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**Exploring the Possibility
of Energy Justice in Italy:
a Distributive and
Restorative Perspective**

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Sintesi

Lo scopo di questa ricerca è quello di esaminare le questioni di giustizia energetica in Italia e le principali sfide sorte in concomitanza con gli obiettivi della transizione energetica. Mentre la politica energetica italiana non è mai stata particolarmente costruttiva in termini di politiche a lungo termine, questo momento storico di ripresa potrà costituire un'opportunità per riscrivere i propri obiettivi e politiche pubbliche al fine di rendere la transizione energetica una Just Transition. Vengono individuate due sfide contemporanee per il contesto politico, economico e sociale dell'Italia, dal raggiungimento di un mercato a valle più inclusivo, dove misure per combattere la povertà energetica vengano implementate alla (ri)introduzione di strumenti di riparazione per i danni ambientali causati da chi inquina, come ad esempio la carbon tax. Il quadro della giustizia energetica viene, dunque, utilizzato come parametro di studio e di analisi della transizione italiana verso un'economia a basse emissioni di carbonio. La giustizia energetica potrà essere il motore di una transizione giusta sia per l'Italia che per tutta la società.

Abstract

The purpose of this research is to examine energy justice issues in Italy and the main challenges that have arisen in conjunction with energy transition objectives. While Italian energy policy has never been particularly constructive in terms of long-term policies, this historic moment of recovery may provide an opportunity to rewrite its objectives and public policies in order to make the energy transition a Just Transition. Two contemporary challenges are identified for Italy's political, economic and social context, from the achievement of a more inclusive downstream market, where measures to combat energy poverty are implemented to the (re)introduction of tools to repair environmental damage caused by polluters, such as the carbon tax. The energy justice framework is therefore used as a study and analysis parameter for Italy's transition to a low-carbon economy. Energy justice can be the engine of a just transition both in Italy and for society as a whole.

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Parole chiave

energy justice – Italy – energy poverty – carbon tax

1. Introduction.

In energy law studies researchers seldom ask themselves the basic question of what energy conceptually means for our society. Is it merely an essential resource for the economy, or does it have a deeper meaning? How do we conceptualize energy rather than physically describe it? In my opinion, energy is a combination of risk and responsibility. Risk because, like all human benefits we enjoy, it involves a risk that must be reasonably assessed. In the same way as we evaluate the lower risk method when traveling or receiving medical care, we must assess the lower risk method when approaching the energy activities. There is no such thing as progress without risk. Energy and its development have a number of unavoidable implications. Responsibility, on the other hand, enters into play when it comes to the extraction and utilization of natural resources, as well as their distribution and spreading in the global economy. Responsible actions into the energy industry are required to control and reduce the environmental impact and the effects on climate change. Energy justice serves exactly this purpose: to make the sector more sustainable, fair, and equitable so that the advantages accrued do not have an irreversible impact on the environment and climate and they are equally spread and distributed.

As a result, today's energy law scholars cannot avoid using this framework to examine individual aspects and elements of the energy world. This research wants to clarify that energy justice is not the outcome of the energy transition, but it is a methodology, a metric through which it is possible to frame the energy transition decisions. In fact, this study uses the energy justice framework as a tool to explore Italy's energy transition, as well as the obstacles it faces and the potential solutions. As a result, the principles aid not only in identifying and defining these problems, but also in finding just and fair solutions. The energy sector, like our society, requires more justice, not just in terms of human rights, but also of responsibility and solidarity. We must protect our planet, making it safe for present and future generations without halting technological growth and innovation. The concept of sustainable development, which arose in the aftermath of the Rio Declaration, may have found a successor capable of having a significant impact on society and the energy industry. Energy justice must remain a topic of discussion among academic forums because it is only in this way that the society can truly move towards a transition, a just transition.

As an evolution, or rather a specification of environmental and climate justice, energy justice comes with a slew of challenges¹. Although many of them are already defined in the Sustainable Development Goals by the United Nations², it is important to consider how each country intends to respond to the increasing claims for a transition to a low carbon economy and with which actions. Countries whose economies are based on fossil fuels will face different challenges than those that have already made transition strategies. As a matter of fact, this study intends to explore the energy justice initiatives in Italy as the only and unique way to better understand and fulfil the energy transition by identifying some of the potential political, economic, legal and social interventions that legislators and policymakers could support and implement.

After the explanation of the energy justice framework and principles, this study will move towards the Italian energy scenario, in which it is possible to identify injustices and inequalities. As a matter of fact, Italian policymakers are called for actions not broad and general, but rather specific and concrete. And these actions should not be, political in nature. The energy transition should be devoid of political overtones and should bring all factions together. Moreover, policymakers and legislators must ask for the support and contribution of all stakeholders in order to identify some of the most delicate samples on which we must have a decisive impact. Only with all market participants joining the decision-making process that the energy economy will be ready to migrate to a low-carbon model, leading society to a fairer and more equitable future. And Italy now has the opportunity to rewrite its goals in light of a more equitable energy transition. Today Italy must be the target of a set of new and visionary public reforms towards the energy transition. And the COVID-19 pandemic, among all the tragic consequences, may represent a unique opportunity to rewrite Italian energy policy and to invest all the Europeans recovery funds in the energy transition goal. First of all, it is compulsory to identify injustices among the energy market trying to propose solutions in order to make it more equitable. From the misrecognition of vulnerable classes and the unequal distribution of energy benefits among the population to the achievement of a more inclusive downstream energy market that is sensitive to the needs of the poorest social classes by making accessible to them the same benefits that are recognized to upper middle classes. These distributives and recognitive measures to fight energy poverty and to provide equal access to energy services, may be combined with another kind on initiatives such as the restorative ones. The paper assesses the opportunity to (re)introduce a restorative measure for the environmental impact, the carbon tax. Enacting this policy may attract more funds and finance to potentially direct in

