Abstract: Energy poverty is one of the most critical social challenges in the debate about energy transformation. Reducing the risk of this challenge and mitigating the effects are at the heart of public policies. However, not only the government sector can support people who experience or are at risk of energy poverty. The business sector, especially energy companies, which are the main actors in predefining energy systems in individual countries, can actively participate in this process, among others, through socially responsible activities. The article aims to examine to what extent the problem of energy poverty is an element of social responsibility projects undertaken by energy companies. In addition, it was examined to what extent national climate policies address this issue. The study was conducted using content analysis. The results indicate energy companies’ weak interest and engagement in the energy poverty problem. They treat it very peripherally and do not include material topics on the list. The article ends with a set of conclusions for business sector representatives to help develop projects supporting energy poverty combat.

Keywords: energy poverty; energy poverty risk; energy policy; energy transition; non-financial reporting; social responsibility of energy companies; energy companies

1. Introduction

The rising average annual temperature on Earth and the growing concentration of greenhouse gases [1] associated with anthropopressure observed are the causative factors for the emerging policies and plans to prevent the further development of disturbing phenomena [2].

Climate change caused by human activity has many social, economic, environmental, and political consequences [3]. The observed sudden and unexpected weather phenomena and the growing risk of destabilization of social and economic systems seem to be a good motivation to start the climate transformation and redesigning of energy systems [4,5]. Reducing the amount of greenhouse gases will be possible only by taking specific actions related to changing the way energy is produced, including shifting away from fossil fuels in favor of green energy [6]. The energy transformation will only be possible with the participation of public authorities [7] responsible for implementing and enforcing climate plans and other stakeholders, including primarily enterprises with a unique role of energy companies.

In the case of European countries, this decision was accelerated by the outbreak of the armed conflict in Ukraine [8,9]. The risk of limiting the number of energy resources from Russia related to European sanctions forced the countries to immediately address...
the issue of resource availability and the possibility of replacing the existing sources with others, including more environmentally friendly ones [10].

Although the assumption of the energy transformation is its fair character, it is already clear that various challenges related to adapting new policies and strategies to the net-zero era cannot be avoided.

On the map of obstacles related to the energy transition, there is the phenomenon of energy poverty. Energy poverty is defined as “a situation in which households are unable to access essential energy services and products” [11].

Public administration, as a stakeholder responsible for society’s well-being and quality of life, is one of the critical parties accountable for eliminating the problem of energy poverty. The public sector is aware of this challenge, which is reflected, among others, in the National Energy and Climate Policies (NECP) [12].

The public sector is not the only one that impacts the social situation. Due to the business scale of operation and obligations toward society, companies can play a significant role in solving the problem of energy poverty, mainly through socially responsible activities and contributions to implementing Sustainable Development Goals [13].

The motivation to write the paper was to learn about the approach of energy companies to the problem of energy poverty. Two research questions were developed:

1. To what extent do national policies address energy poverty as an essential issue to be tackled by energy companies?
2. What actions are conducted in the area of energy poverty by the company as part of its activities for social responsibility and sustainable development?

In order to answer the research questions, an analysis of national policies of countries of origin of the biggest energy companies from Europe was carried out, and integrated or sustainability reports of energy companies were examined in terms of the presence of the energy poverty issue and the scope of undertaken activities was analyzed. An analysis of the literature on the subject precedes the research part. The article ends with concluding remarks for energy companies to tackle the energy poverty challenge under their sustainable development strategies and policies.

2. Materials and Methods

There are two main research methods used for this paper. The first stage of the research was the literature review (secondary data analysis) addressing the issue of energy poverty. Energy poverty was examined as a social challenge related to the energy transition. The described phenomenon was a starting point for further analysis, oriented mainly on a business perspective. The basic materials for this element of the study were reports, scientific papers, and NECP documents.

The first part of the research was devoted to discovering the existence of the energy poverty term in National Energy and Climate Policies. Expectations toward business in the context of energy poverty were analyzed. The authors searched for the topics and activities expected from companies to address energy poverty. The NECP analysis included countries that were the headquarters of the companies analyzed in the second part of the study. For non-EU countries, documents equivalent to the NECP were analyzed.

