

# Energy Justice and Sustainable Development Goals: The Case of Common Gas Field Projects of Iran and Qatar

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## ABSTRACT

The world's largest gas field is located in the Persian Gulf on the common border of Iran and Qatar. This field is named South Pars in Iran and North Dome in Qatar. The issue of exploiting shared resources appears a major controversy i.e. each country tries to get more out of common field. In addition to increased exploitation, pollution from industrial facilities has caused extensive environmental degradation in the area in three dimensions of air, water and soil pollution. The continuation of this situation has also led to an outbreak of unknown and congenital diseases among infants and residents of the area. Energy justice, as a new concept, seeks to apply the principles of justice in the production and exploitation, distribution and use of energy. This study tries to assess the extent to which Iran-Qatar common field is being exploited within the framework of the three tenets of energy justice. This study intends to identify energy justice in terms of having sustainable development indicators in common gas field of Iran and Qatar. We use the concept of Sustainable Development Goals (SDGs), especially from Goals that are related to the concept of energy justice to assess the realization of energy justice. The assessment of the tenets of distributional, procedural and recognition justice shows that energy justice is not pursued in joint exploitation of Iran and Qatar.

## 1. Introduction

International Energy Agency (IEA) reported in 2014 states that energy demand will grow by about 37% by 2040. In the meantime, the share of natural gas and less polluting fuels will be higher. Global natural gas production will reach 5,400 billion cubic meters in 2040. The growth is obtainable from the perspective of gas supplies according to the report. One of the sources of this energy is in common field between two or more countries. The benefit from these fields depends on the social and political conditions of the countries. Countries whose energy fields are on their common borders and have sufficient independence in their relations, have put

solutions to competitive exploitation on their agenda and are trying to benefit from these fields.

The largest gas field in the Persian Gulf and the common border between Iran and Qatar is an example. This field is known South Pars field in Iran and to North Dome field in Qatar. The two countries provide a significant part of their energy demand through this common field. The issue of exploiting shared resources between two or more countries has always been a major controversy and each country try to get more out of these common fields. In addition to increased exploitation, pollution from industrial facilities has caused extensive environmental degradation in the area in three dimensions of air, water and soil pollution. The continuation of this situation has also led to an outbreak

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of unknown and congenital diseases among infants and residents of the area. It seems that the accelerated development of gas field, regardless of infrastructure and social issues, cause vulnerable areas.

Patterns of energy systems are frequently volatile and unsustainable. But who gets the energy? Who owns it? In what form? And at what costs? Not only are the physical infrastructures of energy supply beginning to change, but such questions are generating new awareness of the links between energy and social justice; it is in this context that the concept of energy justice has emerged, a concept that directly complements and makes tangible many sustainable development goals (Jenkins, 2016). Energy justice also seeks appropriate energy policies, energy security and climate change. This study seeks to assess energy justice in common gas field of Iran and Qatar within a framework of the three tenets of justice, namely, distributional, procedural and recognition justice. Energy Justice conjugates justice with energy. Justice is the first virtue of social institutions; energy is a fundamental need and the driving determinant of human progress. Energy justice seeks to apply basic principles of justice as fairness to the injustice evident among people devoid of life sustainable energy, hereinafter called the energy oppressed poor. Energy Justice is an integral and inseparable dimension of the universally accepted foundational principle, or *grundnorm*, of international law and policy: Sustainable Development. Sustainable development-an expression of distributive justice-is the foundational premise of international energy and environmental law (Guruswamy, 2010).

The present study is aimed at identifying energy justice in terms of having sustainable development indicators in common gas field of Iran and Qatar. We use the concept of Sustainable Development Goals (SDGs), especially from Goals that are related to the concept of energy justice to assess the realization of energy justice. In this study, we use Goals 3, 9, 10, 12 and 13 to better understand and evaluate energy justice among the 17 Goals.

In the second section, the literature of energy justice and sustainable development is reviewed. The third section, introduces the method of study. Section four evaluates the tenets of energy justice in the joint exploitation of Iran and Qatar. The final section concludes the study.

## 2. Energy Justice and Sustainable Development Goals

Justice has always been one of the most important concerns and of the highest human ideals, and it is also theoretically an important topic in the social and economic sciences. Justice is the creation of a special relationship between the highest humanitarian goals and the way people live, such as prosperity and the enjoyment of the benefits of society, such as wealth and dignity. Thinkers like Thomas Hobbes interpret justice as part of the natural law, and it interprets the field of action of individuals and the actions of society. In 1951, Hobbes attributed the third natural right to justice in *Leviathan's* discussion of natural law. John Rawls, in his famous book *A Theory of Justice*, which can be considered to be Kant's thoughts, addresses the issue of justice. In Rawls' view, humans find themselves in the right way by considering two conditions: first, enjoying freedom until they harm others' freedom; secondly, it accepts inequality to a degree that does not harm the low-income society. One critique of Rawls is the American philosopher Robert Nozick. He sees justice based on natural rights. Indeed, it produces the relation between justice and natural rights in the modern age after Hobbes. Amartya Sen in the book of *Development as Freedom* says, the freedom to engage in economic exchange is a fundamental part of social life. He allows for development and justice when there is freedom of political, social and economic participation for individuals.

