



ACCELERATING SDG 7 ACHIEVEMENT

POLICY BRIEF 7

ENERGY AND SDG 16 PEACE, JUSTICE AND STRONG INSTITUTIONS

7 AFFORDABLE AND
CLEAN ENERGY



POLICY BRIEF #7

ENERGY AND SDG 16 (PEACE, JUSTICE AND STRONG INSTITUTIONS)

Developed by

UN DESA, International Renewable Energy Agency (IRENA), UN Environment, United Nations Institute for Training and Research (UNITAR), and Norway

In collaboration with

United Nations High Commissioner for Refugees (UNHCR), the International Energy Agency (IEA), and the World Bank

Key Messages

Energy production, distribution and use are fundamental to our economies, and central to relations between and within states—as well as major contributors to global climate change.

Climate change will place great pressure on national institutions, economies, and social and political systems, as well as countries' natural resources, food production, water supplies, and liveable spaces. The negative impacts of climate change will not be equally distributed, and this could generate significant geopolitical tensions. People in the poorest countries and in places affected by conflict are the most threatened. Three key policy drivers that can strengthen their resilience are: targeted climate adaptation programmes, development and humanitarian programmes to help improve response capacities, and peace building and conflict prevention programmes to reduce tensions. As tackling climate change becomes more and more critical, the current energy system will need to undergo a profound transformation. The global transition to sustainable sources of energy will need to accelerate, with major implications for international relations, peace and security around the world.

IRENA's "Global Energy Transformation: A Roadmap to 2050" shows that renewable energy and energy efficiency combined can deliver 90 per cent of energy-related emission reductions required to achieve the objectives of the Paris Agreement, assuming an ambitious acceleration of the energy transformation.

Renewables bring numerous benefits that could address many of the root causes of poverty, marginalisation, migration, and political instability—by promoting prosperity and job creation, improving food and water security, and enhancing sustainability and equity.

The shift to renewables could help to alleviate competition over important natural resources, including water and food, while increasing energy access and offering developing economies an opportunity to bypass a fossil-fuel based development model. At the same time, renewables can have a democratising effect, as renewable resources are available in most countries (unlike fossil fuels), are not limited in quantity, and are harder to disrupt (though there are new challenges in the form of cyber-security risks, technology dominance, and access to minerals).

Where there is conflict or displacement of people, renewable energy solutions can also offer more sustainable and affordable energy supply options for humanitarian and peacekeeping missions.

All these potential benefits from a transition towards renewable energy-based economies will only materialise with effective, accountable, and inclusive institutions at all levels, and policies addressing structural aspects from the socio-economic system and its interaction with the energy transition.

The decline of the conventional energy system will generate many stresses and risks, which will need to be managed effectively. The energy transformation is expected to put significant pressure on fossil-fuel producing countries. New social tensions and financial risks, such as stranded assets, could reverberate through international politics. If revenues from fossil fuel production decline, countries that have not diversified their economies sufficiently could potentially be destabilised. The loss of fossil fuel revenues in countries with weak governance could lead to fractures in society and political instability, undermining progress towards SDG 16. Thus, it is paramount to anticipate the challenges that arise from the transformation to facilitate a smooth, fair, and just transition.

I. Introduction: interlinkages between SDG 7 and SDG 16

Energy is fundamental to our civilization and to the prosperity of nations. Its production, distribution, and utilization are deeply embedded in the fabric of our economies and central to the relations between states, peaceful and inclusive societies, and accountable and inclusive institutions. Actions taken to address SDG 16 will to a large extent pave the way for a successful achievement of SDG 7, while at the same time achievement of SDG 7 will underpin the achievement of SDG 16.

The energy sources powering our societies have been undergoing a period of rapid change. Renewables have emerged as a technologically feasible, economically attractive, and sustainable choice that can increasingly meet the energy needs of many countries, corporations, and citizens. As tackling climate change becomes more and more critical and renewables steadily increase their capacity to meet our energy needs, the global transition to sustainable sources of energy will continue to accelerate, with major implications to international relations, peace and security around the world.

