

The Kingdom of Spain

Positions for the International Renewable Energy Agency

I. Combating Climate Change by Increasing Urban Energy Efficiency

As a signatory to the *Paris Climate Accord* (Paris Agreement) and steadfast supporter of the European Union's (EU) climate directives, the Kingdom of Spain (Spain) recognizes the inherent importance of maintaining a safe and clean environment and is fully cognizant that while only half of the world's population lives in cities, 70 percent of carbon dioxide is emitted in these hubs of human activity. For this reason, Spain has continuously targeted urban energy inefficiencies as a means of mitigating our carbon footprint.

Domestically, we have heavily invested in the transformation of major cities to smart cities through enhancing transportation systems, and civilian engagement has helped to establish our nation as a leading force in urban transformation, serving as an emblem for European nations. The Institute for the *Diversification and Saving of Energy* (IDAE) contributes toward the achievement of objectives set forth by the EU in the areas of energy efficiency, renewable energy, and low-carbon alternatives. **Regionally**, guidelines set forth by the EU act as a model for development programs. The *Action Plan on Energy Saving and Efficiency 2014-2020* and the *Renewable Energies Plan 2011-2020* in compliance with *Directive 2009/28/EC* and *Directive 2012/27/EU*, respectively, contribute to regional benchmarks for energy efficiency. Further, Spain is an effective advocate under the *Directive for Alternative Fuels Infrastructure, 2014/94/EU* (DAFI) which has helped to establish programs such as the *National Action Framework for the Development of the Market* and the *Infrastructures for Alternative Fuels in the Transport Sector* (MAN), which targets the transportation sector as it comprises 40.7 percent of energy usage, making a significant contribution toward the accomplishment of regional objectives. The most prominent involvement on our behalf, moreover, is within the *Effort Sharing Decision* which establishes greenhouse gas emission goals for the timeframe 2013-2020 in sectors such as transport, buildings, agriculture and waste. Spain is designated to be on track for meeting all prominent benchmarks set by the EU in energy efficiency regionally. The Directives propositioned by the EU have additionally facilitated compliance with the Paris Agreement on an **international** scale. By setting ambitious contribution goals, Spain is actively pursuing objectives identified under Article 4, paragraphs 4 and 11 of the Paris Agreement. Further, the IDAE has had various involvements in international cooperation to promote the diffusion of technology, experience, and knowledge abroad. Most significantly, our government has been commended continued involvement in the *Development Assistance Committee of the Organization for Economic Co-operation and Development* (OECD) in the pursuit of *Sustainable Development Goals* (SDGs) such as poverty eradication and sustainable development. With such contributions underway, Spain offers some **recommendations** to further increase urban energy efficiency. *First*, as recognized in Article 6, paragraph 8 of the Paris Agreement, poverty eradication and sustainable development play a central part in achieving contribution goals in developing Member States. As a consequence, continually working toward the objectives set forth by the SDGs and furthering cooperation under OECD will significantly strengthen efforts to increase urban efficiency across the globe. *Further*, as specified in Article 7, paragraph 13 and exemplified by the IDAE, we propose continuous and enhanced international support through the use of mitigation, adaptation, finance, technology transfer, and capacity building, as appropriate, to assist in the facilitation of energy efficiency. *Finally*, observing our major cities on the forefront of urban efficiency, Spain identifies leading smart cities such as Barcelona, Madrid, San Sebastian, and Valencia as models for developed nations to work toward advancing their carbon mitigation prospects. Elements include increasing the area of pedestrian-only, car free zones to discourage the use of automobiles, the integration of technology into major city sectors, and the promotion of alternative energy sources and civilian engagement. Climate change poses a significant threat to the well-being of not only the citizens of our nation, but also of the global population; therefore, the Kingdom of Spain is rooted in our mission to maintain a safe and clean environment within and beyond our borders.