The second aspect was the sustainability or integrated reporting analysis of the biggest energy companies from Europe. The initial search was made using the Eikon Database. It allowed for the preparation of the list of most significant entities. The criterion used was market capitalization. The list contained 36 companies and 34 were finally examined due to the availability of the English version of documents. The analysis does not include the business offering green energy.

The basic year of chosen reports was 2022. In rare cases, only the 2021 document was available. If the company had an integrated report, including the sustainability area, it was treated as a fundamental source of information. The article does not mention the
names of the companies whose reports were analyzed, and none of them are directly quoted—for this reason, their list is not included in the references.

The early literature review helped to discover the core keywords directly related to energy poverty. The following words or phrases were chosen as codes to identify the report’s content: energy poverty, fuel poverty, National Energy and Climate Plan (NECP), poverty risk, social exclusion, vulnerable groups, vulnerable consumers, financially weak households, energy needs, energy poor, struggle to pay, energy debt, and alleviate energy hardship. The terms were selected for analysis after reading articles on energy poverty, based on the vocabulary used in them and giving hope for finding the right information in the company documents. Each report was examined considering the word’s appearance and the context in which it is used.

Content analysis is a flexible research method used for data gathering, coding, and reflecting on the issue of the researcher’s interest. It allows for the transformation of qualitative data into quantitative measures by setting the right coding system [14]. The method allows for customization of the scope and scale of the planned research. It is understood as “a technique for objective, systematic, and quantitative description of the manifest content of communication” [15] and “a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use” [16].

The research method used in the study has a long tradition in qualitative and quantitative studies on social and environmental reporting [17–19]. The method has been verified in previous studies and is adequate for the purpose of this article [20]. The authors used content analysis based on searching for previously collected keywords (directed approach [21], conceptual analysis [22]). Table 1 presents the research steps followed by the authors to prepare and conduct the content analysis.

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: Prepare the Data</td>
<td>The collection of National Energy and Climate Policies; The collection of integrated/sustainability reports of the biggest energy European companies.</td>
</tr>
<tr>
<td>Step 2: Define the Unit of Analysis</td>
<td>The energy poverty as an issue of business interest.</td>
</tr>
<tr>
<td>Step 3: Develop Categories and a Coding Scheme</td>
<td>Analysis of business context of energy poverty in NECP; Development of keywords for report analysis based on early literature review.</td>
</tr>
<tr>
<td>Step 4: Test the Coding Scheme on a Sample of Text</td>
<td>The initial analysis of three exemplary documents to check the consistency and clarity, and to validate the codes scheme.</td>
</tr>
<tr>
<td>Step 5: Code All the Text and recheck the consistency</td>
<td>The full analysis of the chosen documents. The check of data consistency.</td>
</tr>
<tr>
<td>Step 6: Conclusions and findings</td>
<td>Formulating the final conclusions and findings.</td>
</tr>
</tbody>
</table>

Source: Own elaboration based on [23].

The task was to know both the frequency of occurrence of the indicated terms as well as the context of their use. On this basis, it was possible to formulate conclusions regarding business engagement in solving the problem of energy poverty.

3. Literature Review

3.1. Energy Poverty as a Social Challenge for Energy Transition

Many citizens experience the phenomenon of energy poverty, sometimes known as fuel poverty. It is often defined as the inability to keep homes adequately warm [24]. The
term itself seems self-explanatory; however, covering a general picture of energy poverty and its causes would be helpful. Understanding the phenomenon can impact how the solutions and policies are formulated. The first efforts to investigate energy poverty can be assigned to the United Kingdom and Ireland precursors [25] (p. 176). In the cited publication, Świerszcz presents a definition of energy poverty stating that families experience energy poverty when they allocate more than 10 percent of their earnings toward achieving an adequate level of heating [25,26]. Although the above approach is potentially practical and precise, it misses nuances of the problem. Thus, another proposition, a low income–high cost indicator, allows for considering both the high-energy cost and low-household income. The high-energy cost depends on the energy consumption level and price. Low-household income can be associated with a shared understanding of poverty, which is perceived as a very subjective term, dependent on the current average income level typical for a particular country. All this creates a situation where energy poverty should also be considered context-dependent.