Renewables bring numerous benefits, which could address many of the root causes of poverty, marginalization, migration, and political instability. The pivot to renewables may promote prosperity and job creation, improve food and water security, and enhance sustainability and equity. The shift to renewables will also help to alleviate competition over important natural resources, notably water and food, and help combat air pollution and climate change. It will increase energy access and offer developing economies an opportunity to leapfrog a fossil fuel-based development model. At the same time, the number of energy-related conflicts is likely to decline. Competition for fossil fuel resources has been at core or on the margins of many inter- and intrastate conflicts. The pivot towards modern forms or renewable energy has the potential to reduce the incidence of energy-related conflicts, thus contributing to Goal 16.1 to significantly reduce all forms of violence and related death rates everywhere.

Sustainable energy solutions could benefit people in situations of displacement. Providing access to affordable, reliable, sustainable, and modern energy services is essential to protect and assist displaced people more effectively and economically. Similarly, renewable energy solutions can also offer more sustainable and affordable energy supply options for peacekeeping missions.

At the same time, peaceful and just societies, along with accountable institutions, are critical for sustainable development and ensuring a just transition. SDG 16 aims to promote peace and justice for all through the strengthening of institutions and good governance norms to reduce violence and lawlessness (including state violence and government corruption), promote the rule of law and access to justice, and protect human rights. Implementation of SDG 7 requires the development of effective, accountable, and inclusive institutions at all levels (Goal 16.6). Renewables could also be a powerful vehicle of democratization because they enable the decentralization of the energy supply and empower citizens, local communities, and cities. This can contribute to Goal 16.5 to substantially reduce corruption and bribery in all their forms.

All these potential benefits from a transition towards a renewable energy-based energy system will only materialize with policies addressing structural aspects from the socio-economic system and its interaction with the energy transition. Just and fair transition considerations need to be addressed upfront to ensure an inclusive energy transition. At the same time, the decline of the conventional energy system will generate many stresses, social tensions and financial risks, such as stranded assets, that could reverberate through international politics and which need to be managed effectively. In this regard, the energy transformation is expected to put significant pressure on fossil fuel-rich countries. If revenues from fossil fuel production decline, countries that have not diversified their economies sufficiently could potentially be destabilized. The loss of fossil fuel rents in countries with weak governance could lead to fractures in society and political instability, undermining progress towards SDG 16. Thus, it is paramount to anticipate the challenges that arise from the transformation to facilitate a smooth, fair, and just transition.

This policy brief attempts to highlight the interlinkages between SDG 7 and SDG 16, referencing analytical work done to date by various UN agencies and non-UN entities. However, it is by no means comprehensive and exhaustive with regard to the many challenges. It aims to inform the debate on what steps countries and international institutions could take to mitigate the risks associated with climate change and the energy transformation and develop strategies to enhance a smooth transition.

II. The nexus between SDG 7, climate change, and security

Climate change will put pressure on the economic, social, and political systems that underpin each nation state, as well as their natural resources. Where institutions and governments are unable to manage the stress or absorb the shocks of a changing climate and associated climate damages, the risks to the stability of states and societies will increase.

UN Environment in the context of its work on climate change and security stresses that climate change is a “threat multiplier,” aggravating already fragile situations and potentially contributing to further social tensions and upheaval. The UN Security Council has addressed the topic of climate and security on several occasions, including most recently in January 2019. It is important that discussions on climate and security consider the nexus to sustainable energy.

Energy is the main contributor to climate change, with energy use accounting for more than two thirds of greenhouse gas emissions according to the IPCC. Thus, progress in SDG 7 Goal 7.2, to increase substantially the share of renewable energy in the global energy mix, and Goal 7.3, to double the rate of improvement in energy efficiency, are critical to effective climate action. In fact, IRENA’s “Global Energy Transformation: A Roadmap to 2050” shows that renewable energy and energy efficiency combined can deliver 90 per cent of energy-related emissions reductions required to achieve the objectives of the Paris Agreement, assuming an ambitious acceleration of the energy transformation. In addition to climate change mitigation, the energy transformation would provide a 2.5 per cent improvement in GDP and a 0.2 per cent increase in global employment by 2050, compared to business as usual.