¹ Kirsten JENKINS, *Setting energy justice apart from the crowd: Lessons from environmental and climate justice*, (2018) 39 in *Energy Research & Social Science*, Pages 117-121.

² United Nations. *The 17 goals*. Available online, <https://sdgs.un.org/goals> accessed on 18 September 2021.

implementing energy poverty measures and initiatives. Energy justice is therefore not only a theoretical and interpretative concept but also holds practical and applicative implications. Our society is full of injustices and inequalities, we just have to decide at which sector to look at and which instrument to use to identify and solve them. Energy justice now seems to have acquired such importance that it cannot be neglected by the public policies of any state that aims to combat climate change. As a matter of fact, the most important step in integrating energy justice with public policy was taken by the US in appointing Shalanda Baker, professor of public law, as deputy director for energy justice at the U.S. Department of Energy, by the new Biden administration³. This not only symbolises the full recognition of energy justice as a new public policy to be pursued by all states but is an unequivocal admission that the energy sector is rife with inequalities and injustices and that these must be eliminated as soon as possible. And the fact that a professor of public law has been chosen is no accident. Law punishes, sanctions, constrains but also regulates legal relations in a society and identifies the objectives necessary for its preservation.

In this worldwide scenario exploring energy justice in Italy is not a case. The recent health crisis caused by the COVID-19 virus has prompted European Institutions to provide large sums of money to Member States for economic recovery. Most of the new funds will be used to implement a green and sustainable economy. The establishment of a new Ministry for the Ecological Transition in Italy demonstrates the importance of this commitment and the growing need to follow the sustainable energy pathway. So, this study may also benefit lawmakers, helping them in the implementation of energy justice within the Italian framework.

2. The Energy Justice Framework.

2.1 General Background to Energy Justice.

In recent years, energy has once again become a central issue in the public and academic debate. The combination of a number of factors, such as climate change, the gradual depletion of fossil resources, and the increasing precariousness of energy supplies means that much of the global political agenda is focused on the transition to a low carbon economy⁴. European institutions as the real political and normative drivers of the Member States, are moving substantially on two levels: environment and security. The first involves reducing emissions by replacing fossil fuels with renewable ones, saving energy and increasing energy efficiency; the second involves

³ Department of Energy Announces New Senior Leaders (energy.gov 2021) <https://www.energy.gov/articles/department-energy-announces-new-senior-leaders> accessed 13 September 2021

⁴ R J HEFFRON, *Energy Law: An Introduction* (Springer 2015)

building new infrastructures to expand the number of supplier countries⁵. These twin goals embrace the need to ensure affordable and clean energy access for the world's population, as well as the need to address climate change by reducing the use of fossil fuels⁶. On the way to a transition to a low carbon economy, policy makers cannot overlook the injustices of the energy world if the aim is the consideration for social justice in terms of fairness in access in resource and in technology allocation⁷. These injustices affect not only the society and the weaker classes, but above all the environment and the ecosystem. So, a just society must be imagined not only as the result of the energy transition, but also as a metric to shape all the decisions. The energy justice framework helps, therefore, to identify the weaknesses of an energy system and to transform these weaknesses in challenges. Only when these various obstacles are overcome, and injustices are eliminated the transition to a low-carbon economy can be completed⁸.

Before moving forward, a review of the energy justice framework is due. The concept of energy justice has emerged in recent years in the social sciences as an analytical-interpretive, evaluative-normative tool applicable to socially relevant issues such as policies, the diffusion of technologies/production systems, consumption and access to the energy market, activism, and participation in energy decisions⁹. It has been proposed to consider energy decisions as ethical and justice issues, and to reconsider how the energy system's dangers and externalities, as well as its benefits and advantages, are distributed within society, and whether decision-making reflects criteria of equity, inclusion, and representativeness¹⁰. Whatever the scope and objective of an energy justice framework is, it provides a useful tool for the researcher to analyse (and reflect on) where do injustices occur, who is impacted or neglected, and what mechanisms are in place to address them so that they are brought to light and reduced. In fact, the energy justice principles have been theorized with this purpose, of identifying all the aspects of the society where energy injustices occur, and which actions must be taken. The concepts that underpin the energy justice system fix distributive, procedural, and recognition concerns for energy goods.

⁵ Xiangyu TENG, Liang Chun LU & Yung-Ho CHIU, *How the European Union reaches the target of CO2 emissions under the Paris Agreement*, (2020) 28 in *European Planning Studies*, 9, 1836-1857.