The more general view is presented on the European Commission website, as it does not refer to any numbers: “Energy poverty occurs when energy bills represent a high percentage of consumers’ income, or when they must reduce their household’s energy consumption to a degree that negatively impacts their health and well-being” [27]. It draws attention to meeting basic needs (keeping a comfortable household temperature, difficulty of paying bills, problems with heating devices). However, this general approach must be improved when searching for solutions and formulating policies for tackling the problem. One possible method could lead to developing more precise criteria to define those who suffer from energy poverty (vulnerable groups and/or individuals). The considered approach can turn the attention to preparing clear criteria typical for every country or even further: depending on where the household is located (town or country) or what kind of energy carriers are in use. Nevertheless, it could cause a situation where comparisons between countries, for example, would be impossible. Only a complex attitude will benefit, offering, for example, many supplementary indicators. The system should be “simple yet comprehensive” [28] (p. 2) [29]. The paper presented by Herrero challenges the validity of official energy poverty metrics based on a single indicator, such as the UK’s low income–high cost measure, and instead promotes the adoption of multi-indicator approaches that openly recognize the limitations inherent in each method used [30] (p. 1018) [31].

A unified definition of energy poverty is absent throughout the European Union, as Member States are not obligated to adopt one [32] (p. 6, 39). Thomson and Bouzarovski articulate in the cited publication that an increasing array of EU countries have established official energy poverty definitions and implemented corresponding national policy frameworks to tackle this concern [32] (p. 37). These definitions often do not directly address the issue of energy poverty—for example, focusing on the categorization of vulnerable customers, and thus referring to social policy rather than energy policy [32] (pp. 37–40). Halkos and Gkampoura review in detail energy poverty definitions [33].

Numerous factors and contextual elements come into play when examining the origins of energy poverty. These include aspects like diminished income levels, energy costs, the structural integrity and energy efficiency of buildings (such as heat efficiency), housing size, local climate and environmental conditions, as well as household behaviors and preferences [25]. Policymakers should take into consideration characteristics of dwelling (e.g., poor quality housing) and households (e.g., pensioners and disabled people and the way they consume energy), as well as different prices/tariffs for home energy [26].

There is also an environmental dimension to the issue. Individuals experiencing a decline in well-being due to deficient energy consumption tend to use unclean or polluting fuels [34] (p. 47). Poor quality housing means emissions of heat to the atmosphere. The European Commission’s document shows that in 2019 the problem affected up to 31 million people in the European Union [35]. Other studies present higher numbers, e.g., 50 million [36] or even 80 million due to the energy price crisis [37]. The statistics differ probably due to definitional problems.
Halkos and Gkampoura mention what activities can help tackle energy poverty. The list includes changes to the living environments, new technologies, energy transition, policies and legislation, and financial schemes [33] (p. 11). The energy transition process is associated mainly with the UN SDGs, namely, SDG 7.1 “By 2030, ensure universal access to affordable, reliable and modern energy services” [38] (p. 19). Renewable energy solutions will affect the environmental aspects of energy production systems. However, they can also have the potential to contribute to solving energy poverty problems, especially in developing regions of the world [39,40].

The importance of the energy poverty caused that individual countries and the European Union created and maintained their own strategies and policies to tackle this multidimensional problem... The European Union (EU) is progressively focusing on addressing energy poverty through policy initiatives, intending to intensify endeavors to significantly mitigate this problem within the context of enhancing energy efficiency, transitioning to a low-carbon economy, and facilitating a clean and equitable energy shift [41] (p. 3).

Public policies on energy poverty are paramount as they serve as the foundation for addressing a critical socio-economic challenge that impacts millions of vulnerable individuals and households. These policies provide a structured framework through which governments and public bodies can allocate resources, set goals, and implement strategies to ensure equitable access to affordable and reliable energy services. Moreover, they are crucial in raising public awareness, encouraging private sector involvement, and guiding collective efforts toward a more sustainable and inclusive energy future.

