



**THE LOW-CARBON ECONOMY:  
A STUDY OF DISTRIBUTIVE, PROCEDURAL  
AND CORRECTIVE JUSTICE**

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**Abstract:** Rapid economic development has significantly impacted the environment, particularly through carbon emissions, threatening human survival. Indonesia, a major global emitter, aims to achieve net-zero carbon emissions by 2060 through a low-carbon economy plan. Justice, a key Islamic principle, is essential in this transition to ensure both worldly and spiritual welfare. This study analyzes the integration of distributive, procedural, and corrective justice in Indonesia's low-carbon economy policies. Using a qualitative critical approach and literature review of policy documents, academic studies, and government reports, the study identifies the role of justice in low-carbon development. Findings reveal that distributive justice demands equitable access to renewable energy resources and subsidies for low-income households. Procedural justice underscores the need for transparency and public participation, as seen in the inclusive formulation of Indonesia's Enhanced Nationally Determined Contributions (ENDC). Corrective justice involves compensatory measures, including job retraining for coal industry workers and ecosystem restoration in deforested areas. The study concludes that achieving justice in a low-carbon economy requires equitable benefit distribution and the prevention of marginalization. Transparent, participatory policies are crucial to address socio-economic impacts while promoting sustainable development. This approach aligns with

Islamic values, advocating for balance between individual and societal welfare in transitioning to a low-carbon economy.

**Keywords:** Moderation, Islamic economics, low-carbon economy

## INTRODUCTION

Economic development has significantly advanced globally, but this progress often negatively impacts the environment when not accompanied by a commitment to sustainability and natural resource conservation (AMP, 2022). According to the International Energy Agency (IEA), China was the world's largest emitter of carbon dioxide in 2021, producing 11.94 gigatons of CO<sub>2</sub>. The United States followed with 4.64 gigatons, the European Union with 2.71 gigatons, and India with 2.54 gigatons. Other countries collectively emitted 14.4 gigatons of CO<sub>2</sub>. Global carbon emissions reached 36.3 gigatons in 2021, the highest level recorded in history (Databooks, 2021). Indonesia ranked among the top five contributors to global carbon emissions, primarily driven by coal and natural gas burning as well as deforestation for agriculture and fuel production (Databooks, 2022).

In response, nations worldwide, including Indonesia, are committed to reducing carbon emissions. Through the Ministry of Environment and Forestry as the National Focal Point, Indonesia has adopted ambitious targets under the Enhanced Nationally Determined Contribution (ENDC) document, published on September 23, 2022. This document aligns with the United Nations Framework Convention on Climate Change (UNFCCC) Decision 1/CMA.3 in Glasgow, particularly Paragraph 29, which calls for preventing global temperature increases beyond 1.5 degrees Celsius. Indonesia aims to

achieve net-zero emissions by 2060 or earlier, supported by the Long-term Strategy for Low Carbon and Climate Resilience (LTS-LCCR 2050). The country's greenhouse gas emission reduction targets are outlined in its Nationally Determined Contributions (NDC), which aim to reduce emissions by 29% domestically and 41% with international support by 2030 (Republic of Indonesia, 2022).

The implementation of a green economy or low-carbon economy in Indonesia is detailed in the NDC. It includes strategic initiatives such as reducing greenhouse gas emissions by 27.3% by 2024 as part of the 6th National Priority (PN-6), which focuses on environmental improvement, disaster resilience, and climate change mitigation (Finance, 2021). Low Carbon Development (PRK/LCD) is a central platform in Indonesia's strategy, emphasizing economic growth while reducing greenhouse gas emission intensity and minimizing natural resource depletion. PRK/LCD aligns environmental sustainability with economic and social growth, making it a cornerstone of Indonesia's low-carbon economy (Lewis, 2014; Santosa & Lawalata, 2019), and the implementation of low-carbon development carried out in various regions and countries (Adi, 2013; Emodi et al., 2017; Nurfatriani, 2016). These studies have resulted in various obstacles and challenges in realizing low-emission development. This approach to discussing the upheaval of thinking about the low-carbon economy complements the existing study.