⁶ See also C. PETTERUTI, *Diritto dell'ambiente e dell'energia. Profili di comparazione*, Napoli 2020, G. DE MAIO (a cura di), *Introduzione alla studio del diritto dell'energia. Questioni e prospettive*, Napoli, 2019, 298, L. AMMANNATI, *La transizione energetica*, Torino, 2018, 224.

⁷ D. MCCAULEY, V. RAMASAR, R. HEFFRON, B. SOVACOO, D. MEBRATU, D., MUNDACA, Energy justice in the transition to low carbon energy systems: Exploring key themes in the social sciences (2018) in *Applied Energy*.

⁸ Darren MCCAULEY, Raphael HEFFRON, *Just transition: Integrating climate, energy and environmental justice*, (2018) 119 in *Energy Policy*, Pages 1-7

⁹ K. JENKINS, R.J. HEFFRON et al., *Energy justice: a conceptual review* (2016) 11 in *Energy Research & Social Science*, 174-182.

¹⁰ Benjamin K. SOVACOO, R.J. HEFFRON et al., *Energy decisions reframed as justice and ethical concerns*, (2016) 1 in *Nature Energy*, 5.

Furthermore, there are increasing questions about a restorative and cosmopolitan energy system in which the global influence of our behaviours and decisions is considered¹¹.

Distributive justice refers to how the costs and benefits of change are spread not only between individuals and social classes (between groups and communities), but also geographically (between territories) and temporally (e.g. intergenerational justice). Reflecting on the entire energy system necessitates and forces one to consider how the costs and benefits of change are distributed over the energy cycle.

In the other hand, procedural justice applies to the demand for equal proceedings that include all involved parties in a non-discriminatory manner. Availability of information, accountability, integrity, inclusiveness and representativeness of the various interests at stake are all aspects of procedural justice¹². This necessitates not only that all potentially affected people be allowed to participate in the consultation that precedes decision-making and that their voices be heard, but also that effective processes of participation, access to knowledge and impartiality, and information-sharing by industries and governments be in place¹³.

Recognition justice refers, instead, to the (non-)recognition or misrecognition of social groups and geographical areas, as "*the process of insult and degradation that devalues some people and some identities of place in comparison with others*"¹⁴. Non-recognition can take several forms, including ignoring certain decisions that impact social groups and sectors of society, or misrecognition of individuals and groups, in which distortions of their views and desires are linked to multiple forms of non-recognition and devaluation. Non-recognition can also influence the way in which procedures are followed (whether and how they are involved, treated and represented in decision-making) and how the impacts and costs of the energy system are distributed (how decisions reflect recognition of the concerns and opinions of different audiences by assessing and redistributing costs and benefits)¹⁵. Restorative justice is

¹¹ K. JENKINS, R.J. HEFFRON et al., *Energy justice: a conceptual review*, cited.

¹² Gordon WALKER, *Beyond distribution and proximity: Exploring the multiple spatialities of environmental justice*, (2009) 41 in *Antipode*, (4), pp. 614-636.

¹³ Procedural justice implementation is strictly connected with the judicial system of a country and how it operates. In the Italian legal framework, the jurisdiction is based on the distinction between subjective rights and legitimate interests. In fact, the Italian legal system, unlike other European countries, usually distinguishes legal positions into subjective rights and legitimate interests. The aforementioned legal positions are assigned to the jurisdiction of distinct judicial bodies: Article 103 of the Italian Constitution states that, in general, the administrative judge has jurisdiction over the legal position defined as "legitimate interest" while the ordinary judge rules over the subjective rights. The legal position known as subjective right assumes that only private interests are at stake; legitimate interests, instead, demand for a private position being diametrically opposed to a public one i.e., a public authority and the general interest they pursue. See S. Lucattini, *Modelli di giustizia per i mercati*, (Giappichelli) 2013, M. NIGRO, *È ancora attuale una giustizia amministrativa?*, (1983) V in *Foro Italiano*, p. 249-261, V. BACHELET, *La giustizia amministrativa nella Costituzione italiana*, (Giuffrè), 1969.

¹⁴ Darren A. MCCAULEY, et al., *Advancing energy justice: the triumvirate of tenets*, (2013) 32 in *International Energy Law Review*, 3.

¹⁵ R.J. HEFFRON, D. MCCAULEY, *Achieving sustainable supply chains through energy justice*. (2014) 123 in *Appl. Energy*, 435-437.

concerned about how it can be rectified if there is an injustice in the energy sector. This can be done in the form of the allocation of project revenues but also by returning the energy sites issues to their former use, especially in the extractive industries. Consequently, within the context of the project and the guidelines laid down in the law, the waste management and decommissioning strategy should be adequately finalized and cost-effective. In addition, restorative justice may aid in identifying where prevention needs to occur¹⁶.