3.2. Business Social Responsibility to Tackle Energy Poverty

Dealing with the problem of energy poverty is a global problem, regardless of latitude or political system. Despite differences in the factors that cause a given challenge or the scale of its occurrence, one solution is cooperation [42]. Changing the situation of people affected by energy poverty requires the involvement of a wide range of stakeholders. However, the public administration and the business sector have a particular task due to their legitimacy to act.

The energy industry is aware of its role in the climate transformation [43]. Its importance is due to having resources and providing energy supply services through many products. The range of services allows for diversifying the offer depending on customers’ needs. However, this type of business engagement is an element of business as usual, not a social activity. In the case of practicing social responsibility, more initiatives that go beyond standard business activities should be considered.

The issue of the activities of energy companies in the social and environmental sphere is not new. In the literature on the subject, one can find articles illustrating the approaches and the scope of involvement in implementing CSR as supporting sustainable development goals [44]. The authors emphasize the need for energy companies to react to the identified social and environmental problems, seeing activities for sustainable development not only as an opportunity, but also as an obligation [45]. The role of social responsibility in achieving goals for sustainable energy development is emphasized. The achievements of companies from various countries are presented, showing the implementation of socially responsible practices that are part of the standard scope of social responsibility [46–48]. The performance of socially responsible companies is also examined [49]. Another issue addressed is reporting and disclosure [50–54]. CSR as a sign of trustworthiness among consumers is also positioned [55].

There is yet a need to conduct comprehensive studies on how energy companies address the problem of energy poverty in their CSR strategies. In one of the articles, attention is drawn to the link between CSR and energy poverty. However, the presented content does not contain specific solutions that could be expected from businesses in this area [56]. There are also papers in which social responsibility correlates directly with poverty alleviation through the energy-related programs [57]. This orientation of CSR is also shared
in other studies, which refer to the positive impact of CSR on utilization of renewable energy resource and sustainable energy supply [58] with direct relation to energy poverty. The emerging topic of energy poverty and business engagement still requires more deployed analyses. The conducted literature review made it possible to define the research gap, which is the lack of advanced knowledge about the activities of energy companies in the area of energy poverty as an element of their social responsibility, which goes beyond development of sustainable energy and greenhouse gases reduction often reported.

4. Results

4.1. Results of National Energy and Climate Policies Analysis

NECPs serve as blueprints outlining how European Union member states intend to strategically address various energy-related aspects, including energy efficiency, renewables, reductions in greenhouse gas emissions, interconnections, and research and innovation. By providing an integrated framework for addressing energy and climate challenges, these plans offer a foundation that facilitates both public and private investment. This coordinated strategy not only aligns countries’ efforts with EU-wide goals, but also generates a streamlined pathway for energy poverty policies. The Table 2 presents the results of NECP analysis on the national level.

<table>
<thead>
<tr>
<th>Country</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>- emphasizes minimum income instruments and housing subsidies to alleviate energy poverty; - supports housing construction and renovation works such as liabilities for renovation loans; - investing in the long-term sustainability of buildings.</td>
</tr>
<tr>
<td>Estonia</td>
<td>- provides a subsistence benefit and grants to enhance living conditions for individuals and apartment associations; - offers an advisory unit to assist with energy-related matters; - enforces provisions to limit energy supply interruptions, enhancing overall energy security.</td>
</tr>
<tr>
<td>Finland</td>
<td>Energy poverty prevention is integrated into Finland’s social policy framework. The country restricts energy companies’ rights to disconnect supplies due to unpaid bills, ensuring that vulnerable households are not disproportionately affected.</td>
</tr>
<tr>
<td>France</td>
<td>- focuses on enhancing energy allowances, such as the energy transition tax credit (CITE) and MaPrimeRénov’, to make them more effective; - zero-rate eco-loans and energy audits for low-income households contribute to improving energy efficiency and reducing energy bills.</td>
</tr>
<tr>
<td>Greece</td>
<td>- supports distribution network extension projects and maintains a social tariff scheme. Vulnerable customers are automatically transitioned into the Universal Service scheme, while the exploration of an “energy card” and residential building upgrades aim to further alleviate energy poverty.</td>
</tr>
<tr>
<td>Hungary</td>
<td>- aims to maintain sustainable overhead costs for households while ensuring the financial stability of energy companies; - implements programs to improve conditions for vulnerable customers, providing targeted support.</td>
</tr>
<tr>
<td>Iceland</td>
<td>- does not detail specific policies; - an action plan outlines the intentions to improve energy efficiency;</td>
</tr>
</tbody>
</table>
Italy - focuses on reducing energy bills for families through social bonuses or tariffs; promotes energy efficiency through regulations, tax breaks, certification schemes, and subsidies for low-income families, contributing to long-term savings and sustainability. [66]