The Sustainable Development Goals revolve around the welfare of people and society. This is in line with the spirit and philosophy of Islam (Al Fatlawi et al., 2022). The role of Islamic economics can be explained in several things, such as the empowerment of financial

institutions for financing businesses that support renewable energy, the empowerment of renewable energy through the development of the halal industry, renewable energy financing can be done with the concept of Ta'āwun and Jāriyah alms through *crowdfunding* and waqf (Iskandar et al., 2021). Based on the research, the discussion of the low-carbon economy has been discussed by several scholars. So, in the discussion in this article, we try to complete the data on the implementation of low-carbon development in Indonesia and its relationship with the principle of justice from various perspectives.

Islamic jurisprudence teaches about the principle of justice. (Abdelkader, 2000). Justice is intended to achieve the welfare of society by distributing resources appropriately and proportionately. (Randeree, 2015). Distributive, procedural, and corrective approaches can measure justice. Each approach has a different object of discussion. Distributive justice emphasizes the division and distribution of natural resources to all elements of society so that everyone receives the benefits (Cohen, 1987). Procedural justice emphasizes that the decided policies can provide justice for all groups of society. (Konovsky, 2000). Corrective justice is carried out to recover from the impact caused by policies or activities that cause damage or imbalances that can affect human survival (Coleman, 1995). Suppose it is associated with carbon emissions that cause many negative impacts. In that case, the government and the parties involved must implement the three-justice approaches to restore conditions that can ensure the survival of the Together, as explained in the Qur'an and Hadith.

This study employs a critical qualitative approach, incorporating literature studies and document analysis, to examine the integration of justice principles in Indonesia's low-carbon development policies. By focusing on the interrelation between justice and sustainability, this research aims to provide a holistic perspective on how Indonesia's low-carbon strategy aligns with the broader goals of justice and prosperity, by Islamic economics.

## **METHODS**

This study uses a critical qualitative approach that focuses on a literature review to understand the application of justice in the context of a low-carbon economy in Indonesia. (Creswell, 1998). The critical qualitative method was chosen because it provides the flexibility to explore the concept of justice from the perspective of benefit distribution, procedures, and impact correction, which can be comprehensively applied in a low-carbon economy. The data collected included secondary literature from policy reports, academic articles, and official documents relevant to implementing a low-carbon economy in Indonesia.

Data collection was carried out through document analysis, including public policies related to carbon emission reduction, government annual reports, and previous research that explored the impact of low-carbon economies on resource distribution. This article draws on literature from various academic and government sources to identify policies, practices, and challenges in implementing distributive, procedural, and corrective justice. This approach ensures the connection between the concept of justice in Islamic teachings and

the application of justice in the context of a low-carbon economy. As an explanation of each problem formulation, it can be understood by the following table:

Table 1. Research Data Collection Techniques

No.	Problem Formulation	Data Collection Techniques
1	How is distributive justice applied in a low-carbon economy in Indonesia?	Literature study, document analysis
2	What is the fair decision-making procedure in low-carbon economy policy?	Literature studies, expert interviews
3	How can corrective justice be applied to mitigate the impact of low-carbon economic policies?	Literature studies, case studies
4	What are the challenges in implementing the principle of justice in low-carbon economic policies in Indonesia?	Policy analysis, literature study
5	How can the principles of Islamic justice be integrated into low-carbon economic policies?	Literature studies, expert interviews

Data analysis was done using a thematic approach, which mapped the data into three main categories: distributive, procedural, and corrective justice. Each theme is outlined based on its relevance to the concept of a low-carbon economy. It is then interpreted through a critical approach to evaluate how implementing low-carbon economic policies in Indonesia has accommodated these principles of justice.

## RESULT AND DISCUSSION

## **Conceptual Studies on Justice**

The concept of justice has long been taught in the Qur'an and Hadith, even before the emergence of the concept of justice in modern life. Justice means paying attention to individual rights and ensuring they are granted to their owners. Justice can be defined as placing something in its place, which means granting rights that are appropriate to the position and needs of the individual. (Rangkuti, 2017). Justice, in the true sense, is giving rights to all entitled to receive them, whether individual or group rights, and there is no discrimination based on any value or type. Islam already taught the principles of justice long before this concept became popular in modern economics. Islam has a solid legal basis in upholding justice and balance between rights and obligations, individuals and society, spiritual and physical aspects, and life in this world and the hereafter. (Rahmiyanti, 2018).