In this report, IRENA further quantifies the impact of climate damages on global macroeconomic performance. The report finds that climate damages significantly reduce GDP growth, but that this negative impact would be eased under an energy transition scenario in line with global climate objectives. However, even under an energy transition scenario, GDP growth would be reduced by more than 10 per cent by 2050 due to climate damages. Moreover, the regional distribution of climate damages is very unequal, and this could generate tensions which hamper progress towards prosperity, sustainability, and peace. Increasing the transition’s ambition and providing socio-economic resilience are two priorities that need to go hand in hand.

The 2015 report “A New Climate for Peace—Taking Action on Climate and Fragility Risks” commissioned by the G7 stresses that people in the poorest countries—and the most vulnerable groups within those countries—are the most threatened by the impacts of a changing climate. People face especially challenging obstacles to successful adaptation in places affected by conflict. If they fail to adapt to the effects of climate change, the risk of instability will increase, trapping them in a vicious cycle. But even seemingly stable states can be pushed towards fragility if the pressure is high enough or the shock too great for systems to manage peacefully.

The report identifies seven key compound climate and fragility risks, including local resource competition, livelihood insecurity and migration, volatile food prices and provision, transboundary water management, and unintended effects of climate change policies. Extreme weather events and disasters will exacerbate fragility challenges and can increase people’s vulnerability and grievances, especially in conflict-affected

situations. Climate change is highly likely to disrupt food production in many regions, increasing prices and market volatility and heightening the risk of protests, rioting, and civil conflict. Transboundary waters are frequently a source of tension; as demand grows and climate impacts affect availability and quality, competition over water use will likely increase pressure on existing governance structures. Rising sea levels will threaten the viability of low-lying areas even before they are submerged, leading to social disruption, displacement, and migration, while disagreements over maritime boundaries and ocean resources may increase. As climate adaptation and mitigation policies are more broadly implemented, the risks of unintended negative effects—particularly in fragile contexts—will also increase.

The “New Climate For Peace” report further identified three key policy drivers that could help strengthen the resilience of states and societies to climate-fragility risks. Climate change adaptation programmes help countries anticipate the adverse effects of climate change and take action to prevent, minimize, and respond to its potential impacts. Development and humanitarian aid programmes help states and populations build their economic, governance, and social capacities and improve their resilience to shocks. Peacebuilding and conflict prevention programmes address the causes and effects of fragility and conflict by reducing tensions and creating an environment for sustainable peace.

III. The emerging new geopolitical landscape of energy shaped by renewables can foster greater peace and security

The global energy transformation driven by renewables has major geopolitical consequences. It is changing power dynamics between and within states, bringing the promise of greater energy independence to nations and communities, and enhancing energy security and democratic empowerment. To understand and analyze this changing geopolitical reality the International Renewable Energy Agency created with the support of Germany, Norway, and the United Arab Emirates, an independent Global Commission on the Geopolitics of Energy Transformation. The Commission presented its report “A New World. The Geopolitics of the Energy Transformation” (IRENA, 2019) to the 9th Assembly of IRENA in January 2019. One of the Commission’s key findings is that the growing renewable energy deployment across the globe can reduce energy-related conflicts and lower competition for natural resources which have been predominantly associated with fossil fuels.

The Commission highlighted in its report that the energy transformation from fossil fuels to renewables will drive a geopolitical transformation as profound as that which accompanied the shift from biomass to fossil fuels two centuries ago. Unlike fossil fuels, which are concentrated in specific geographic locations, renewable energy sources are available in one form or another in most countries. This reduces the importance of current energy choke points, such as the narrow channels on widely used sea routes, that are critical to global supply of oil.

Energy flows such as renewables do not exhaust themselves and are harder to disrupt; therefore, countries that succeed in developing their renewable energy sources will significantly improve their energy security. Renewable energy sources can be deployed at almost any scale and lend themselves better to decentralized forms of energy production and consumption, adding to the democratizing effects of renewables. Countries that switch from imported fossil fuels to domestically generated renewable energy will improve their trade balance and enjoy significant macroeconomic benefits. They will also be less vulnerable or beholden to their suppliers and will therefore be able to pursue their strategic and foreign policy goals more independently.