The Netherlands - seeks fair distribution of sustainability burdens among citizens and businesses, with increased contributions from companies; promotes collaboration in achieving energy efficiency goals. [67]

Norway - emphasis is on cost-effective contributions toward emission targets; policies aim to minimize societal costs while achieving environmental objectives. [68]

Poland - focuses on modernizing and renovating buildings through subsidy programs; provides options to install prepayment metering and billing systems, terminate contracts without extra charges, and change energy vendors; offers access to consumer rights and introduces anti-smog tariffs to improve air quality. [69]

Portugal - implements mechanisms to safeguard vulnerable consumers and actively supports energy efficiency and renewable energy integration; policies not only reduce energy poverty, but also enhance environmental sustainability. [70]

Romania - mandates electricity suppliers to ensure a secure supply, limit interruptions, and prevent disconnections during electricity crises; grants aid in home heating, support measures for vulnerable consumers include payment rescheduling and financial assistance. [71]

Sweden - Unlike other countries, Sweden does not differentiate between energy poverty and general poverty. No specific targeted policies for energy poverty exist, reflecting the country’s comprehensive approach to social welfare. [72]

United Kingdom - The UK’s Energy Company Obligation (ECO) mandates larger energy suppliers to implement energy efficiency measures for domestic premises; support is aimed at low-income and vulnerable households, promoting energy conservation and accessibility; the minimum energy efficiency standards requirement for private landlords further contributes to improved energy efficiency; the energy price cap provides protection against poor value tariffs, enhancing consumer affordability. [73]

Source: Own elaboration.

The way to combat energy poverty involves a blend of solutions, which can be divided into four categories. The first is related to modernization and renovation. Many countries focus on upgrading buildings through subsidies and renovation projects, improving energy efficiency and living conditions. Certification schemes are employed to encourage energy-efficient practices in homes and buildings.

The second is dedicated to legal protection of household energy security. It empowers consumers through options to terminate contracts, switch vendors, and access to information fosters competitive energy markets and affordability. This category may also include energy price caps and tax breaks that protect households from energy-related financial hardships.

A third way to address energy poverty is infrastructure development. It supports the expansion of distribution networks and the improvement of energy supply security. Some countries focus their attention on direct financial support. This includes housing subsidies and energy allowances to help vulnerable households afford energy expenses.
Finally, we can also distinguish policy based on corporate participation. This approach is most evident in the policy of the Netherlands, which distributes sustainability burdens fairly among citizens and businesses, encouraging collective responsibility. The approach based on company participation is also partially visible in UK policy.

In conclusion, the global drive to eliminate energy poverty and enhance energy efficiency involves a blend of financial support, regulatory frameworks, infrastructure development, modernization, and company participation. Analysis of the NECP reports indicates that business participation is not a common solution.

4.2. Results of the Qualitative Analysis of Sustainability Reporting of the Biggest European Energy Companies

The analysis was carried out on the largest energy companies from Europe, which were selected using the Eikon Database. Their market capitalization served as the main selection criterion. Table 3 contains the list of chosen companies.