Justice is the creation of a special relationship between the highest humanitarian goals and the way people live, such as prosperity and the enjoyment of the benefits of society, such as wealth and dignity. Justice in a collection of contemporary studies has continued with a study on environmental pollution, this type of justice is expressed by environmental justice (Schlosberg, 2013; Walker, 2012). The concept of environmental justice owes much of its current definition to community activists across the USA who have highlighted environmental degradation in their localities as a result of polluting industrial activities and have resisted the siting of potentially polluting facilities, including waste incinerators, in their neighborhoods since the 1970s (Davies, 2006:708). The idea of environmental justice has been a central concern for academics in a range of disciplines, and both the concept and its coverage have expanded substantially in the past two decades (Schlosberg, 2013). In contrast, energy justice (the focus throughout here) carries the same basic philosophy;



however, it aims to provide all individuals, across all areas, with safe, affordable and sustainable energy. The focus here is firmly on energy policy and the key theme of energy systems (McCauley et al, 2013:2).

Recently, the concept of energy justice has been introduced in the literature of environmental justice and climate justice. Notions of justice can emphasize how energy serves as a material prerequisite for many of the basic goods to which people are entitled, and also that the externalities associated with energy systems often interfere with the enjoyment of such fundamental goods as security and welfare. Energy justice, therefore, recognizes that energy needs to be included within the list of things we prize; how we distribute the benefits and burdens of energy systems is preeminently a concern for any society that aspires to be fair (Sovacool, 2014: 15). Energy justice questions are about how to distribute the benefits and costs of energy production and consumption, as well as attention to future generations and environmental pollution.

In this paper, we follow the three central issues or tenets of energy justice that are presented in the literature of justice for energy policy: distributed justice, procedural justice, and cognitive justice. Distributional understandings of justice in terms of the unequal distribution of impacts, the unequal distribution of responsibilities and the spatialities that are implicated within these. justice as recognition in terms of the processes of disrespect, insult and degradation that devalue some people and some place identities in comparison to others. Justice as participation and procedure in terms of how geography plays into the inclusions and exclusions of environmental decision-making (Walker, 2009: 615).

Distributional justice is the first tenet of energy justice. Distribution of environmental goods and bads, with equity and fairness as common concepts. Distributive justice breaks with the GDP model because it proposes that the unequal distribution of these goods remains a fundamental issue, and not just a regrettable necessity. Utilitarianism itself tends to erase inequalities from the calculation, by summing the total well-being of

society, which means that injustices, both social and environmental, are built into the system. This raises the question of how to alleviate these injustices by working within that system (Todd and Zografos, 2005: 485).

The concept of sustainable development has been well developed and accepted throughout the political system, appearing in European and national-level energy strategies, and wider afield. The European Commission’s “Energy 2020: A Strategy for Competitive, Sustainable and Secure Energy” places sustainability at its core, yet explicit references to the ideas of justice and equity are notably absent. But sustainable development is embedded in the notion of equity and justice, and the desire for a sustainable energy system necessitates policy developments that have these concepts at their core. In this regard the newly emerging energy justice agenda is both fundamental and timely (Jenkins, 2016).

The 17 Sustainable Development Goals and 169 targets which we are announcing today demonstrate the scale and ambition of this new universal agenda. They seek to build on the Millennium Development Goals and complete what they did not achieve. They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental. The Goals and targets will stimulate action over the next 15 years in areas of critical importance for humanity and the planet (UNDP, 2015). Energy access, renewable energy, energy efficiency and other energy-related issues are also contributing to the achievement of almost all SDGs. There are several SDGs, in which energy-related issues are mentioned explicitly in targets or indicators (energypedia.info).

### 3. Method

To assess and illustrate our arguments, we study energy policy and SDGs in common field of Iran and Qatar. Three tenets of justice show in table 1. We use SDGs to examine three tenets of energy justice.

**Table1.** The evaluative and normative contributions of energy justice.

Tenets	Evaluative	Normative
<b>Distributional</b>	Where are the injustices?	How should we solve them?
<b>Recognition</b>	Who is ignored?	How should we recognize?
<b>Procedural</b>	Is there fair process?	Which new processes?

