

Wind and solar energy ngo in turkey



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Proposal to a Wind and Solar Energy NGO in Turkey INTRODUCTION

Background. For many reasons, there has been an influx of demand for renewable energy production. All this demand rises from the initial issue that, at the moment, the world essentially runs on finite resources. Much of the world's energy is currently produced and consumed in ways that are unsustainable if current technology and practices were left unchanged or even if the overall quantities of energy sources were to increase substantially. In 2008, roughly 5.8 billion tons of hard coal and 953 million tons of brown coal of the reported 960 billion tons of coal remaining in proved recoverable reserves were consumed worldwide. Crude oil, based on World Energy Council Member Committees and supplementary sources, stands with 1239 billion barrels remaining after 2008. And at the 2008 consumption rate, only roughly 50-60 years remain for the use of the 185.5 trillion cubic meters in global gas reserves. All these numbers were collected from KotcioÄŸlu's article, Clean and Sustainable Energy Policies in Turkey, but in my eyes, the disagreement over when we reach peak energy or finally run dry of nonrenewable sources only represents an instrument that measures an ultimately impending energy crisis. I think it is safe to say that my belief towards these projections can be attributed to my Environment and Society course professors at the University of Otago. They explained that the frivolous natures of these reports are generally conceived from unreliable national data obscured in the interest of political and financial benefits. And for this reason, the same figures and projections are very important to Turkey given that they are heavily dependent on foreign finite sources for their energy supply. This is clear in Uslu's report, which detailed <https://assignbuster.com/wind-and-solar-energy-ngo-in-turkey/>

Turkey's consumption of nonrenewable natural resources. It stated that between 1994 and 2002 Turkey imported 89.3%, 96.6%, and 82% of their total oil, natural gas, and coal consumption, respectively (114). These numbers become even more significant to the discussion of renewable energy when the U. S. Energy Information Administration (EIA) calculated that natural gas, oil, and coal were the largest contributors of the electricity supply in 2008 at 81% of their 161 billion kilowatt-hours (TWh). In Soyhan review of Sustainable energy production and consumption in Turkey, he mentions that over half of Turkey's natural gas consumption is used for electric power production (1353). That is to say, that over 13.5 billion m³ of natural gas was dedicated towards generating electricity given Turkey consumed 27.3 billion m³ in 2005 (Balat 112). In particular, domestic lignite coal generates 22% of electricity making it Turkey's most consumed domestic energy source (Ozturk et al. 328). That would leave 59% of electricity production dependent on foreign fossil fuels while domestic coal lasts. Ozturk et al. and many other scholars studying Turkey's energy, claim that the demand for energy, particularly electricity, is growing rapidly (329). Reasons like this and the rising costs that will shortly follow are why the scholars, scientist and other intellectuals of our time are urging an increase of renewable resource development for more electricity production (Uslu, T). Turkey, home to several geographical advantages, is a highly favorable location to harness solar and wind energy for the generation of electricity (Toklu, E. et al. 1187). Hydropower has contributed a large amount of energy to Turkey's electricity supply but future projects are subjected to intense environmental sustainability and human rights criteria's due to their potential of causing severe negative social and environmental impacts

(Türkmenmez, Mine, and Erhan Demireli 8). As a Sun Belt nation with 2,640 hours of sunshine Turkey receives a yearly average solar radiation of 1,311 kW h/m² (Kaygusuz, K 812). And of the estimated 10 million, continuously available, megawatts (MW) of energy in the earth's wind, Turkey has the highest share of technical wind energy potential throughout Europe at 83,000 MW (Bilgili and Simsek 144). Theoretically, Turkey's yearly wind potential is around 120 billion kWh, which is about twice as much as their current electricity consumption (Ilkiliç 1167). [pic] Solar Radiation (SolarGIS © 2012 GeoModel Solar s. r. o.) [pic] Wind Patterns (Aydin et al. 1267)

Statement of the Project Problem. Despite such rich potential, Turkey's energy mix shows a relatively small contribution from renewable energy sources (RES) (Toklu, E. et al. 1175). After thorough research, I believe this is due to a number of imbalanced economical, governmental, social and physical factors. To a large extent, many of these issues can be reoriented with domestic legislation and proper institutions. Turkey is one of several countries that have implemented legal, organizational and technical structures to support RES technologies (Aydin et al. 1270). The results from implementing the 2005 Renewable Energy law exemplifies its success with 80 new licenses given to wind power projects to provide an additional 2887 MW of installed power, totaling their wind energy power plants installed capacity to 10000 MW (Türkmenmez 7). These efforts are appreciated throughout Turkey and the renewable energy industry but it is widely believed that they still have more steps to be taken (Gökmenç). Since there is a significant amount of pressure coming from influential and reputable stakeholders already covering this issue I propose an organization committed to using the instruments available in order to improve Turkey's

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renewable energy market and ultimately a sustainable energy supply.