Table 3. The analyzed energy companies, country of their headquarter, and market capitalization.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company Name</th>
<th>Headquarter</th>
<th>Market Capitalization (M USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shell PLC</td>
<td>GB</td>
<td>199,145</td>
</tr>
<tr>
<td>2</td>
<td>TotalEnergies SE</td>
<td>FR</td>
<td>141,654</td>
</tr>
<tr>
<td>3</td>
<td>BP PLC</td>
<td>GB</td>
<td>100,478</td>
</tr>
<tr>
<td>4</td>
<td>Equinor ASA</td>
<td>NO</td>
<td>91,273</td>
</tr>
<tr>
<td>5</td>
<td>Neste Oy</td>
<td>FI</td>
<td>29,038</td>
</tr>
<tr>
<td>6</td>
<td>Polski Koncern Naftowy Orlen SA</td>
<td>PL</td>
<td>18,671</td>
</tr>
<tr>
<td>7</td>
<td>OMV AG</td>
<td>AT</td>
<td>13,511</td>
</tr>
<tr>
<td>8</td>
<td>Galp Energia SGPS SA</td>
<td>PT</td>
<td>8717</td>
</tr>
<tr>
<td>9</td>
<td>MOL Magyar Olajes Gazipari Nyrt</td>
<td>HU</td>
<td>7152</td>
</tr>
<tr>
<td>10</td>
<td>OMV Petrom SA</td>
<td>RO</td>
<td>6725</td>
</tr>
<tr>
<td>11</td>
<td>Eni SpA</td>
<td>IT</td>
<td>4692</td>
</tr>
<tr>
<td>12</td>
<td>Aker ASA</td>
<td>NO</td>
<td>4119</td>
</tr>
<tr>
<td>13</td>
<td>HELLENiQ ENERGY Holdings SA</td>
<td>GR</td>
<td>2736</td>
</tr>
<tr>
<td>14</td>
<td>Energean PLC</td>
<td>GB</td>
<td>2269</td>
</tr>
<tr>
<td>15</td>
<td>Harbour Energy PLC</td>
<td>GB</td>
<td>2239</td>
</tr>
<tr>
<td>16</td>
<td>Repsol SA</td>
<td>ES</td>
<td>1891</td>
</tr>
<tr>
<td>17</td>
<td>Aker BP ASA</td>
<td>NO</td>
<td>1436</td>
</tr>
<tr>
<td>18</td>
<td>Saras SpA</td>
<td>IT</td>
<td>1165</td>
</tr>
<tr>
<td>19</td>
<td>Serica Energy PLC</td>
<td>GB</td>
<td>1084</td>
</tr>
<tr>
<td>20</td>
<td>Dno ASA</td>
<td>NO</td>
<td>932</td>
</tr>
<tr>
<td>21</td>
<td>Etablissements Maurel et Prom SA</td>
<td>FR</td>
<td>834</td>
</tr>
<tr>
<td>22</td>
<td>Tullow Oil PLC</td>
<td>GB</td>
<td>509</td>
</tr>
<tr>
<td>23</td>
<td>Genel Energy PLC</td>
<td>GB</td>
<td>355</td>
</tr>
<tr>
<td>24</td>
<td>EnQuest PLC</td>
<td>GB</td>
<td>338</td>
</tr>
<tr>
<td>25</td>
<td>Capricorn Energy PLC</td>
<td>GB</td>
<td>336</td>
</tr>
<tr>
<td>26</td>
<td>NWF Group PLC</td>
<td>GB</td>
<td>173</td>
</tr>
<tr>
<td>27</td>
<td>Tethys Oil AB</td>
<td>SE</td>
<td>145</td>
</tr>
<tr>
<td>28</td>
<td>Pharos Energy PLC</td>
<td>GB</td>
<td>121</td>
</tr>
<tr>
<td>29</td>
<td>Maha Energy AB</td>
<td>SE</td>
<td>103</td>
</tr>
<tr>
<td>30</td>
<td>Crown Energy AB</td>
<td>SE</td>
<td>53</td>
</tr>
<tr>
<td>31</td>
<td>Enwell Energy PLC</td>
<td>GB</td>
<td>53</td>
</tr>
<tr>
<td>32</td>
<td>Sound Energy PLC</td>
<td>GB</td>
<td>33</td>
</tr>
<tr>
<td>33</td>
<td>Motor Oil Hellas Corinth Refineries SA</td>
<td>GR</td>
<td>28</td>
</tr>
</tbody>
</table>
The mapped situation of socially responsible practices undertaken by energy companies was confronted with the content analysis of sustainability or integrated reports. Sustainability reports of the parent company were selected, if available. In other cases, reports were selected based on the country of the company’s headquarters. Table 4 presents the results of quantitative content analysis. It contains the information about the appearance of each keyword in the studied documents.