Finally, the relation to cosmopolitan justice, based on the central belief that we are all people of the world. As the energy market evolves and energy demand rises, our decisions have a global impact that must be recognized and accounted for. Recognition of our decision's cosmopolitan influence is beginning to spread and take place all over the world. There have been a number of recent strong examples of rising interest in legal action with cosmopolitan impact as a result of cross-border or overseas repercussions. In a 2019 Australian ruling, a judge argued that a coal mine should not be allowed to open because of the carbon dioxide effects that would be caused elsewhere in the world¹⁷. This cosmopolitan approach to energy issues seems to be associated with the most recent theory of a cosmopolitan turn in public law systems and constitutional theory, which asserts that global issues and their consequences must be considered in legal practice and procedure in order to achieve a just society¹⁸.

3. The Italian Energy Policy.

Italy is both a sovereign nation and a member of the European Union. The country does not have a large energy industry tale, owing to a lack of natural and critical resources, as well as a high reliance on foreign suppliers. Environmental concerns have always consumed the energy ones, which had to take precedence over energy development, even if it meant a significant increase in costs and a significant reduction in energy security¹⁹. After the Second World War, Italy started the first nuclear program to provide electricity for a civil use. This project was visionary, and it managed to allocate in a short time period Italy as one of the leading countries in nuclear technology and electricity generation independence²⁰. But in the 1987, the

¹⁶ R.J. HEFFRON, *The role of justice in developing critical minerals* (2020) 7 in *The Extractive Industries and Society*, 855-863.

¹⁷ Ibid.

¹⁸ M. KUMM, *The Cosmopolitan Turn in Constitutionalism: On the Relationship Between Constitutionalism in and Beyond the State 2009* in Jeffrey L. DUNOFF & Joel P. TRACHTMAN eds., *In Ruling the World? Constitutionalism, International Law, and Global*, 69.

¹⁹ L.M. PEPE, *Reflections on comparative oil and gas law: new convergences of public and private rights* (2020) 4 in *Quaderni Amministrativi*, 51-66.

²⁰ L.M. PEPE, *The implementation of environmental and safety standards for the nuclear and mining waste management in Italy. Which role for public regulators?* (2020) in *Amministrazione e Contabilità degli Enti Pubblici* www.contabilita-pubblica.it accessed 6 September 2021. For further readings L. COLELLA, *Il diritto dell'energia*

referendum on nuclear power declared the irreversible Italian nuclear phase-out. Instead of focusing Italian energy policies on new sources or investing in new technologies, the result has been a steady increase in reliance on fossil fuels. In practice, the referendum merely replaced nuclear power plants with oil-fired thermal power plants, greatly increasing our dependency on crude oil imports and making the country extremely vulnerable to market fluctuations and the rise in the cost of crude oil²¹.

As already pointed out, Italy has always been strongly dependent on fossil fuels. The COVID 19 pandemic that hit the world in 2020 has shown how Italy managed to reduce the share of hydrocarbons in its energy mix (around 60%). The new sharp drop in 2020, which brings the share of fossil fuels to its lowest level since 1961, is mainly attributable primarily to the drop in oil in transport, a consequence of the collapse of mobility, as well as the reduction in production activities. But, on the other hand, the collapse in oil consumption in 2020 has strengthened the position of gas, which has now reached 37.4%, some seven percentage points more than the weight of oil. Gas has been widely recognized as the least harmful fossil fuels and also as the resource that could accompany the transition. Indeed, while a low carbon economy is a long-term goal that will require not only investment in new technologies but also the commitment of the most polluting countries, in the medium and short term, natural gas could accompany the transition and try to meet energy needs in the least harmful way possible. However, this is insufficient. Renewable energy sources should be at the forefront of Italy's energy mix. Despite the fact that solar, wind, and biomass account for more than 30% of the energy mix, this rate does not seem to be a positive trend.

In the latest 20 years, EU has increasingly required massive investments in the renewable sector and energy efficiency technology. Italy, like all Member States, has been called upon to commit to the programmatic objectives of the Paris Agreement and the 2050 Energy and Climate Strategy enshrined in the *Green New Deal*. Its commitment in terms of contribution at national level is defined in the National Energy and Climate Plan (PNIEC)²² to be updated every 10 years. Italy seeks to align itself with all multilevel goals in this national strategy, from keeping global average temperature rise far below 2 degrees Celsius to continuing efforts to restrict temperature rise to 1.5 degrees Celsius and reducing greenhouse gas emissions by at least 40% by 2030²³. In fact, the 2020 Budget Law²⁴ provides for the establishment of a Fund aimed

nucleare in Italia e in Francia. Profili comparati della governance dei rifiuti radioattivi tra ambiente, democrazia e partecipazione, Aracne, 2017, 420.

²¹ A. DI GREGORIO and others, *Produzione e valore del comparto oil & gas in Italia nel periodo 2020-2050*, (2019) 27 in *Esperienze d'impresa*, 1/2, 1-18.

²² Integrated National Energy and Climate Plan (Ministry for the Economic Development 2020) https://www.mise.gov.it/images/stories/documenti/it_final_necp_main_en.pdf accessed 11 September 2021.

²³ *Ibid.*

²⁴ Law 160/2019.

at relaunching investments by central government administrations and the development of the country, with a total endowment of approximately €20.8 billion for the years 2020 to 2034.