SOLUTION Objectives. Given Turkey's current legislative and institutional infrastructure concerning energy, I propose the creation of a nongovernmental organization (NGO) that will dedicate its efforts to participants and prospects of the renewable energy market in overcoming any existing barriers. This non-profit would assist its clients by using in-house resources and those of others by introducing these troubled parties with pertinent symbiotic partners. Although each case will be unique, the underlying goal to improve Turkey's overall renewable energy capabilities will remain the same for each and every client. In our efforts to increase Turkey's renewable energy market, we expect to create an ever-improving sustainable energy supply for the people and environment of Turkey. **Scope.** Yes, energy is a national issue for Turkey. But as much of a problem it may pose for the population at large, the increasing deficit of domestic energy creates immense opportunity for renewable energy companies. And it is these renewable energy entrepreneurs that we, the NGO, will serve best. We believe in Turkey's natural potential to harness and generate clean and sustainable energy. We rely on the idea that the Turkish government will fulfill their fair share in their respective role for providing a sustainable domestic energy supply but that the private sector must capitalize on all opportunities presented to them. Unfortunately, Turkey still fosters administrative hurdles, financial impediments, obstacles to grid access, a lack of information and training as barriers for ambitious wind and solar companies (Türkmenmez, Mine, and Erhan Demireli 9). We find that although hydro and geothermal practices have yet to be utilized at their full potential the barriers preventing their implication are beyond the nature of our

expertise. Whether these solar and wind companies are large international corporations expanding into the Turkish market or small companies with big dreams and little capital our NGO will guide them to become the successful energy providers, innovators, and supporting mechanisms manufactures they desire to be. We are not an organization devoted to lobbying for improved legislation but by using our own experiences we will inform and work with those who are capable of influencing prudent legal infrastructure.

[pic] Market Attractiveness of Renewable Energy Resources (Bakherava and Ozeke, slide 22) Methods. Since legally registering, a non-profit organization from a foreign country requires extensive in-country legal support we must base the NGO within Turkey itself. One option is to obtain recognition as an American nonprofit corporation, as all similar renewable energy organizations do, under section 501(c)(3) of the Internal Revenue Code and then establish a branch in Turkey. Even though this may provide enough legal status to carry out our intentions, we would probably prefer reducing our risk for failure and incorporate under Turkish procedure. For an increased probability of success the foundations for this NGO starts well before the legal processes. As the future founder of this NGO, I find it necessary to move to Turkey and get involved with an operating NGO—ideally EUROSOLAR Turkey—that shares similar goals. NGO’s like EUROSOLAR claim that they delegate effort towards my specific goal but due to the relatively small amount of renewable energy activity, I presume that their efforts are simply not effective enough. And with this experience, I hope to learn whether it would be best to rehabilitate an active department or initiate my proposed NGO in order to fulfill its purpose. Assuming that my proposed NGO is necessary to increase Turkey’s RES supply it will have to be built around a

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clear action plan that is more effective than previous attempts. As a result of my experience with the other NGO, the contacts and credibility I have preemptively accumulated from corresponding interactions becomes our venture capital. We will have to start small at a case-by-case rate with a working board of directors who have specialized skills and knowledge to contribute to our success and the success of those we help. It is essential to establish a reliable reputation since, and amongst other obvious reasons, the organization is designed to operate under a small amount of monetary capital. In doing so, we must discuss and investigate each company's business plans and assess if they are capable of succeeding under Turkey's current circumstances. If we are unconfident with their plan, we will attempt to align their goals with a successful action plan before moving forward. We also find it necessary to 'whistle blow' on companies who are unwilling to alter their operation when putting the environment or society at risk. All the contacts accrued from our board will enable us to connect small RES entrepreneurs with appropriate investors. Our concept of funding does not end with a list of banks or venture capital firms. We encourage exploring creative measures to secure a reduced initial cost wherever possible. A possible method may include, proposing an industry-leading company to provide small start-ups—who have dedicate time and effort to analyzing the location and its potential—with their developed equipment at a reduced price in return for good will advertising and a reasonable portion of the projects revenue. We recognize that laws and the institutions provide by the state are some of our greatest assets. One of our priorities is to understand these laws and fully utilize them for any of our applicable beneficiaries. TÃ¼kenmez & Demireli discussed current legislation that directly applies to the purpose of <https://assignbuster.com/wind-and-solar-energy-ngo-in-turkey/>