At the same time, the Commission points out that the energy transformation also brings risks and challenges. These include cybersecurity concerns, technology dominance and access to minerals essential for renewable energy development. However, the Global Commission on Geopolitics of Energy Transformation finds that overall the benefits outweigh the risks, provided appropriate and holistic policies are adopted

early on.

One of the major geopolitical challenges related to fossil-fuel exporters is that they are likely to see a decline in their global reach and influence unless they can reinvent their economy for a new energy era. Major fossil fuel exporters face economic, social, and political risks if they do not take steps to transform and diversify their economies. According to a 2018 IEA report on the “Outlook for Producer Economies 2018—What do changing energy dynamics mean for major oil and gas exporters?” a changing energy system is posing critical questions for many of the world’s largest oil and gas producers already. Inaction or unsuccessful efforts to reduce reliance on hydrocarbon revenue would compound the risks facing both producer economies and the global economy. In the long run, however, fossil fuel-driven economies have a huge opportunity to reverse the risks posed by oil dependence, and create a more sustainable economic future for their peoples. Countries that lead in technological innovation stand to gain from the global energy transformation.

The Global Commission also highlighted that the energy transformation will lead to the emergence of new communities and interdependencies. As countries develop renewables at home, they will be also seeking to integrate their grids with those of neighbouring countries, creating new geographies of energy trade. Electricity will become the cornerstone of new patterns of energy trade. Trade in renewable energy technologies and electricity will expand. In broad terms, the weight of energy dependence will shift from global markets to regional grids. Cross-border electricity trading will create opportunities for regional cooperation, and the creation of ‘grid communities.’ Illustrations of these include the Scandinavian countries, which have traded electricity between themselves for decades, and the ongoing efforts to bolster electricity market integration within the European Union. Regional electricity pools are also being developed in Asia (the ASEAN power grid), Africa (five sub regional power pools), Central America (SIEPAC), and the Middle East (the Gulf Cooperation Council power grid). In recent years, several renewable energy supergrids have been proposed, including the Asia Super Grid, and the North Sea Offshore Grid. IRENA’s Clean Energy Corridor initiatives in Africa and Central America are also supporting the creation of regional markets for renewable power and facilitating its cross-border trade.

IV. Sustainable energy as a solution in situations of displacement

The UN estimates that in 2019 over 131 million people are in need of humanitarian assistance due to conflict, natural disasters, and other complex global challenges. In situations where large numbers of people are moving within or across borders, access to energy is a priority for basic survival. Safe and accessible cooking fuel is needed to be able to eat. In the absence of adequate shelter, energy is needed to maintain livable temperatures. Power is needed in undertaking productive economic activities or for children to study in the evening hours. Power is also needed to charge mobile phones that enable communications—allowing contact with family members and receipt of information as well as supporting the transfer of money in cash-assistance programmes.

Current energy practices in situations of displacement are often insufficient, inefficient, unsafe, expensive for displaced people, and harmful to the surrounding environment.

The current electricity production is also costly for implementers. Delivering protection and humanitarian assistance requires a reliable power supply in often off-grid situations, such as for public lighting, water pumping and treatment, offices and residences, cooling of medicine and vaccines, laboratory services, or light for emergency services (such as the delivery of babies) at night. At present, fossil-fuel powered generators tend to be the main source of electricity in displacement settings, which results in high costs from high fuel prices, logistics, transportation, maintenance, and security, as well as administrative and technical inefficiencies. A recent study estimates that around 5 per cent of humanitarian agencies’ expenditure goes on diesel, petrol, and

associated costs such as fixing generators. That would mean that the sector spent some \$1.2 billion on polluting fuel in 2017.

The Global Plan of Action for Sustainable Energy Solutions in Situations of Displacement (GPA) was launched in July 2018 to address current challenges that impede energy access in humanitarian settings, and thus provides a framework that will provide concrete actions for a more systemic, collaborative approach towards the vision of “safe access to affordable, reliable, sustainable, and modern energy services for all displaced people by 2030.”