II. Assessing the Socio-Economic Impacts of Wind and Solar Energy

In recognition that fossil fuel, a nonrenewable resource, currently meets 81 percent of the demand for energy worldwide, the Kingdom of Spain (Spain) identifies the Global Energy Crisis as of dire importance. Our nation, therefore, upholds the foremost belief that access to renewable energy (RE), such as wind and

solar, is key to the social and economic success of Member States. **Domestically**, RE infrastructure has deeply penetrated our energy sector with the integration of advanced technologies that improve the efficiency of existing systems and regulatory frameworks that encourage the growth of new ones. As a result, Spain has achieved an impressive 47.2 percent share in renewable resources nationwide, significantly surpassing related goals set by the *International Renewable Energy Agency* (IRENA). This is partially due to policies that give RE operators incentives, such as penalties under failure to meet commitments to supply, that do not exist in other European nations. **Regionally**, Spain has contributed to wind and solar energy through adherence to directives set forth by the European Union (EU). Like our fellow EU Member States, we have adopted an independent *Renewable Energies Plan 2011-2020* in compliance with *Directive 2012/27/EU*. Additionally, in light of the EU's energy and climate goals for 2030 which target 27 percent of RE in the EU as a whole and a 40 percent reduction in carbon dioxide since 1990, Spain has been a significant tributary, with wind and solar power accounting for 21.8 and 5.8 percent of our energy sector, respectively. The EU has additionally facilitated our contributions to the well-being of other nations, including its recent plan to fund an international power line to transport excess energy produced by renewable resources from Spain to France. **Internationally**, Spanish companies account for more than 10 percent of global wind capacity, and Spain is the third largest exporter of wind turbines around the world. We, as a nation, are a continuous supporter of the *Sustainable Development Goals* (SDGs) established by the United Nations, especially the three dimensions of sustainable development defined as economic, social, and environmental and upholding the living standards of all people. Moreover, Spain has consistently worked to ensure the establishment of ambitious goals concerning climate change. Additionally, our nation recognizes that the challenges of *Least Developed Countries* (LDCs), home to over 70 percent of the world's poor, should be particularly addressed. The Institute for the Diversification and Saving of Energy (IDAE) was founded with the objective of fostering the expansion of RE globally. IDAE is involved as Spain's representation in the *International Energy Agency* (IEA), IRENA, the *Alliance for Rural Electrification* (ARE), and the *Renewable Energy Policy Network for the 21st Century* (REN21), among others. Independently, IDAE has involvement in Latin America, the Mediterranean, and Asia. Further, Iberdrola, our largest energy group, was a pioneering force in efforts to bring renewable resources to Kenya, which saw success as one of Africa's leading nations in RE usage. Due to both our successes and failures in the field of promoting wind and solar energy, Spain offers some **recommendations** for future action. *First*, while we admit our shortcomings such as tariff deficit experienced as a result of discrepancies between the cost of RE and the amount charged to consumers, it acknowledges these obstacles as not only setbacks, but also lessons to be offered to our fellow Member States. Spain reaffirms the importance of a consistent, predictable regulatory framework that incentivizes citizens to invest in nonrenewable energy, an action which has resulted in significant growth in the past. *Second*, as exemplified by the United Nations Development Program's "Solar Empowerment Across Countries" initiative, solar energy is a valuable resource to combating the water crisis in numerous vulnerable communities. Spain, therefore, propositions the diffusion of valuable technology, such that facilitated the expansion on Kenyan RE on behalf of Iberdrola. *Furthermore*, our government acknowledges that many of these vulnerable communities are in areas without access to wind or solar resources, possess concerns about the disruption of bird migration, and scorn the unattractive terrain that sometimes results from the implementation of RE. With the help of the international community, however, clean technology is more accessible than ever, and a skeptical awareness of the environmental externalities of new mechanisms for RE have prompted strides in minimizing its impacts on the landscape. The recognition that all nations deserve access to renewable resources has accelerated on the forefront of the international community, and the Kingdom of Spain has remained aggressive in our pursuit for clean energy alternatives to propel innovations and power the future.