Justice has been discussed long before the concept of a green economy. Islam places the principle of justice at the core of all laws that govern economic activities. Several Qur'anic verses reveal the principles of justice, such as QS 4:135, which reads, "O you who believe, be a true upholder of justice, be a witness for Allah even if it is against yourself or your parents and relatives. If he is rich or poor, then Allah knows better his benefits...", and QS 2:188 which reads "And do not eat the wealth of the other part of you in a wicked way, and do not bring it to the judge, so that you may eat a part of the property of the other person by sin, even though you know." (Shadr, 2008).

There is a discussion of justice with environmental sustainability in economic activities, namely distributive justice, which explains that natural resources and the environment must be distributed

fairly among all communities, including future generations. Distributive justice in the context of environmental economics involves the equitable distribution of natural resources and the environment so that everyone can enjoy the benefits of these resources without any group feeling disadvantaged. Procedural justice emphasizes the importance of fair and transparent procedures in decision-making regarding the environment and natural resources. In environmental economics, procedural justice theory ensures that the environment-related decision-making process involves public participation and accommodates all parties' interests. Corrective justice emphasizes the importance of corrective actions and restitution to correct injustices that occur to the environment and natural resources. In environmental economics, corrective justice theory focuses on recovering environmental damage and restitution to affected parties (Rawls, 2020).

### **Low Carbon Economy Policies and Practices**

A low-carbon economy is an economic system that uses few energy resources that produce carbon dioxide emissions so that it does not significantly impact greenhouse gas emissions into the environment. In a different context, a low-carbon economy can be interpreted as a green economy. To achieve these goals, the Indonesian government has adopted a sustainable and low-carbon development strategy as a critical strategy to achieve the vision of an advanced Indonesia by 2045 and to achieve zero emissions by 2060. The management of the low-carbon economy in Indonesia is regulated in the National Medium-Term Development Plan (RPJMN) for 2020-2024. Indonesia's national priority agenda has several agendas,



including the priority one agenda, which strengthens economic resilience for quality and equitable growth, and the priority six agenda, which focuses on building the environment, improving disaster resilience, and reducing the impact of climate change. One of the efforts to achieve a *Green Economy* is through low-carbon development (PRK), which includes five priority sectors. Three sectors are related to circular economy principles: waste management, sustainable energy development, and green industry development. Implementing the circular economy in these sectors can reduce waste, promote the use of renewable energy, and improve the efficiency of using natural resources, products, and industrial processes to support a greener environment (*Badan Perencanaan Dan Pembangunan Daerah Kota Bogor - Indikator Kesejahteraan Umum*, n.d.).

Low-carbon development is essential in accelerating the transition to a green and sustainable economy. It is also crucial to achieving the vision of an advanced Indonesia in 2045 and the goal of zero emissions by 2060. Transforming Indonesia's economy into a green economy is a strategic step to prevent being trapped in the "middle-income trap." The green economy and low-carbon development can help improve economic growth and people's well-being while maintaining good environmental quality (Coordinating Ministry for Economic Affairs of the Republic of Indonesia, 2022).

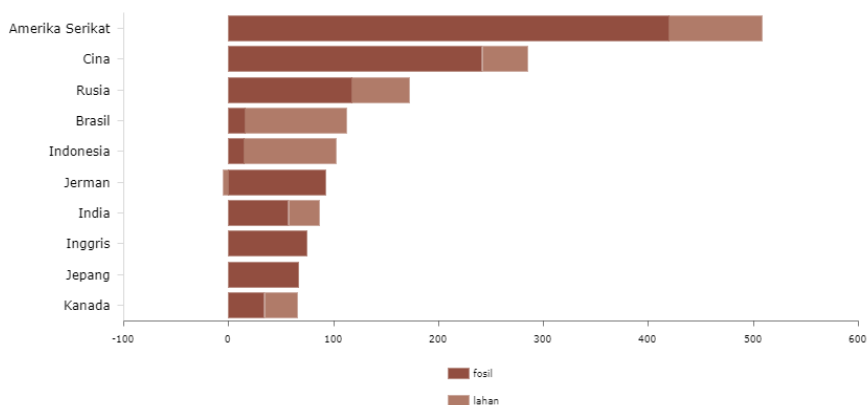
Low Carbon Development is based on the 13th Sustainable Development Goals (SDGs), which aim to reduce the impact of climate change. It includes several activities, including 1) strengthening resilience and adaptation to climate-related disasters around the world, 2) integrating climate change prevention measures in national policies

