accommodation and 20% of rented
- 61% of Energy Poor Households are owned detached or semi-detached/terrace (including free accommodation) and 9% of households are owned apartments (split incentives between owner and remaining tenants)
- 7% of Energy Poor Households are apartments which are provided rent free (split incentive between owner and remaining tenants)
- 10% of Energy Poor Households are rented detached or semi-detached/terrace houses (split incentive between landlord and tenant)
- 9% of Energy Poor Households are rented apartments (double split incentive between owner and remaining tenants and landlord and tenant)

A methodology for identifying the actual energy poor households was also presented based on a set of simpler criteria. The aim of these simpler criteria were to simplify the identification of the energy poor households. This differentiated between Energy Poor Household Types, as these are categorized by SILC, in order to come up with an income threshold, that takes into account energy expense, and an energy efficiency class below which a household is deemed energy poor. An Energy Poor household is therefore a household that has an income less the amount shown in table below (depending on the household composition) and lives in a property that has an Energy Performance Class D or below D.

2020 data, inflated to 2023 with reference year 2022	Total threshold	Plus additional person
Number of people	€	€
1	12,371	
2 (2 adults, 1 adult & 1 dep)	18,620	
3 (3 adults, 2 adults & 1 dependent, 1 adult 2 dependent)	24,826	
4 (1 adult & 3 dependent, 2 adults & 2 dependent etc.)	28,407	5,806

Definition of vulnerable customers

This task differentiated between vulnerable consumers, vulnerable customers and vulnerable electricity customers. The task analysed existing definitions and identified areas of improvement. An analysis of various definitions for vulnerable customers and energy poor from different EU member states was also presented along with recommendations on specific qualitative definitions both in English and in Greek. These are also presented below:

Energy Poverty Definition

Options	English version	Greek version
Option 1	Energy Poverty means a household's lack of access to essential energy services that provide basic levels and decent standards of living and health, including adequate heating, hot water,	Ενεργειακή φτώχεια είναι η έλλειψη πρόσβασης ενός νοικοκυριού σε απαραίτητες ενεργειακές υπηρεσίες, όταν οι εν λόγω υπηρεσίες παρέχουν βασικά επίπεδα και αξιοπρεπή πρότυπα

	cooling, lighting, and energy to power appliances, existing social policy and other relevant policies, caused by a combination of factors, including but not limited to non-affordability, insufficient disposable income, high energy expenditure and poor energy efficiency of homes.	διαβίωσης και υγείας, συμπεριλαμβανομένων της επαρκούς θέρμανσης, του ζεστού νερού, της ψύξης, του φωτισμού και της ενέργειας τροφοδοσίας ηλεκτρικών συσκευών, την υφιστάμενη εθνική κοινωνική πολιτική και άλλες σχετικές εθνικές πολιτικές, η οποία προκαλείται από συνδυασμό παραγόντων, συμπεριλαμβανομένων, τουλάχιστον, της οικονομικής αδυναμίας, του ανεπαρκούς διαθέσιμου εισοδήματος, των υψηλών ενεργειακών δαπανών και της χαμηλής ενεργειακής απόδοσης των κατοικιών.
Option 2	Energy poverty is attributed to people and households who encounter difficulties in getting adequate energy supply to satisfy basic needs in their dwellings. This is often due to insufficient resources or housing energy efficiency conditions.	Ενεργειακή φτώχεια αποδίδεται σε ανθρώπους και νοικοκυριά που αντιμετωπίζουν δυσκολίες στην απόκτηση επαρκούς παροχής ενέργειας για να ικανοποιήσουν βασικές ανάγκες στις κατοικίες που διαμένουν. Αυτό συμβαίνει συχνά λόγω ανεπαρκών πόρων ή ακατάλληλης ενεργειακής απόδοσης της κατοικίας τους.

Vulnerable Customers

In addition to the energy poverty definition, an analysis of the EU opinion along with best practices from other EU MS was conducted to identify and propose a recommendation for vulnerable customers. Following discussion with MECI with regards to the possible definitions, it was concluded that a definition for vulnerable customers that is separate to energy poverty should be established, with an inclination to refer to it. Additionally, an analysis on the existing vulnerable customer categories and the categories eligible for the special tariff was performed. This showed that most categories focus solely on health-related issues. It was recommended that the parameter of income should be included for some health-related categories. Furthermore, the Government could explore incorporating other categories such as mental health, language limitations, people in remote areas, people with limited or no digital skills and/or people with no internet access, as well as widening the age criteria.