The resources are intended, in particular, for investments aimed at the circular economy, the decarbonisation of the economy, the reduction of emissions, energy saving, environmental sustainability, and, in general, investment programmes and innovative projects, including through contributions to businesses, that are highly sustainable and take into account social impacts. Italy and Europe seem to have accepted the challenge of climate change by setting themselves ambitious targets with a view to implementing the Paris Agreement. The challenge is not only to reduce the use and dependence on fossil fuels, but to change society and its evolution. All policy sectors must adopt market and investment policies that take into account the impact on the environment and climate. Strong social consensus and awareness of the emergency has put these objectives high on the political agenda and shaped many aspects of public policy.

And the recent health crisis has prompted European Institutions to provide additional large sums of funds to Member States for economic recovery. Most of these will be used to implement a green and sustainable economy. The establishment of a new Ministry for the Ecological Transition in Italy demonstrates the importance of this commitment and the growing need to follow the sustainable energy pathway. So, this study may also benefit policymakers and lawmakers, helping them in identifying energy injustices and challenges and try to use the recovery fund to invest in their reduction and elimination.

4. Energy Poverty and the Access to Energy Services: A Distributive Justice matter.

The United Nations has established the Seventh Sustainable Development Goal, which is the accessibility to reliable and sustainable electricity. The UN has set a target of ensuring universal access to energy resources by 2030, with an emphasis on delivering modern and sustainable energy to all developing and least developed countries²⁵. But Governments and politicians still continue to be concerned about energy poverty, and its abolition is seen as vital for social welfare²⁶. This because the access to energy services can have multiple faces and therefore, it is possible to produce effects even in developed countries²⁷. In recent years energy transition strategies adopted at the national and European level have not always taken distributive and recognition justice into account. Rather than being used to combat social inequality and make

²⁵ United Nations. The 17 goals Available online, <https://sdgs.un.org/goals>

²⁶ A.J. Bradbook, J.G. Gardam, Placing Access to Energy Services within a Human Rights Framework (2006) 28 in Human Rights Quarterly, 2, p. 389-415.

²⁷ A.C. SADATH, R.H. ACHARYA, *Assessing the extent and intensity of energy poverty using Multidimensional Energy Poverty Index: empirical evidence from households in India*, (2017) 102 In *Energy Policy* 540–550.

the change socially acceptable, they have effectively excluded significant segments of the vulnerable population and marginalized areas from economic and quality-of-life benefits²⁸. To date, policies have implicitly concluded that addressing the energy transition requires policies that ignore social and territorial disparities. They exacerbate and reproduce existing inequalities by penalizing marginalized areas and the most disadvantaged social groups²⁹. As a result, recognizing social justice and distributing all energy and market benefits equally is one of the most difficult challenges. Environmental, energy and social policies must be combined, starting with the most vulnerable people. Those people who find themselves in energy poverty³⁰.

Under the influence of the European Commission, Italy's energy transition policies are categorized as "*ecological modernisation*," which emphasizes technical innovation as a way out of the crisis and market as a tool to accelerate change³¹. The combination of technological innovation and market inclusiveness has resulted in policies that, for example, have encouraged the production of energy from renewable sources and the adoption of energy-efficient devices thanks to government incentives and tax credit. Citizens have had varying degrees of access to these policies as a result of how they were crafted. The decision was made to speed up the energy transition by stimulating the upper-middle class to opt for innovation: homeowners, households with stable incomes, savings and the spending power to make major investments, such as installing photovoltaic panels and structural energy-saving measures in their homes, buying a new car with ecological features, and buying homes in high energy classes³². For various reasons, these policies have been difficult for the lower and middle classes to access. Unemployed, precarious workers, families with low incomes and no savings: these are types of situations that for different reasons have problems accessing policies based on direct incentives or in the form of tax deductions³³. The energy transition policies must be anchored to improving the quality of life of people who do not currently benefit from ecological modernisation³⁴.

The Italian institutions have developed partial and insufficient responses, primarily based on three approaches: intervention in energy prices to reduce the cost of energy to the final

²⁸ C. LIDDEL, C. MORRIS, *Fuel poverty and human health: A review of recent evidence*, (2020) 38 in *Energy Policy*, 2987–2997.

²⁹ F. BIDDAU, *Questioni etiche e resistenze nella transizione energetica: quali sfide per le scienze sociali? In Territori e resistenze. Spazi in divenire, forme del conflitto e politiche del quotidiano* (Fabio Bertoni, Fulvio Biddau, Luca Sterchele ed.) (Manifestolibri 2019)

³⁰ OECD, *Green Growth Studies Energy*, (OECD 2011) <https://www.oecd.org/greengrowth/greening-energy/49157219.pdf> accessed 19 September 2021.

³¹ Amanda MACHIN (2019) *Changing the story? The discourse of ecological modernisation in the European Union*, (2019) 28 in *Environmental Politics*, 2, 208-227

³² G. E. HALKOS, E. C. GKAMPOURA, *Evaluating the effect of economic crisis on energy poverty in Europe* (2021) 144 in *Renewable and Sustainable Energy Reviews* 144.

³³ G. CARROSI, *Povert  energetica: le politiche ambientali alla prova della giustizia sociale* (2020) 2 in Working papers. Rivista online di Urban@it.