and planning, 3) increasing education and human awareness of climate change mitigation and adaptation, 4) fulfilling developed countries' commitments to provide US\$100 billion annually to assist developing countries in addressing the impacts of climate change, and 5) increase the capacity of climate change-related planning and management in least developed countries and small islands, and pay attention to vulnerable groups such as women, youth, and local communities (Ministry of National Development Planning, n.d.).

Report *Low-Carbon Development Indonesia* stated that the implementation of low-carbon development is carried out through several activities, such as the use of biogas for household energy, upstream watershed rehabilitation with community participation, conservation of Nipah ecosystems and buffer forests in the eastern part of the Lamandau river wildlife sanctuary, increasing food and economic security for vulnerable communities through agriculture, as well as climate projections and adaptation strategies for rice planting with the *System of Rice Intensification* (SRI). In addition, there is also an agricultural reform program to increase the productivity of forest resources, the use of former mining land as a mangrove tourism park, and so on (Santosa & Lawalata, 2019).

Indonesia has committed to reducing carbon emissions in Law Number 71 of 2021 and Presidential Regulation Number 98 of 2021, with a target of reducing greenhouse gas emissions by 29 percent with its efforts and 41 percent with international support by 2030. ENDC Documents (*Enhanced Nationally Determined Contributions*) include increasing NDC targets, national policies related to climate change, adaptation policies, and transparency frameworks. Indonesia's

greenhouse gas emission reduction target in UNDC increased from 29% to 31.89% in the ENDC, and the target with international support increased from 41% to 43.20%. The increase in the target is based on the latest national policies, such as the FOLU Net-sink 2030 policy, the acceleration of the use of electric vehicles, the B40 policy, increased actions in the waste sector such as the use of WWTP sludge, as well as an increase in targets in the agricultural and industrial sectors (Limanseto, 2022).



**Figure 1.** Countries with the Largest Cumulative Carbon Emissions 2021 (Source: Carbon Brief)

Several other government efforts have been implemented as follows: *First*, Renewable Energy Programs - The government has encouraged the use of renewable energy through programs such as *Feed-in Tariffs* (FiT) and *Renewable Energy Certificates* (REC), which provide incentives to renewable energy producers to supply electricity to the primary grid (EBTKE, 2023). *Second*, Tax incentives - The government provides tax incentives to companies that install renewable energy systems and energy-efficient technologies (Ministry of Finance of the Republic of Indonesia, 2019). *Third*, Urban spatial planning -

The government designs sustainable urban spatial planning, develops environmentally friendly cities, and promotes sustainable transportation such as bicycles, trains, and electric cars (Public, 2021; Center for Public Communication, 2009). *Fourth*, Emission reduction programs - The government has adopted emission reduction programs that aim to reduce carbon emissions from the energy, industry, and transportation sectors (LIPI Public Relations, 2023). *Fifth*, Energy saving policies - The government encourages energy conservation through energy labeling programs for household and corporate devices and energy awareness campaigns (Republik Indonesia, 2007). *Sixth*, Sustainable infrastructure development - The government designs and builds environmentally friendly infrastructure, such as green buildings and environmentally friendly highways (KBPU, 2020).

## **A Study of the Principle of Justice and Its Implications in a Low-Carbon Economy**

### **A. A Study of Distributive Justice and Its Implications in a Low-Carbon Economy**

As discussed earlier, distributive justice refers to the equitable distribution of resources and benefits in society (Rawls, 1968). Procedural justice is related to a fair and participatory decision-making process. Meanwhile, corrective justice refers to the steps taken to correct injustice that has already occurred.