our NGOs in their 2012 article, Renewable Energy Policy in Turkey with the New Legal Regulations. In 2001, Turkey responded to the demand for legal infrastructure that entices and fosters renewable energy by introducing the Electricity Market Law (EML). This bill empowered the Energy Market Regulatory Authority (EMRA) to act as an independent regulatory body with administrative and financial autonomy over the electricity industry. Their next relevant action, the 2005 Law on the Utilization of Renewable Energy Resources for the Purpose of Generating Electricity, is recognized as the cornerstone of legislation for the renewable energy industry. These laws and their subsequent amendments address licensing, purchase agreements and quotas, grid access and financial incentives for RES producers but also include manufactures of supporting mechanisms. The feed-in tariffs in particular have been under direct criticism, for their low compensation rates, from financial and other corresponding institutions in the renewable energy industry. Within our mission, we devote our efforts to see that any appropriate stakeholder of Turkey's solar and wind energy markets receive all available exemptions, subsidies, tariffs and other incentives that will ensure the construction of their projects. We will hopefully grow into an organization that is capable of unbiasedly streamlining public funds for successful RES investment. Unlike the rest of the RES industry, the amount of an NGO's funding does not determine its successful output. In fact, the quality of work an NGO provides is often inversely related to its bank statement. Fortunately, successful networking does not require extensive funding and will prove to be an enormous factor in our effectiveness. Our organization will need to develop cooperative relationships with the Turkish branch of the European Association for Renewable Energy (EUROSOLAR), the <https://assignbuster.com/wind-and-solar-energy-ngo-in-turkey/>

Black Sea NGO Network, the Turkish branch of the United Nations Environment and Sustainable Development Program, Entrepreneur Associations of Turkey, finance firms like The Zorlu Group, domestic energy companies like Polat Energy and Demirer Energy, as well as the Economic Policy Research Foundation of Turkey (TEPAV) think tank—especially their Economic Policy Research Institute (EPRI), Entrepreneurship Institute (EI), Institute for Private Sector and Economic Development (IPSED) and Finance Institute (FI) branches. Keeping healthy relationships with institutions like these will gain us their knowledge from previous mistakes and refine our instincts on determining who will provide the best outcome for particular projects. CONCLUSION We believe in Turkey's natural potential to harness and generate clean and sustainable energy. Our mission is to enable wind and solar energy companies of all sorts and sizes to create an ever-improving sustainable energy supply for the people and environment of Turkey. So far, by incorporating the renewable industry in their 'strategic energy plan' Turkey has improved its electrical energy supply. But a nation with such potential needs an institution dedicated to assimilating the prospective RES companies with contemporary legalities and financing opportunities. Our cooperation with the private sector will initiate great change and improvements for Turkish society and the lives of its people. We intend to not only improve the domestic situation but also contribute to global influence by aiding Turkey in becoming an example of unprecedented renewable energy utilization. Works Consulted Aydin, Aynur, Coskun Yavuz, and Zhan Tarker. "Wind energy and Turkey." *Environmental Monitoring and Assessment* 184. 3 (2012): 1265-1273. Web. Bakherava, Alina, and Ozge Ozeke. "Strategic Analysis of Renewable Energy Markets in Turkey."