Table 4. The frequency of occurrence of keywords related to energy poverty in all 34 energy companies’ reports.

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Number of Occurrence</th>
<th>Number of Reports with the Keyword</th>
<th>Additional Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy poverty</td>
<td>5</td>
<td>3</td>
<td>Sometimes only the term poverty was used but the context was not corresponding with the topic of energy poverty.</td>
</tr>
<tr>
<td>Fuel poverty</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>National Energy and Climate Plan (NECP)</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Poverty risk</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Social exclusion</td>
<td>0</td>
<td>0</td>
<td>The term appeared a few times as a general one not oriented on the studied topic.</td>
</tr>
<tr>
<td>Vulnerable groups</td>
<td>26</td>
<td>9</td>
<td>In fact, the number of mentions is 65, but in most cases, it is about a context other than energy poverty.</td>
</tr>
<tr>
<td>Vulnerable consumers</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Financially weak households</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Energy needs</td>
<td>7</td>
<td>4</td>
<td>Energy needs topic was often used to describe the necessity to ensure enough amount of energy around the world. This meaning was excluded from the analysis.</td>
</tr>
<tr>
<td>Energy poor</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Struggle to pay</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Energy debt</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Alleviate energy hardship</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Own elaboration based on the analysis of the companies’ reports [75–109].

There are only a few direct references to the identified keywords in the studied documents. Some of the terms were used in different contexts. Surprisingly, the main keyword—energy poverty appeared only five times. Taking into account the practice of energy companies in the implementation of CSR projects, the result related to the low number of mentions of the problem of energy poverty as a topic of sustainable development was an interesting discovery.

The second part of the analysis was the way energy companies address the phenomena. Table 5 summarizes the kind of activities described in the analyzed documents. Only 12 reports of the surveyed energy companies mention any actions taken to address problems directly or indirectly related to energy poverty.
Table 5. Examples of socially responsible projects addressing energy poverty included in energy companies’ reports.

<table>
<thead>
<tr>
<th>Type of Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra funds to support vulnerable energy consumers to pay the energy bills.</td>
</tr>
<tr>
<td>Hardship fund for customers which allows for clearing the energy debts.</td>
</tr>
<tr>
<td>Donation to charities which pay households their energy bills and to have the possibility to heat the home during winter.</td>
</tr>
<tr>
<td>Financial participation in governmental emergency funds, which support the most vulnerable social groups.</td>
</tr>
<tr>
<td>Vouchers for fuels for people in need.</td>
</tr>
<tr>
<td>Delivery of oil/fuel to the most vulnerable people.</td>
</tr>
<tr>
<td>Designing and delivering flexible services ensuring the satisfaction of different consumers’ needs.</td>
</tr>
<tr>
<td>Reduction in energy costs for those who need it the most.</td>
</tr>
<tr>
<td>Donation to social projects support combating energy poverty.</td>
</tr>
<tr>
<td>Support local community access to energy by investing in infrastructure and distribution of equipment like more efficient stoves to those in energy poverty.</td>
</tr>
<tr>
<td>Special support for large families in poor financial conditions.</td>
</tr>
</tbody>
</table>

Source: Own elaboration.

Despite the small scale of the projects, enterprises demonstrate relatively diverse forms of involvement. They all aim to relieve the most deprived people by meeting the need to provide the right amount of energy for heating and functioning within households. The least engaging form is the funds transfer to social organizations that conduct more coordinated actions. Another form was the organization’s involvement in distributing heating/fuel or addressing services directly to individual consumer groups, offering them specific support.