Source: Jenkins et al., 2016

Distributional tenet of justice is expressed, where are the injustices? The expansion and exploitation of the common gas field has caused increased air, soil and water pollution. In addition to affecting the health of individuals in these areas, the health of pregnant women and children is compromised. Destruction of farming and

fishing, high migration and lack of infrastructure and suitable settlement, human capital loss, etc., all represent injustice in the region. To evaluate the first tenet, we use SDGs3 and 13. To evaluate the second (Recognition) and third (Procedural) tenets, we use SDGs 9, 10 and 12. Table 2 shows the tenets of energy justice and SDGs.

**Table2.** Tenets of energy justice and SDGs.

Tenets	Goals	Targets	Indicators
Distributional	Goal 3. Ensure healthy lives and promote well-being for all at all ages	3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births	3.1.1 Maternal deaths per 100,000 live births
		3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births	3.2.1 Under-5 mortality rate (deaths per 1,000 live births) 3.2.2 Neonatal mortality rate (deaths per 1,000 live births)
Recognition	Goal 13. Take urgent action to combat climate change and its impacts	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	3.9.1 Mortality rate attributed to household and ambient air pollution 3.9.2 Mortality rate attributed to hazardous chemicals, water and soil pollution and contamination
		13.2 Integrate climate change measures into national policies, strategies and planning	13.2.1 Number of countries that have formally communicated the establishment of integrated low-carbon, climate-resilient, disaster risk reduction development strategies (e.g. a national adaptation plan process, national policies and measures to promote the transition to environmentally friendly substances and technologies)
Recognition	Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	9.1.1 Share of the rural population who live within 2 km of an all-season road
		9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and	9.4.1 CO2 emission per unit of value added



Tenets	Goals	Targets	Indicators
		industrial processes, with all countries taking action in accordance with their respective capabilities	
Procedural	Goal 10. Reduce inequality within and among countries	10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective] of age, sex, disability, race, ethnicity , origin , religion or economic or other status	10.2.1 Proportion of people living below 50 per cent of median income, disaggregated by age group, sex and persons with disabilities
		10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard	10.3.1 Percentage of the population reporting having personally felt discriminated against or harassed within the last 12 months on the basis of a ground of discrimination prohibited under international human rights law
	Goal 12. Ensure sustainable consumption and production patterns	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	12.2.1 Material footprint and material footprint per capita

Source: UNDP (2016)

Using the indicators listed in Table 2 for the tenets of energy justice in next section, we will evaluate these tenets for common field of Iran and Qatar.

#### 4. Reviewing and Evaluating the Tenets of Energy Justice in the Joint Project of Iran and Qatar

To evaluate energy justice in the common area of Iran and Qatar, we use the concept outlined in Section 3 and in Tables 1 and 2.

Using the concept of distributional justice and the question of Table 1 and indicators 3.1.1, 3.2.1, 3.9.1, 3.9.2 and 13.2.1, the exploitation of the field takes place in a competitive and independent manner between Iran and Qatar. The independent withdrawal of each country with a view to producing more in a competitive and non-violent atmosphere has negative consequences for both countries. These consequences include greater utilization and lack of attention to sustainable development and resource conservation for the next generation, increasing environmental pollution in the region as it is known as one of the most polluted areas in the world. The pollution from industrial facilities has been exploited, in three

dimensions of pollution, air, water and soil have caused extensive degradation of the environment and vegetation and animal encroachment. The continuation of this condition has led to an outbreak of unknown and congenital diseases among infants and residents of the area. In addition, increasing the operation of gas fields causes a dramatic drop in reservoir pressure and a rapid drop in pressure down to the dew point. This results in the loss of valuable components in the gas, in the form of droplets that are scattered and unrecoverable, thus reducing the amount of condensate that can be recovered.

Regarding recognition justice and relating to the question of who is ignored? We use indicators 9.1.1, 9.c.1. Environmental destruction and air pollution due to not regarding distributional justice has led to ignoring fishermen, immigrants, settlers and farmers. Indicator 9.1.1 shows that due to increased demand for immigration to this region, and the lack of adequate infrastructure and housing, the quality of life immigrants is low. In addition to having no minimum welfare, they are affected by the condition of the region. The people who migrate to this region are most educated and human capital, which neglected the loss of labor force and

human capital. As well, the use of competitive and independent of the common area, in addition to causing great problems, led to high rates of abortion and cancer and had a significant impact on indigenous people, especially mothers and infants, and their impact on the individuals and staff of these fields, most of them elites and human capital.