³⁴ S. SUPINO, B. VOLTAGGIO, *La povert  energetica. Strumenti per affrontare un problema sociale* 2020 (Il Mulino ed.).

consumer; activation of policies to ensure access to energy services for the most vulnerable sections of the population; and income support for the most vulnerable, through the introduction of energy bonuses³⁵. On the first front, competitive energy markets were established through liberalization, which should have resulted in lower average energy costs. However, many companies' entry into the free market has not resulted in lower energy prices, and vulnerable consumers are becoming more susceptible to switching operators. In Italy, the free market is still very limited. Major monopolistic companies continue to prevent competitors from entering the market, inhibiting the formation of a competitive game aimed at drastically lowering prices. On the second and third front, the Italian Energy Regulator (ARERA) has long tried to intervene with specific measures (payment instalments, maximum interest rates, prohibition of service suspension in cases of extreme hardship) to protect the most vulnerable consumers³⁶. The energy and gas incentive, for example, is designed to help customers who are struggling financially (as measured by a set of indicators) or affected by serious health conditions, or already have access to anti-poverty measures such as the citizenship income and the shopping card.

These different approaches represent thus a downstream response that increases household purchasing power, but it is incapable of influencing consumption quality, improving energy efficiency rate, or possibly impacting the capabilities of the weaker sections to improve the general adoption of sustainable energy³⁷. Moreover, according to studies by the Bank of Italy, only about one third of those eligible actually benefit from this aid³⁸. And in the report on the energy bonus made by the Energy Regulator to the Minister of Economic Development in 2019, it emerges that the number of households that have obtained the bonus at least once, from the start of the mechanism to 31 December 2018, is 2.9 million for electricity and about 1.8 million for gas³⁹. Despite the Energy Regulator's various initiatives to raise awareness of the tool among potential recipients, with information campaigns and projects aimed at involving other actors working with vulnerable citizens, the relationship between households that qualify for the electricity and gas bonus and those that actually receive the bonus has consistently been between 30% and 35%⁴⁰. These percentages vary at the territorial level: in the southern regions,

³⁵ M. JESSOULA, M. MANDELLI, *La povertà energetica in Italia: una sfida eco-sociale* (Il Mulino ed. 2019).

³⁶ ARERA, *Rafforzamento dei meccanismi di sostegno per i consumatori vulnerabili*, https://www.arera.it/quadrostrategico/1921_OS3.htm accessed 19 September 2021.

³⁷ M. JESSOULA, M. MANDELLI, *La povertà energetica in Italia: una sfida eco-sociale*, cited.

³⁸ I. FAIELLA, L. LAVECCHIA, M. BORGARELLO, *Questioni di Economia e Finanza. Una nuova misura della povertà energetica delle famiglie* (Banca D'Italia 2017) 404, https://www.bancaditalia.it/publicazioni/qef/2017-0404/QEF_404.pdf accessed 17 September 2021.

³⁹ Autorità di Regolazione Energia Reti Ambiente, *Il bonus sociale elettrico e gas: stato di attuazione nell'anno 2019 Relazione al Ministro dello Sviluppo Economico* (ARERA 2020) <https://www.arera.it/allegati/docs/20/305-20.pdf> accessed 17 September 2021

⁴⁰ Ibid.

the average number of beneficiaries using this tool drops to 21%, while in the northern regions it rises to 43%⁴¹. It is clear how the access to energy services and benefits involves issues not only of recognition justice but also of distributive justice within all the country.

4.1. Policy Recommendations.

The issue of energy poverty can be extended beyond social policies and into environmental policies: it must be at the centre of a new approach to developing policies for the energy transition. In addition to existing instruments, which must be improved in order to reach all those who are eligible, it is possible to intervene upstream of the problem, working to reduce energy demand while enacting policies for renewable investments (such as solar panels for households) or tax credits and support that can reach the lower classes rather than just those who have a certain turnover or income level. To accomplish this, must be created integrated policies addressing social issues (fighting energy poverty), environmental issues (reducing greenhouse gas emissions), energy issues (increasing energy efficiency), and economic issues (boosting the building renovation sector and creating new green jobs). Intervening with energy efficiency projects for buildings, for example, will not only alleviate the burden of energy bills on household budgets, but it will also reduce the burden of housing on emissions and create new jobs to address the construction sector's crisis⁴².

As already argued, the rising of electricity prices is also a significant contributor to energy poverty. But, as some studies have already suggested, increasing the percentage of renewable generation may lead to a reduction in energy poverty. If these studies are correct, an energy economy based solely on fossil fuels may promote energy poverty⁴³. This thesis may demonstrate why, despite its status as a developed country, Italy continues to struggle with energy poverty. Despite the rising renewables percentages in the electricity mix (around 35%), it is still heavily reliant on fossil fuels. As a result, this approach will demonstrate the impact of the energy transition on lowering electricity prices⁴⁴. To accomplish this, it is necessary to review the policy instruments that have been put in place so far in order for them to implement cognitive and distribution aspects from a better social stance to reaching all segments of the population that are currently excluded. This, however, is insufficient. Massive investments in renewable energy are required as part of the energy transition, which will be aided primarily by

⁴¹ Ibid.