V. Energy in peace missions

UN Peacekeeping missions play a key role in assisting a range of host countries navigate the difficult path from conflict to peace. Currently, the UN Department of Peace Operations (DPO) runs 14 active peacekeeping missions, deploying over 140,000 peacekeepers on an annual budget of US\$ 6.8 billion . These missions operate in complex, conflict affected regions where uniformed and civilian personnel are deployed to protect civilians, prevent conflict, build rule of law, and promote human rights. Mandated by the UN Security Council and General Assembly, UN Peacekeeping serves to aid countries in the transition from conflict to peace.

Most Peacekeeping missions are operating in conflict or post-conflict states where basic infrastructure is underdeveloped or unreliable. Operating these missions involves constructing facilities, shelters, and offices which, in practice, function as small towns consisting of people from a diverse set of troop-contributing countries. The associated water, energy, and waste demands can become a burden to the local ecosystems when not properly managed, especially in larger missions such as in South Sudan, the DRC, and Mali, which deploy over 15,000 people each. Considering the fragility of conflict and post conflict states, systematic action on environmental management is an imperative for UN Peacekeeping missions to ensure cohesion with host countries instead of causing unintended harm.

Without access to reliable electricity grids to power offices and facilities, peacekeeping missions have a heavy dependency on diesel and petrol for generators and use high volumes of fuel for vehicle and aircraft fleets. In 2017, operations emissions were totalled at 1.05 MtCO₂, or 55 per cent of the UN system-wide emissions. It was estimated in 2009 that the annual fuel cost for DPO-supported base operations was US\$ 638 million, and aircraft fuel costs were estimated at US\$ 201 million in 2010. Extrapolating these estimates means that an estimated 2 per cent of the overall peacekeeping budget is spent on unsustainable and dirty fuel sources. Operating in areas where oil and gas governance is a contributing factor to conflict, minimising the need for traditional fuels would be ideal. Changing these practices could result in more efficient use of financial resource and contribute to global and national sustainable development goals.

VI. Conclusions

The energy transition cannot be considered in isolation to the broader socio-economic structure it is based on nor to the broader geopolitical landscape it evolves in. Frameworks to assess countries’ exposure, relative risk, and potential to benefit from the energy transformation, as well as exploring policy options and tools available to proactively support a smooth fair and just energy transformation both in individual countries and globally are key. Adopting a holistic energy transition approach with effective, accountable and inclusive institutions at all levels will be key in maximizing the synergies between SDG 7 and SDG 16.

Encouraging countries that depend heavily on fossil fuel exports to diversify their economies, avoid economic disruption, and reduce the risk of social instability will be equally critical. This can be done, for instance,

through institutional reforms and policies to promote education, enhance skills, and boost job creation and SMEs, as well as building capacity and sharing information about best practices for diversification in fossil fuel-dependent economies, with particular attention paid to the need of stranded communities and workers will be equally critical. It is paramount to develop strategies and programmes to support countries that face the twin challenges of fragility and fossil fuel dependency, especially the countries that can be considered as both fragile and/or conflict prone and highly dependent on fossil fuels.

At the same time, it is important to support the least developed countries, in particular African countries and Small Island Developing States (SIDS), in their efforts to optimise use of their renewable energy sources: issues to be addressed include market access, trade agreements, technology and investments, as well as policies to enhance security and regional integration.

Leveraging the imperative of regional and transcontinental energy system integration to promote regional dialogues on energy infrastructure interconnections, while strengthening governance for the management of cross-border electricity transmission and control over grid infrastructure, could have significant positive spillover implications for peace and stability.

Other essential steps include the continuous monitoring and analysis of emerging geopolitical challenges related to the energy transformation, with special regard to critical material supply chains, tensions over technology transfer and cybersecurity, and potential asymmetric dependencies. A dialogue on measures to safeguard energy systems and grids and develop global norms and rules for cybersecurity is particularly urgent.

Last but not least, assessing existing and needed capabilities of the international community and in particular the United Nations system is of critical importance. This should encompass a focus on building analytical, mediation, and coordination assets, and the ability to provide effective assistance for diversifying the economies of vulnerable countries and advance intergovernmental and multi-stakeholder cooperation at the intersections of peace, security, climate change and sustainable energy.

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