Options	English version	Greek version
Option 1	Vulnerable customers are customers who require additional protection and support due to their personal circumstances and characteristics. These could include, but not limited to, income criteria, family status, age, health conditions and dependency on	Οι ευάλωτοι πελάτες είναι οι πελάτες που απαιτούν επιπλέον προστασία και υποστήριξη λόγω των προσωπικών τους περιστάσεων και χαρακτηριστικών. Μεταξύ άλλων, αυτά μπορεί να περιλαμβάνουν επίπεδα εισοδήματος, οικογενειακή κατάσταση, ηλικία, θέματα υγείας

	electrical equipment. Energy poor, as defined, are classed as a subset of vulnerable customers, with their own specific characteristics.	και την κρίσιμη εξάρτηση στον ηλεκτρικό εξοπλισμό. Οι ενεργειακά φτωχοί, όπως αυτοί ορίζονται ξεχωριστά, κατατάσσονται ως μια υποομάδα των ευάλωτων πελατών, με τα δικά τους συγκεκριμένα χαρακτηριστικά.
Option 2	Vulnerable customers are those who are economically, socially, or medically vulnerable and may require assistance to maintain access to the necessary levels of electricity to ensure their health, well-being, and safety.	Οι ευάλωτοι πελάτες είναι οι πελάτες που είναι οικονομικά, κοινωνικά ή ιατρικά ευάλωτοι και μπορεί να χρειάζονται βοήθεια για να διατηρήσουν την απαραίτητη πρόσβαση ηλεκτρικής ενέργειας για να διασφαλίσουν την υγεία, ευημερία και την ασφάλεια τους.

Examine whether new policies and measures are needed to comply with EU provisions

This task presented EU requirements and examined the compliance of national policies and measures against EU provisions. A list of needed actions and policies was presented along with a list of non-compulsory actions and policies. Additionally, this task presented a long list of policies and measures extracted from best practices analysis, highlighting the ones already implemented in Cyprus.

3.2.2 Lessons Learned

- Legislation definition requirements on vulnerable customers and energy poor is harmonized with EU directive through several Decrees which include relevant parameters (income, family status, health conditions). However, there is no actual definition but rather categories/criteria that are identified through relevant Decrees.
- Legislation measures are harmonized with EU directive as they include protection measures such as the prohibition of electricity supply disconnection and social benefits (provision of financial support and special electricity tariff) as well as measures to improve energy performance.
- Legislation is harmonized around information provision on support measures to be made available to all interested parties. However, this is not targeted nor is done consistently.
- Legislation allows for policy measures, including fiscal measures or other financial incentives, to be made available. A number of policy measures are currently in place and support the vulnerable and energy poor. Measures for vulnerable customers and energy poor include: increased financial incentives through subsidies, financial incentives for energy efficiency improvements, prohibition of disconnection.
- Vulnerable customers parameters include: health conditions, income conditions, disability. There are no parameters on energy expenditure and energy efficiency of homes.
- Energy poor parameters include: recipients of financial support. There are no parameters on expenditure against income nor on energy performance of properties.
- The National Legislations do not include official indicators for energy poverty which consider energy expenditures and energy efficiency.
- The Cyprus House Budget Survey (HBS), which is typically used among EU MS for the estimation of energy poverty, runs every five years. The last HBS dataset available was for 2015 (2020 was cancelled due to COVID) and as such recent data was not available. A recommendation was made to consider running the HBS more often to address various Government needs, including the monitoring of energy poverty.
- Survey on Income and Living Conditions (SILC) runs on an annual basis and although the quality of data collected is not as detailed as that of HBS, it was deemed more appropriate to

be used for the purposes of this exercise. Most of SILC questions are the same every year, but there is a subset of ad-hoc questions that are included in some surveys. Although the 2023 SILC has some very relevant questions, data would not be available until mid-2024. Out of the remaining SILC surveys, the 2020 survey was chosen since it included the most comprehensive and relevant list of questions. Recommendations were made on how future SILC surveys could be improved to collect additional information by incorporating and maintaining certain ad-hoc questions found in the 2023 survey. It was also recommended to compare in the future energy poverty estimations based on SILC with similar estimations derived using the HBS data.