⁴² J. MALINAUSKAITE, H. JOUHARA, L. AHMAD, M. MILANI, L. MONTORSI, M. VENTURELLI, *Energy efficiency in industry: EU and national policies in Italy and the UK*, (2019) 172, in *Energy*, Pages 255-269.

⁴³ J.I. PENA, R. RODRÍGUEZ, *Are EU's Climate and Energy Package 20-20-20 targets achievable and compatible? Evidence from the impact of renewables on electricity prices*. (2019) 183 in *Energy*, 477-86.

⁴⁴ L. HAAR, *Inequality and renewable electricity support in the European Union* (2020) in *Inequality and energy Academic Press*, p. 189-220.

subsidies and tax breaks. The environment will only be recognized as a determining factor in people's quality of life and well-being if social intervention and investment support are combined. A national plan focusing on both poverty alleviation and the transition to a low-carbon economy could be the answer. This could be expressed through the Italian versions of the Green New Deal and the Recovery Plan proposed to fight the recession caused by the COVID-19 pandemic.

5. The Carbon Tax and the Restorative Principle.

After having assessed the causes and the effects of energy poverty in Italy, the ambitious plans of the Italian energy policy may also be directed at the implementation of restorative measures to cover the damages and irreversible effects of the energy industry. It must not be overlooked that the energy system produces the major amount of carbon dioxide, and it constitutes the first driver of the global climate change. In combination with renewable investments, global policies must include sanctions for violations of the limits and obligations upon States in terms of environmental impact and climate change mitigation. In this scenario energy taxation can play a double role. On the one hand, an energy taxation system, such as a carbon tax, will levy on fossil fuel consumption in proportion to CO₂ emissions, following the polluter pays principle⁴⁵. Atmospheric emissions must be regulated⁴⁶ - and not only from a fiscal point of view - in accordance with parameters defined at European and international level. On the other, the carbon tax is not only a method of levying a tax on the most polluted companies, but it is also a proper restorative strategy against the environmental damages caused to the ecosystem and to society as a whole. The imposition of a carbon tax expresses the need for the implementation of restorative energy justice, in which the damages caused must be repaid to the society.

In the European scenario, the idea of a carbon tax has been mooted on several occasions. Initially in 2009, the EU Parliament pointed out that a European carbon tax based on the polluter-pays principle could have changed the behaviour of economic operators and their production structures in an environmentally friendly way, while at the same time guaranteeing significant revenues in the short term⁴⁷. These would have to decrease progressively in proportion to the shift of production patterns towards renewables. But many countries were hostile to this proposal: on the one hand the oil-producing countries, and on the other some of the Member States, who were convinced that such a form of taxation should be regulated at

⁴⁵ J. EDMONDS, J. REILLY, *Global Energy and CO₂ to the year 2050* (1983) 4 in *Energy Journal*, p. 21-47.

⁴⁶ D. W. PEARCE, *Blueprint 2: Greening the World Economy* (Earthscan 1991).

⁴⁷ European Parliament resolution of 8 March 2011 on innovative financing at global and European level (2010/2105(INI))

international level and not only at EU level⁴⁸. The troubled life of the European carbon tax has always been accompanied by a sense of discouragement, given that its application could probably have guaranteed high revenues and encouraged virtuous behaviour aimed at achieving energy efficiency⁴⁹. The increase in the price of polluting fuels would certainly have contributed to the use of more environmentally friendly alternative sources, as well as reducing taxation on income and labour⁵⁰. The failure to introduce a European carbon tax at EU level has prompted some Member States to regulate the tax freely in their individual systems. In the 1990s, several northern European countries adopted the tax in different ways and found a positive and lasting application. The carbon tax is applied in Finland, Sweden and Norway, bringing with it an environmental culture that was still unknown in the founding countries of the EU⁵¹.

5.1 A Carbon Tax for Italy?

Italy - following the signing of the Kyoto Protocol in 1997 - had provided for the establishment of the environmental tax by Article 8 of Law No 448/1998. The tax provided for a rate proportional to the polluting power of the fuel. The Italian carbon tax was configured as an ecological levy that would replace other forms of taxation, in particular on labour, in order to become an incentive for employment⁵². However, the Italian carbon tax has not been implemented despite its initial benefits. Due to the increase in the price of crude oil, it was repealed in 2005. Over the years, a significant reform of energy taxation was proposed at both national and EU level. This too was never implemented. The carbon tax, both at European and domestic level, has a clear capacity to reduce emissions that come to varying degrees from the combustion of various petroleum products. The carbon tax can act as a permanent incentive for the introduction of more innovative energy-saving technological processes: the collection of new revenues can be channelled into the research and development of more efficient production systems and innovative emission reduction techniques⁵³. At the same time, economic costs can be reduced by allowing polluters to choose where to make pollution reductions.

⁴⁸ L.H. GOULDER, *Environmental taxation and the double dividend in A reader's guide: International Tax and public finance*, 1996, p.160.