The main principle in Islamic economics is distributive justice. The Islamic economic system emphasizes the importance of distribution based on freedom and justice. The freedom in question is by the values of monotheism and justice, not the view of capitalists

who consider it the freedom to act without interference from any party. In the Islamic economic system, freedom must be balanced with the material and spiritual elements of the individual and the balance between the individual and society and between one society and another. Meanwhile, justice in distribution is reflected in the prohibition in the Qur'an (QS. Al-Hasyr [59]: 7), which advocated that wealth should not only circulate among the wealthy but should contribute to the welfare of society as a whole. Therefore, the Islamic economic system encourages the accumulation of wealth by a group of people to be avoided, and the flow of wealth is automatically diverted to weaker societies (Rahmawaty, 2013).

Distributive justice can be measured by the principle of justice in distribution, which states that the distribution of resources and benefits must be carried out fairly and evenly based on the needs and contributions of each individual in society. Therefore, distributive justice can be measured by looking at the extent to which resources and benefits are distributed evenly and by needs and contributions. The principle of community welfare measures distributive justice by looking at the extent to which the distribution of resources and benefits can improve the welfare of society as a whole (Rawls, 1968). In this case, distributive justice can be measured by examining how the distribution of resources and benefits can improve people's living standards and welfare. The principle of equality measures distributive justice by looking at the extent to which all individuals in society have equal access to resources and benefits. In this case, distributive justice can be measured by looking at the extent to which equal access to resources and benefits can be achieved, and the principle of retributive

justice measures distributive justice by looking at the extent to which the distribution of resources and benefits can be attributed to individual achievements or contributions in society. In this case, distributive justice can be measured by looking at the extent to which the distribution of resources and benefits can be based on individual achievements and contributions (Tarigan, 2018).

The study of distributive justice in a low-carbon economy focuses on how the distribution of the results of economic transformation towards lower carbon emission reductions can be arranged to be fair to all parties involved (Government of the Republic of Indonesia, 2021). This involves considering how the changes may affect different social groups, including the poor, vulnerable groups, and communities that depend on the economic sectors associated with fossil fuel use (Limanseto, 2022).

Some considerations that need to be observed in the study of distributive justice in a low-carbon economy are as follows:

*First*, accessibility and fairness of access. Economic transformations that focus on reducing carbon emissions must consider accessibility and equitable access for all groups of society, including the financially disadvantaged. For example, whether the changes allow access to cleaner and more affordable transportation or whether they may affect excessive energy prices for underprivileged groups.

*Second*, education and training. Community groups related to economic sectors related to the use of fossil fuels need to be considered in economic transformation plans that focus on reducing carbon emissions. This can include providing education and training to these

groups of people to adapt to the changes and have the skills needed in new sectors of the economy.

*Third*, the distribution of benefits and losses. Economic transformations focused on reducing carbon emissions must consider how the benefits and disadvantages are distributed among different groups of society. For example, can poorer and more vulnerable society groups benefit from the change, or will they suffer losses due to the transformation?

*Fourth*, participation and involvement. Economic transformations focused on reducing carbon emissions must actively engage community groups and give them a voice in decision-making. This is important to ensure that the resulting policies and plans can meet the needs and interests of various community groups.

To achieve distributive justice in a low-carbon economy, it is necessary to conduct a comprehensive and integrated analysis to ensure that all groups of society can benefit from economic transformation focused on reducing carbon emissions. This can include policies and programs that can help the financially disadvantaged groups and the education and training needed for the group.

The implication of distributive justice in a low-carbon economy is that changes towards reducing carbon emissions must consider their impact on different society groups and find equitable solutions for all parties involved (LIPI Public Relations, 2023). Some implications of distributive justice in a low-carbon economy are:

*First*, Improving accessibility. Economic transformations focused on reducing carbon emissions must pay attention to accessibility for financially disadvantaged groups, including access to

clean and affordable transportation and affordable energy. This can help reduce social and economic disparities between community groups.

*Second*, Increase equality. Economic transformation focusing on reducing carbon emissions can help reduce social and economic disparities between community groups. This can be achieved by providing education and training for community groups related to economic sectors related to the use of fossil fuels so that they can adapt to these changes and have the skills needed in new economic sectors.

*Third*, fair distribution of benefits and losses. Economic transformations focused on reducing carbon emissions must consider sharing benefits and losses among different society groups. This can be done by ensuring the resulting policies and plans meet various community groups' needs and interests.