The third and final tenets are procedural justice. SDGs 10 on reducing inequality and SDGs 12 on consumption and production patterns emphasize. It is possible to discuss the type of production and cooperation of the two countries in this regard. Using the commonly used strategies to exploit common areas in international treaties, such as prosperity, which has legal obligations in both countries, can be followed by a framework and behavior close to justice. Competitive exploitation has entered into two countries during the time of import, and the continuation of this process is not in the interest of any of the two countries. Why do both countries compete in exploiting the common field? Qatar for exportation and achieving its desired goals and Iran for responding its high domestic demand.

In its first six-year national development plan (2011-2016), Qatar predicted that it will complete the development of the common area by the end of 2015 and, through the achievement of the objectives of the program, will bring about a significant transformation in its economy. Iran's deep dependence on domestic consumption in industrial, domestic, agricultural, commercial and transportation sectors has made Iran a strategic value for this commodity. In a rational atmosphere, the two countries will, in terms of production standards, gain more benefits in the long term in terms of energy justice. The proper model framework

in decision making, provided that its conditions and assumptions are met, will have the proper atmosphere for the realization of energy justice.

Such a decision may be in the following circumstances:

- Decisions are made in full confidence.
- The decision maker not only has the information in its entirety, but also has the ability to use this information.
- The criteria for selection are clear and the decision maker has a reasonable system of preference so that it can differentiate and classify different options by arranging its values.
- The decision maker must be able to calculate the results related to each option and compare it with other options, as well as the freedom to act in the choice of the method.
- The weakness of the legal system governing the two countries in the oil and gas sector has led to the failure to meet these conditions, as well as the neglect of energy justice by both countries.
- In order to move in the direction of energy justice, attention must be paid to the legal requirements for the benefit of the common area of Qatar.
- In this regard, we first look at the status of the two countries in terms of a set of laws, regulations and policies. The main laws of oil and gas in Iran are:
- Oil Exploration and Exploration Act throughout the country (1957).
- Oil Law (1974)
- Oil Law (1987)
- Law on the Amendments to the Oil Law of 1987 (adopted in 2011)

**Table 3.** Highlights the importance of the four main oil laws in Iran relative to energy justice.

The title of the law	Article number	Article description
<b>Oil Law (1957)</b>	9	The National Iranian Oil Company is committed to maximizing its commitment to oil exploration and exploitation operations in the areas it holds.
<b>Oil Law (1974)</b>	26	Protecting resources and preventing environmental pollution
<b>Oil Law (1987)</b>	7	Full surveillance and care for the preservation of oil reserves and the conservation of natural resources and resources, and for the prevention of environmental pollution.
<b>Law on Amendments to the Oil Law of 1987, adopted in 2011</b>	1	Produced from oil resources, preventing the loss of reserves

Source: research findings



The legal framework of the oil and gas industry in Qatar has been shaped in the following sets of laws and programs:

- Legislative Decree No. 10 of 1974 on the subject, the law establishing the State Oil Company of Qatar.
- Legislative Decree No. 4 of 1977 with regard to the protection of oil wealth.

- Decree No. 30 of 2002 on the topic, the Environmental Protection Act.
- Law No. 3 of 2007 on the issue, the exploitation of natural wealth and its resources.
- Qatar National Development Plan 2016-2011.
- Qatar vision document for 2030.

**Table 4.** Qatar's Legal Requirements for Energy Justice.

The title of the law	Section	Description
<b>Legislative Decree on Protecting Oil Wealth, 1977</b>	4	Agent, committed and responsible for preventing loss, damage to living conditions, and general health.
<b>Qatar National Development Plan 2016-2011</b>	First strategy	The government is committed to exploiting resources and investing wisely from oil revenues for the current and future generations.
<b>Qatar's vision document for 2030</b>	3	Long-term conservation and maintenance of strategic oil and gas reserves to meet the needs of national security and sustainable development.

Source: Valdez et al (2014)

What is clear is that in both countries there are legal requirements for the enforcement of energy justice. But because of the economic and political dependence of both countries, both in terms of exports and resources, or Iran, due to high domestic demand, there is no possibility to enforce energy justice laws or pay little attention to it. The lack of implementation of legal rules has led to a lack of energy justice.

## 5. Conclusions

In this study, the extent of exploitation of Iran-Qatar joint area in the framework of energy justice was evaluated. For this assessment, the three tenets of energy justice were used. The challenge of energy justice is to apply the tripartite approach not only to energy policy, but also to the entire energy system. The study of the three principles of energy justice, namely, distributive justice, accountability and procedural justice, revealed that the type of beneficiaries did not take into account the common energy of Iran and Qatar and did not follow this path. In this context, energy equity is considered by the private sector, government, and the public in terms of social responsibility. Their choices will have a huge impact on global climate change, and in particular on intergenerational justice.

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