⁴⁹ B. POZZO, *Le politiche comunitarie in campo energetico*, (2009) 6 in *Rivista giuridica dell'ambiente*, p.841. See also R. MICCÙ, *Lineamenti di diritto europeo dell'energia. Nuovi paradigmi di regolazione e governo multilivello*, Torino, 2019, 192.

⁵⁰ A. MAJOCCHI, *Green fiscal reform and employment: a survey*, "Environmental, and Resource Economics" (1996) in *Quaderni del Dipartimento di Economia Pubblica e territoriale Università di Pavia*.

⁵¹ M. RHODE ALAN, *Il buon proposito della carbon tax europea* (2010) 5 in *Fiscalità internazionale*, p.383.

⁵² F. CIABATTI, *Meno anidride carbonica e più lavoro con la carbon tax* (1999) in *Tributi* p. 26.

⁵³ R. ALFANO, *L'Emission Trading Scheme: applicazione del principio chi inquina paga, positività e negatività rispetto al prelievo ambientale* (2009) 5 in *Innovazione e diritto*.

However, it is possible to trace some weaknesses in this levy that need to be corrected so as not to generate negative effects at distribution level, with the risk of mainly affecting the less well-off sections of the population or achieving results that fall short of expectations. After the introduction of the tax in Italy, there has been a steady increase in the prices of petrol, methane and electricity: it was feared that there might be a possible inflationary effect that would reinforce distrust of the value of the carbon tax⁵⁴. Indeed, European energy and environmental policies can no longer disregard the implementation of environmental levies on CO₂ emissions if they are generated in compliance with the Union's fiscal principles and, in particular, taking into account the special rules on state aid, which are sensitive in the environmental field⁵⁵.

Energy tax policies can be a driving force for energy transition. As of today, in Europe and in Italy, the Directive 2003/96/EC establishes in Article 15 the possibility for Member States to apply, under fiscal control, total or partial exemptions or reductions in the level of taxation of certain energy products (mainly renewables) for specific purposes⁵⁶. The Italian transposition of the Directive - with Legislative Decree no. 26/2007 - led to a first radical revision of the European regulatory framework of taxation. To date the European legislator and the national one need to come up with a fiscal energy strategy where the tax reductions for the renewable energy investments are linked and combined with a carbon tax as in order to create fiscal drivers of the energy transition.

In addition, this measure of restorative justice could be useful in terms of enforcement of distributive and recognition justice. The fight against energy poverty with the free access to energy services and benefits may find its funding and resources within the carbon tax itself, as a measure to grant energy support and development to the most vulnerable classes.

6. Considerations.

The existence of climate change is a scientific certainty in contemporary society. It is affecting national economies, with high costs for people, communities and countries that will be even more significant tomorrow. Energy development as the main driver of emission release is undergoing an evolutionary phase in front of everyone's eyes. The concepts of energy transition are now firmly established and there is a conviction that a transition must take place. The objective of the stakeholders is to identify which national measures and aspects should be focused on to speed up the process and make it real and concrete. This study was mainly voted to identify the main challenges that Italy might face moving towards to a transition to a low

⁵⁴ Lucia ROTARIS, Romeo DANIELIS, *The willingness to pay for a carbon tax in Italy*, (2019) 67 in *Transportation Research Part D: Transport and Environment*, Pages 659-673

⁵⁵ Ibid.

⁵⁶ F. CINGANO, I. FAIELLA. *La Tassazione Verde in Italia: l'Analisi Di Una Carbon Tax Sui Trasporti*, (2016) 2 in *Economia Pubblica*, 45-90.

carbon economy. In order to make the transition a just transition, the energy sector must be read and analysed through the energy justice framework, which is not only a methodology but also a metric to shape lawmakers' decisions. All the energy justice principles carry elements and aspects on how the energy sector can be fair and equitable balancing all the several interests involved. As a result, the energy transition demands for the energy justice principles to guide and to be the drivers in order to make the transition a just transition.

By applying the energy justice framework in Italy, it has been possible to analyse different aspects and elements of the energy sector that must be reformed. For this reason, the results and the data collected may be seen as policy recommendation. A more inclusive and sensible downstream market, stems from the assumption that ecological modernisation and the relative benefits must be accessible to the most vulnerable classes and not only to the upper middle ones. Moreover, the fight against energy poverty cannot overlook the reduction of electricity prices by making the energy market more competitive and opened to renewables investments. The downstream market and the overall amount of stakeholders involved, may also benefit from the reintroduction of a carbon tax to balance the needs of taxation with the compensation for the environmental damage caused. The carbon tax can undoubtedly represent a way of financing initiatives against energy poverty and social inequalities. In Italy these several challenges call for political actions aimed at reducing injustices through the enforcement of distributive, recognition and restorative measures. It is only by implementing these initiatives that energy justice can bring the right for an energy transition, for a just transition for our present and future society.

In this increasingly evolving scenario, drawing conclusions may seem rash. However, there is a growing trend to recognise the energy justice framework as the only effective enforcement of the transition to a low carbon. It is only by following the guidelines of the energy justice principles that, besides making the energy world fairer, they could also one day increase solidarity among citizens, with a new energy ethic that is no longer superficial but more profound.