- Currently, there is no body monitoring closely energy poverty in Cyprus, nor there is an official indicator for reporting and monitoring purposes.

3.3 Deliverable 3: Fighting energy poverty in Cyprus: new policy measures and methodologies

3.3.1 Tasks Description

Future State Design (cont.)

New definition and adjustment of existing measures

This task presented a summary of current as these were presented in Deliverable 2. A set of new measures was proposed, categorized under four pillars:

1. Social/Affordability measures (i.e. measures that provide immediate financial relief such as special tariffs, income support, tax, and energy prices reductions);
2. Structural measures (i.e. measures which address the root cause by reducing energy consumption and improving energy efficiency);
3. Information and Behavioural measures (i.e. measures to raise awareness and promote energy efficient behaviour);
4. and Administrative and Governance measures (i.e. measures that optimize the governmental services, simplify procedures, monitoring indicators etc.).

Propose new or adjust existing incentives to improve energy efficiency of home owners and/or used by energy poor households

The proposed or adjustment of existing incentives to improve energy efficiency of homeowners and or/used by energy poor households was captured and presented under the previous task, specifically under Pillar 2 and Structural measures.

Measures of awareness and other informative and behavioural issues

This task presented a four-step methodology for establishing a Communications Campaign and presented initiatives that have already been launched in Cyprus. To address the specific needs of the energy poor, there is a need for more targeted initiatives and a robust communication strategy, to be centrally led by the Ministry of Energy Commerce and Industry (MECI). Such a campaign requires a thoughtful and strategic three-phase approach:

- Pre-launch Campaign Phase which includes a clear setting of objectives, execution timeline, consideration of resource availability and identification of target audience;
- Campaign Phase which includes the launching of the campaign across selected channels, and monitoring and evaluation of its performance; and
- Campaign end phase which entails a thorough evaluation of the campaign and whether it has met its initial objectives.

The demographic groups impacted by energy poverty were also identified and useful information for the energy poor groups was presented. The task presented elements of effective communication strategies and impactful channels for communication. A detailed communication campaign influence groups and channels was also presented as an Annex, along with an analysis of impact, outreach and high-level cost for all influence groups.

Methodology for estimating energy savings resulting from the implementation of energy efficiency measures for vulnerable customers, using standardised occupancy and thermal comfort conditions or other parameters.

This task presented a methodology for estimating energy savings resulting from the implementation of energy efficiency measures. The purpose of this task was to estimate the cumulative end-use energy savings achieved in ktoe from the implementation of energy efficiency measures in energy poor houses, and to estimate the number of houses that would need to be renovated along with an estimation of the budget that will be required for the implementation of these measures. The methodology presented has four steps;

1. the identification of representative buildings that better reflect the buildings energy poor live in;
2. the modelling of the energy performance of these buildings to understand their existing energy performance, as well as their energy performance following various energy efficiency upgrades;
3. estimation of the cost of each energy efficiency upgrade; and the estimation of the number of buildings required to be renovated to meet the set end-use energy savings target and the total cost.

The task was complemented with an MS Excel tool for estimating energy savings under various scenarios.

Action Plan

A high-level action plan was presented which captures the immediate next steps with regards to Deliverables 2 and 3. Key actions are also detailed in the report for each of the proposed measures.

3.3.2 Lessons Learned

- Although there are a number of measures already implemented in Cyprus, particularly around Social/Affordability and Structural, these could be further enhanced to specifically address split incentives as well as further encourage energy efficiency upgrades as opposed to just PV installation.
- There are limited targeted information and communication campaigns, and lack of coordination between various Governmental bodies.
- MECI does not have a dedicated communications team responsible for designing, implementing and monitoring communications campaigns. This may affect the effective implementation of the proposed communications campaign.
- The Deputy Ministry of Social Welfare has recently introduced various Social Workers in Local Authorities, which MECI could use to fight energy poverty.
- Social workers and front liners in general have limited understanding of energy efficiency interventions and need to be trained so that they can inform the general public accordingly
- There is no single body responsible for monitoring energy poverty, something that is observed in other countries such as France, Italy and Greece (e.g. Energy Poverty Observatory).