*Fourth*, Greater participation and involvement. Economic transformations focused on reducing carbon emissions must actively engage community groups and give them a voice in decision-making. This can help ensure that the resulting policies and plans meet various community groups' needs and interests.

Cooperation and collaboration from various parties involved, including the government, the private sector, and civil society, are needed to achieve distributive justice in a low-carbon economy. This can help ensure that changes towards reducing carbon emissions can run smoothly and provide equitable benefits for all parties involved.

In Islamic distributive justice's perspective, justice is related to the fair distribution of resources and benefits to society. In the context of a low-carbon economy, Islamic distributive justice emphasizes the



importance of paying attention to the needs and rights of current and future generations in policy-making and implementing environmentally sound economic practices. (Foltz, 2003).

In practice, distributive justice in a low-carbon economy can be realized in several ways, such as developing renewable energy development programs to reduce carbon emissions and benefit all communities, including people in remote areas or poor communities. In addition, the concept of distributive justice also requires policymakers and economic actors to pay attention to the rights of future generations by maintaining the balance of the ecosystem and avoiding economic practices that damage the environment. In the Islamic view, natural resources are considered a gift of Allah SWT that must be managed wisely and fairly to benefit all humanity and other living things. Therefore, the concept of distributive justice in a low-carbon economy can be realized by respecting and paying attention to the rights of nature and all living things related to using natural resources for economic development and community welfare (Nayeen & Islam, 2020).

### **B. A Study of Procedural Justice and Its Implications in a Low-Carbon Economy**

Procedural justice is a view of fairness towards the procedures applied in decision-making so that everyone in the organization feels pretty involved. The principle of procedural fairness relates to the process or method used in distributing a prize or award. (Budiarto & Wardani, 2005). This theory of justice emphasizes the importance of carrying out fair and equal procedures in decision-making and action. In social justice, procedural justice emphasizes ensuring that the

processes implemented in distributing resources and opportunities are fair, equitable, and transparent. It recognizes that the result of allocating resources and opportunities can vary. Still, ensuring that the procedures used to achieve those outcomes are fair and equitable for all parties involved is essential (Solum, 2004).

Procedural fairness in a low-carbon economy refers to a fair and transparent decision-making process where all parties involved have an equal opportunity to provide input and participate in decision-making related to the transition towards a low-carbon economy. Some things that need to be considered in the study of procedural justice in a low-carbon economy are as follows:

*First*, transparency and access to information. A transparent decision-making process and easy access to information for all parties involved are essential to ensure procedural fairness in a low-carbon economy. This can be done by ensuring that information about the transition towards a low-carbon economy is publicly available and easily accessible to all parties involved.

*Second*, community involvement. Community participation and involvement in decision-making are essential to ensure that all parties involved have an equal opportunity to provide input and participate in the transition towards a low-carbon economy. This can be done by ensuring an open forum for the public to provide input and that their input is recognized and considered in the decision-making process.

*Third*, legal certainty. Procedural justice in a low-carbon economy requires legal certainty for all parties involved. This can be done by ensuring that the resulting policies and plans meet applicable

legal and regulatory standards and that the decision-making process is carried out consistently and transparently.

*Fourth*, the role of the government. Governments play an essential role in ensuring procedural fairness in a low-carbon economy. This can be done by ensuring that the government is open to input and criticism from the public and acts as a mediator between various community groups to reach a fair agreement and implement the policies that have been agreed upon.

To achieve procedural justice in a low-carbon economy, involving all parties involved in the decision-making process, including governments, the private sector, and civil society is necessary. This can help ensure that changes towards reducing carbon emissions can run smoothly and provide equitable benefits for all parties involved.

Procedural fairness in a low-carbon economy has several important implications that must be considered, including; *First*, increasing community participation. Procedural fairness ensures that the public can participate in the decision-making process. This will increase public confidence in the change towards a low-carbon economy and reduce distrust and resistance to policies taken.

*They were second*, improving the quality of policies. Procedural fairness ensures that all parties involved in decision-making have an equal opportunity to provide input and ensure that different perspectives are considered. This can improve the quality of the policies produced and ensure that the policies taken can produce the desired results.