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Renewable Energy Policy in Turkey with New Legal Regulations. " Renewable Energy 39. 1 (2012): 1-9. Web. U. S. Energy Information Administration. Country Analysis Briefs: Turkey. 2011. Web. Uslu, T. " Turkey's Foreign Dependence on Energy. " Energy Sources, Part B: Economics, Planning, and Policy 3. 2 (2008): 37-41. Web. Obama's quote The Turkish government has responded to these and other influential demands by intensifying renewable energy facilitating legislation. Mine Tkenmez and Erhan Demireli discussed current legislation in their 2012 article, Renewable Energy Policy in Turkey with the New Legal Regulations, in great detail. In 2001, the Grand National Assembly (GNA), Turkey's legislative body passed the Electricity Market Law (EML). To promote the utilization of renewable energy sources (RES), this bill established an independent regulatory body with administrative and financial autonomy, the Energy Market Regulatory Authority (EMRA). A large factor to the success of renewable energy legislation is their economic incentives for investors and producers. The initial bill included a 99% discounted original licensing fee for renewable electricity generators and exempted them from annual licensing fees during the first eight years of operation. In a 2008 amendment, renewable energy electricity producers were exempt from obtaining a production license if their capacity was at or below 0.5 MW. Other irrelevant yet proactive legislation was the 2007 Energy Efficiency Law. Tkenmez & Demireli recognized the 2005 Law on the Utilization of Renewable Energy Resources for the Purpose of Generating Electricity (<http://www.iea.org/textbase/pm/?mode=cc&action=detail&id=2475>) and its subsequent amendments as the cornerstone of legislation for electricity from renewable sources. They reiterated its aim of expanding the " use of renewable energy <https://assignbuster.com/wind-and-solar-energy-ngo-in-turkey/>

sources for producing electricity in a dependable and economic manner, to increase the diversification of energy sources, to protect the environment and develop the related manufacturing sector to realize these objectives" without disturbing free market conditions (7). It defined the renewable energy resources that are supported under this law, specifically including wind and solar methods. The generated electricity is to be purchased, based on bilateral agreements, by legal entities who possess retail sale licenses. Each retail sale licensee is entitled to purchase an amount—declared by EMRA—of renewable energy source-certified electrical energy considering their proportion of the total electrical energy sold by all retail sale licensees within the previous calendar year. Overall, the state owned transmission company, Turkish Electricity Transmission Corporation (TEIAS), and distribution companies are obliged to give renewable energy plants priority over other source for connection to the electrical grid (G¹/₄m¹/₄Å¹/₄ÿ). Just as retail licensees are obliged to purchase the electricity generated by RES facilities for the resale to non-eligible consumers if the price of electricity generated at the RES facilities are equal to or lower than the sales price of the state owned wholesale company, Turkish Electricity Trading and Contracting Company (TETAS) (G¹/₄m¹/₄Å¹/₄ÿ). In addition to the 2001 incentives, this law includes feed-in tariffs that will be applied for a 10-year period to production licensees in operation before 12/31/2015. The feed-in tariff offers a cost-based compensation to renewable energy producers at 0.073 and 0.133 USD per kWh (kilowatt-hour) for wind and solar power plants, respectively (G¹/₄m¹/₄Å¹/₄ÿ). An additional 0.004 - 0.024 USD per kWh will be provided for five years to facilities that use domestically manufactured mechanical and/or electro-mechanical equipment (<http://www.hg.org/article.asp?id=20931>). <https://assignbuster.com/wind-and-solar-energy-ngo-in-turkey/>

Taşkenmez & Demireli noted a 2010 amendment, which incorporated the principles and procedures relating to the price, time and payments of supporting mechanisms to those generating RES electricity. It also includes distinctive incentives for those manufacturing mechanical and electro-mechanical components within Turkey for their production facilities. The feed-in tariffs have been under direct criticism from financial institutions and others in the renewable energy fields since the tariffs have been lower than expected. But considering that the economic burden of heavy dependence on expensive imported energy source has not kept Turkey from being one of the fast growing markets over the last two decades, renewable energy seems to be a feasible and effective solution for clean and sustainable energy development. Turkey is emerging as “one of the newest, most dynamic and proactive players in ensuring secure, uninterrupted, clean, and reasonably priced energy resources” and thus presents entrepreneurial fronts throughout the renewable energy industry (Ogutcu 70). But given Turkey’s current energy policies, I propose, for the overall betterment of Turkey’s renewable energy capabilities, founding a NGO dedicated to over-coming these non-economic as well as economic barriers using its own resources and those of others by introducing pertinent partnerships. We believe in Turkey’s natural potential to harness and generate clean and sustainable energy. Our mission is to connect renewable energy companies of all sorts and size with ideal corresponding partners in order to create an ever-improving sustainable energy supply for the people and environment of Turkey. [pic] [pic] [pic]