- There is no standardised and agreed methodology for estimating energy savings following the implementation of energy efficiency measures.

3.3.3 Questions & Answers for End-Users

1. What was the project structure and the methodologies used?

Project Structure: The project was split into five (5) phases:

- 1) Project Inception: Focused on establishing the project structure and methodology with the main activities including illustrating the project's framework, discussing the initial results, and conducting meetings for insight gathering.
- 2) Current State Assessment: Aimed at understanding and assessing the current state of energy poverty and vulnerable customers in Cyprus. This included a legal analysis and compliance with relevant EU directives, policy and measures analysis and an EU member state best practice analysis.
- 3) Future State Design: Aimed at estimating the number of households affected by energy poverty in Cyprus, defining vulnerable customers and energy poor and examining whether new policies and measures were needed to comply with relevant legal provisions.
- 4) Action Plan Development and monitoring Phase: Led to the development and proposition of measures to fight energy poverty, incentives to improve energy efficiency of rented/owned households, measures to raise awareness and a methodology for estimating energy savings resulting from energy efficiency measures.
- 5) Closing Phase: Provided a summary of the activities performed and marked the project outcomes.

Methodologies used:

- EY Operating Model and Transformation Framework - Transformation Realized™: This is the methodology that was primarily used during the project. The EY methodology was adapted to meet the project needs aligned with strategic organizational goals.
- Supplementary Methodologies and Tools: These supported the core methodology, ensuring a comprehensive approach to the project.
- Project Management and Quality Assurance: This was integral throughout the project lifecycle, from inception through execution to closing. This included continuous monitoring and delivering work products at each task's completion.

2. Were the objectives of the deliverables met?

The project successfully met all its objectives, and led to the development of one (1) comprehensive action plans. This plan identifies key actions going forward to alleviate energy poverty in Cyprus. Key achievements include:

- Mapping of existing legislation, policies and measures in Cyprus regarding energy poverty and their compliance against EU directives and regulations
- New definition for vulnerable customers and energy poor
- Estimation of energy poverty in Cyprus and their demographic characteristics
- Recommendations on policies and measures to alleviate energy poverty in Cyprus
- Proposition of measures of awareness and other informative and behavioural issues
- Proposition of a methodology for estimating energy savings resulting from the implementation of energy efficiency measures

3. How were key stakeholders handled and how was feedback collected?

- The Project Team arranged undertook several meetings and workshops with all stakeholders involved where the approach and work was presented and discussed. These meetings aimed

to verify the accuracy of desktop research with each stakeholder. This step was vital to ensure the correctness and relevance of our findings.

- Tailored Communication/Engagement Methods: We undertook communication approaches that responded to the specific preferences and needs of each stakeholder, including face to face and virtual meetings as necessary, always with the presence of a MECI representative. This adaptability was key in ensuring effective engagement.
- We aimed to cross-reference information from each stakeholder involved to guarantee comprehensive and coherent documentation.

4. What were the key challenges?

1. Lack of up-to-date HBS survey data. We had to identify equivalent data from other surveys, namely SILC and this was a challenge, particularly on ensuring the quality of the data collected through the SILC.
2. Besides the estimation of energy poverty, we had to consider the actual identification of the energy poor households. This was challenging since we had to set simpler criteria that would capture the same households. Doing so will allow the Cyprus Government to identify actual energy poor households and support them through subsidies.
3. Meeting with various stakeholders and keeping everyone informed and involved throughout the process.
4. The time scale of the project was short which meant that there was limited time to engage all stakeholders involved repeatedly.
5. There is no single body responsible for monitoring energy poverty, something that is observed in other countries (e.g. Energy Poverty Observatory).

5. What were the unexpected risks encountered during the project?

- Delay in acquiring data from CyStat to perform energy poverty analysis due to bureaucratic procedures. This however did not have an impact on the successful implementation of subsequent tasks.
- The announcement of additional measures for vulnerable customers and energy poor post commencement of the project which meant that current state assessment had to be updated accordingly.

4. Annex: Project Deliverables

All deliverables of the project are included in the following Annexes:

- **Deliverable 1:** Inception Report
- **Deliverable 2:** Report on energy poverty in Cyprus and redefinition of vulnerable customers in Cyprus
- **Deliverable 3:** Fighting energy poverty in Cyprus: new policies measures and methodologies