*It was third*, maintaining social stability. Procedural justice can help maintain social stability by ensuring that changes to a low-carbon economy are carried out fairly and transparently. This can help reduce the social dissatisfaction and tension that may arise if changes are made unilaterally or without paying attention to the public's views.

*Fourth*. Encourage innovation and creativity. Procedural justice can encourage innovation and creativity by providing opportunities for all parties involved to provide input and new ideas in the decision-making process. This can help create better, more innovative solutions to address the change towards a low-carbon economy.

*Fifth*, Increase accountability and transparency. Procedural fairness ensures that the decision-making process is carried out transparently and accountable so that all parties can understand how decisions are made and the reasons behind the policies. This can help strengthen public trust and increase support for the transition towards a low-carbon economy.

To achieve procedural justice in a low-carbon economy, there needs to be cooperation and collaboration between various parties involved, including the government, the private sector, and civil society. This will help ensure that the transition towards reducing carbon emissions can run smoothly and provide equitable benefits to all parties involved.

From the procedural justice perspective, Islam is not far from what Rawls explained (Sirait, 2022); several essential principles must be met to achieve justice in a low-carbon economy. Some of these principles include: 1) Transparency: There is transparency in information and decision-making processes, so that all parties involved

can understand and know what is happening and can access information reasonably, 2) Accountability: There is accountability in decision-making and actions taken, so that each party involved is responsible for the actions and decisions taken, 3) Participation: There is community participation in decision-making and implementation of the low-carbon economy program, so that every party involved can provide input and benefit from the program reasonably, 4) Distributive justice: There is a principle of distributive justice in the distribution of benefits from the low-carbon economy program, so that the benefits are distributed fairly to all parties involved, 5) Fair access: There is a principle of equitable access to resources and opportunities to develop low-carbon economy programs, so that each party has the same opportunity to participate and benefit from the program.

### **C. A Study of Corrective Justice and Its Implications in a Low-Carbon Economy**

Corrective justice is a type of justice that is necessary to correct injustices or inequalities that have occurred. Corrective justice refers to corrective actions taken after an injustice, such as compensating the aggrieved party. This theory emphasizes that corrective justice is an integral part of the principles of justice that must be considered along with distributive and procedural justice (Rawls, 2020). Corrective justice is a type of justice that involves corrective action or redress for injustice that has occurred. This concept of corrective justice emphasizes the importance of restoring the condition of justice after injustice occurs. So, if there is a violation of rights or losses, corrective action is needed to restore the situation to achieve justice. Coleman

emphasized that the principle of corrective justice must apply to all people equally without discrimination (Coleman, 1995).

Corrective justice in a low-carbon economy addresses the injustices that occur due to the transition towards a low-carbon economy, especially related to the social and economic impacts on vulnerable or affected groups. Compensation for affected groups is one example of corrective justice in a low-carbon economy. Groups affected by the shift towards a low-carbon economy, such as fossil energy sector workers or communities living in coal-mining areas, should be compensated fairly. This can be done through training programs for new jobs or providing financial assistance to help them cope with the economic impact caused.

*Second*, Reducing social inequality. The shift towards a low-carbon economy must consider the social impacts that may arise, including social inequality. It is essential to ensure that these changes do not result in already vulnerable groups becoming more marginalized or further marginalized. Efforts must be made to improve employment opportunities and access to resources for marginalized groups.

*The third* is encouraging inclusive participation. Inclusive participation can help address social injustice and ensure that the voices of vulnerable groups are heard and considered. Inclusive participation can be done through public consultation or a participatory approach in the decision-making process.

*Fourth*, it relatively reduces carbon emissions. The transition to a low-carbon economy must be done fairly, and all parties must contribute. For groups with low carbon emissions, the shift towards a

low-carbon economy can be seen as an opportunity to participate in developing green technologies and create new jobs.

*Fifth*, take into account the global impact. The shift towards a low-carbon economy must consider its impact globally, including in developing countries. Rich countries must provide financial and technological assistance to developing countries to reduce carbon emissions and improve their welfare.

To achieve corrective justice in a low-carbon economy, involving all parties and considering various perspectives is essential. This will help ensure that changes towards reducing carbon emissions can be made relatively and provide equitable benefits to all parties involved.