5. Discussion and Conclusions

The study of national climate policies showed a need for increased relationship between the understanding of energy poverty and their translation into a specific set of recommendations to be taken into account by business organizations. In this case, the representatives of the authorities do not associate actions addressed to groups experiencing energy poverty with the possible involvement of the sector, which has a considerable contribution to the energy transformation. It is all the more interesting that energy companies are public in many countries. Obliging public entities to include projects mitigating the problem of energy poverty in their reduction plans and proposing a catalogue of possible solutions would bring various benefits. Enterprises would plan their transformation activities considering the consequences of their actions, including financial ones, which are particularly important for people at risk of energy poverty. The dedicated budget would be allocated according to current needs. Earlier estimation of the effects for individual solutions would allow for their scaling and enable the valuation of the actual added value. In addition, sensitization to the problem and making it more specific would enable more coordinated planning of budgets for climate goals.

Similar conclusions come from the analysis of the conducted content analysis. The issue of energy poverty has yet to be an essential topic for energy companies. Only a few entities from the surveyed population reported on the actions taken, but their scale was strongly limited to selected locations or social groups. The reports contained general statements about protecting human rights or vulnerable societies but did not usually refer to specific problems and how they were solved.

Companies do not treat the problem of energy poverty as a human rights risk. It may be due to the lack of a clear link between the issue of human rights and energy poverty. It is worth mentioning that the problematic social situation translates into the organization’s situation. People who cannot afford to meet their basic needs do not participate in the market.
The activities undertaken by the surveyed organizations were usually of philanthropic kind. The context of the analyzed documents showed that this type of involvement was usually based on one-off activities and was not part of a long-term strategy. Enterprises supported one-time actions or organizations reacting to the crisis. In the long run, something other than this approach will have to be proposed. The energy sector is on the verge of an energy transformation. Leaving the problem of energy poverty as a challenge to be solved only by public administration will not solve it. Moreover, the situation may deteriorate in the coming years, when the energy sectors will enter the subsequent phases of transformation. Hence, the need for integrated and well thought-out activities that go beyond philanthropy.

Businesses play a pivotal role in collaborating with public bodies to address the pressing issue of energy poverty. Firstly, through innovative partnerships and initiatives, businesses can contribute technical expertise, financial resources, and operational efficiency to design and implement energy-efficient solutions. Collaborative efforts between private companies and public entities can lead to the development of affordable and sustainable energy options, such as retrofitting buildings with energy-efficient technologies, distributing energy-efficient appliances, and creating localized renewable energy systems [109].

Through funding and supporting research projects, companies can enable the development of cutting-edge technologies, innovative financing models, and policy frameworks aimed at reducing energy consumption and enhancing energy affordability. By investing in research, businesses can identify new methods for improving energy efficiency, expanding access to clean energy sources, and promoting behavioral changes contributing to energy conservation. These advancements can then be shared with public bodies to inform policy decisions and foster sustainable energy practices at a systemic level.

The synergy between businesses and public bodies can contribute to mitigate energy poverty. Through partnerships, research support, and community engagement, businesses can lend their resources, expertise, and innovation to collectively develop and implement effective strategies that alleviate energy poverty’s socio-economic impact. As both sectors collaborate to ensure access to affordable and sustainable energy, the potential for transformative change in the lives of vulnerable populations becomes ever more achievable.

Businesses can directly engage with communities impacted by energy poverty through educational initiatives and outreach programs. By raising awareness about energy-saving practices, promoting financial literacy related to energy consumption, and offering training on the use of energy-efficient technologies, businesses can empower individuals and households to make informed decisions that lead to reduced energy costs. Moreover, companies can support public bodies in designing and implementing targeted assistance programs, such as subsidized energy-efficient upgrades for low-income households or flexible payment plans to ease the financial strain of energy bills. These collaborative efforts not only enhance the overall quality of life for marginalized communities, but also contribute to a more sustainable and equitable energy landscape.

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