Corrective justice in a low-carbon economy has significant implications for addressing social and economic injustices that may occur during the transition to a low-carbon economy. Here are some implications of corrective justice in a low-carbon economy:

*First*, acknowledge that shifting towards a low-carbon economy can have uneven social and economic impacts. The implication is that these changes must be made considering the interests of all parties involved, including vulnerable or affected groups. This can help reduce social injustice and ensure that the benefits of change can be felt relatively.

*Second*, Identify and address unintended impacts. Corrective justice implies that governments and decision-makers must consider the possible impact on vulnerable or affected groups during the transition to a low-carbon economy. This can help reduce the

unintended impact on the group and prevent the possibility of social injustice.

*Third*, provide fair compensation for affected groups. Corrective justice implies that governments and decision-makers must provide fair compensation to groups affected by the transition to a low-carbon economy. This compensation can be in the form of training programs for new jobs or providing financial assistance to help them cope with the economic impact caused.

*It was fourth*, taking into account the differences between different groups. Corrective justice implies that governments and decision-makers must consider the differences between different groups, such as low-income, women, and minority groups. This can help reduce social injustice and provide equitable benefits for all parties involved.

*Fifth*, Reducing social inequality. Corrective justice implies that governments and decision-makers must reduce social inequalities that may arise during the transition to a low-carbon economy. This can be done by increasing employment opportunities and access to resources for marginalized or vulnerable groups.

To achieve corrective justice in a low-carbon economy, involving all parties and considering various perspectives is essential. This will help ensure that changes towards reducing carbon emissions can be made relatively and provide equitable benefits to all parties involved.

From the perspective of Islamic corrective justice, the concept of corrective justice is related to the principle of improving or restoring conditions that have been disturbed or detrimental (Harahap et al.,



2022). In the context of a low-carbon economy, Islamic corrective justice emphasizes the importance of taking corrective action to correct injustices or losses due to unfriendly economic practices. In practice, the concept of corrective justice in a low-carbon economy can be realized in several ways, such as compensating people affected by policies or projects that are not environmentally friendly, developing stricter regulations to prevent economic practices that harm the environment, and repairing environmental damage that has occurred by implementing environmental restoration programs. In addition, the Islamic concept of corrective justice also demands shared responsibility to improve the environment and prevent environmental losses in the future. In this regard, stakeholders, including governments, companies, communities, and individuals, must work together to take corrective actions and prevent more significant environmental losses.

## **CONCLUSION**

A low-carbon economy is an economic system that uses few energy resources that produce carbon dioxide emissions so that it does not significantly impact greenhouse gas emissions into the environment. Low-carbon development is essential in accelerating the transition to a green and sustainable economy. It is also crucial to achieving the vision of an advanced Indonesia in 2045 and the goal of zero emissions by 2060. The impact of emissions caused by transportation, industry, and other economic and non-economic practices has various negative impacts that threaten the welfare of people on all fronts. This contradicts the concept of justice, which

emphasizes that every society has the right to a comfortable and safe life. Of course, the results of activities that produce emissions do not benefit some parties and harm others.

Islam places the principle of justice at the core of all laws governing economic activities, namely providing equal rights for everyone to achieve prosperity. Understanding justice can be approached with the principle of distributive justice related to how the benefits and burdens of carbon emission reduction are distributed fairly among all communities, socially and geographically. This involves sharing the resources, benefits, and burdens of the transition to a low-carbon economy fairly and equitably. From an Islamic perspective, distributive justice in a low-carbon economy must pay attention to Sharia principles that protect individual rights and the interests of society as a whole. Procedural fairness in a low-carbon economy relates to how policies and decision-making processes related to carbon emission reduction are transparent and participatory so that the whole community can be involved. This ensures that the policies taken are based on a democratic and transparent process and take into account the interests and views of all parties involved. Corrective justice in a low-carbon economy concerns correcting the injustices or inequalities in sharing benefits and burdens from reducing carbon emissions. This ensures corrective action is taken if any injustice occurs in transitioning to a low-carbon economy. From an Islamic perspective, corrective justice can be achieved by compensating communities suffering from the transition to a low-carbon economy and ensuring that policies consider all parties' interests.

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