



Building Political Support for a Clean Energy Transition

How arguments on solar power affect public support in Germany and the US

An essay by Alexander Franke

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Building Political Support for a Clean Energy Transition — How arguments on solar power affect public support in Germany and the US

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INTRODUCTION

Renewables such as wind and solar have undergone an unprecedented growth over the past couple of years. Since 2013, renewables haven't taken over from fossil fuels in terms of added global capacity (Liebreich 2015, p. 33). This development is accompanied by an unprecedented fall in technology costs of renewables, particularly solar power (PV). In early 2015, PV was competitive in at least 14 US states without any state subsidies (Deutsche Bank Markets Research 2015). Yet despite its growing technical and economic maturity, small-scale renewables face resistance from status quo energy and other commercial interests. Germany, a country that has the same solar potential as Alaska, had added around 38GW solar capacity to its grid by 2014. In comparison, the US had only about half as much total solar capacity installed (18GW) but has been catching up fast over the past few years (REN21 2015).

An important factor contributing to Germany's early frontrunner position on renewables was the social consensus that ecological and economic concerns can not only be reconciled, but are in fact interlinked. In the US, on the other hand, support for renewables as well as the belief in anthropogenic climate change has long been dividing the public along party and ideological lines (Pew Research Center 2015).

Yet if you were to ask Germans why they decided to invest in solar panels on their rooftops, climate change may not necessarily be the main reason. Generally, Germans who own a solar rooftop installation or who joined a local solar community cooperative do not do this for environmental reasons alone. The more likely reasons are: to become more independent from their local utility, save electricity costs and come together as a community around a common cause. This example shows that there is seldom a single reason behind ordinary citizens' solar investment decisions. Instead, solar power is embedded in broader socio-political narratives and highly affected by individuals' beliefs and moral convictions — in other words, solar has to make intuitive sense to people and needs to be linkable to their general beliefs.

At the core of today's debates around solar power lies, essentially, a struggle of ideologies. Thus, it is important for supporters of solar power in current policy discussions to understand and influence how PV is politically discussed and negotiated by the public. Particularly in the US, arguments need to galvanize conservatives and progressives alike in order to support the further diffusion of solar-friendly legislation and stop recent legislation that aims to roll back the initial success of important policy and technology measures, such as net-metering.

1. New actors in the power market

When examining and comparing power markets in Germany and the United States, we find that traditional utilities are increasingly under attack by this clean energy transition. Historically, utilities in both Germany and the US were vertically integrated monopolies that controlled everything from power production to distribution. After steps towards market liberalization in around half of all US states and in Germany (Fratzscher 2015), we increasingly find “prosumers”, community power groups and co-ops challenging the energy market status quo and producing renewable power locally. Today, individuals, farmers and energy cooperatives own about half the renewable capacity in Germany (Leuphana Universität Lüneburg 2013). Having initially underestimated the huge potential of renewables, utilities around the world are now trying to find appropriate responses to their shrinking market share and profitability of their “old” — largely fossil fuel-driven — operations. An analysis of the Edison Electric Institute, the lobbying arm of investor-owned utilities in the United States, expressed concerns over the increasing competitiveness of renewable energies and storage options, which “could directly threaten the centralized utility model” (Edison Electric Institute 2013). Some observers refer to the utility crisis as a “death spiral” (Rocky Mountain Institute et al. 2014).

As a result, utilities are heavily engaged in political and public relations fights against laws and regulations that allow for greater bottom-up renewable energy integration. The growth in decentralized renewable energy is incentivized via support schemes, such as net-metering (popular throughout the United States) and feed-in tariffs (main driver of renewables in Germany). As a result, fighting those incentives has been at the forefront of utility lobbying.

Utilities are speaking out against these policies, arguing that they are responsible for higher electricity rates for non-solar customers. In the United States, there is a widespread debate about this so-called “cost shift”, but the empirical evidence is divided on the issue. Depending on what counts as an effect of these installations, solar power can either create additional system costs or help avoid them, for example by providing local power at times of peak demand (Rocky Mountain Institute 2013). In Germany, utilities and conservative lobby groups mobilized against the renewable energy law, the feed-in tariff and the provision of priority grid access for renewables at the end of 2012. They argued that the growth in renewable electricity was the main reason for rising power prices and, in consequence, for increasing energy poverty and a looming deindustrialization of Germany — all claims that have been discarded (Morris 2014; Morris 2013).

Seeing that the trend is so clearly in favor of renewables, utilities have begun to catch up in renewable investment, particularly when high returns are guaranteed by legislation or in areas where renewable installations do not directly compete with their existing

capacity. It is no surprise that German utilities, such as E.ON, are heavily invested in offshore wind installations in Germany. In many US markets, utilities are actually the single biggest investor in solar. The Arizona-based utility Arizona Public Service (APS), for example, fought against the existing net-metering regulations of its clients while adding PV to its portfolio. The same is true for NV Energy, which won a policy battle against rooftop PV in December 2015 all while continuing to add PV to its portfolio. This shows that utilities are not against solar power per se, but that they are instead fighting any new solar installations which are not owned by them and threaten their bottom line. In Germany and those US states where renewables are no longer a niche technology, the discussion is no longer about whether these technologies should be built at all, but rather about who controls and profits from them.

Thus, it becomes ever more important to consider arguments that will break the solar deadlock brought forward by concerned utilities and regulators. Comparing political arguments by German and American solar supporters can help to understand the importance of strategic framing on the issue of solar power.

2. Arguments by American and German solar advocates

Environmental arguments

Environmental framings have historically been prevalent for promoting solar power and other renewables. In Germany, the fight against nuclear power meant that renewables were presented as an alternative from the 1970s onwards.

In Germany, the early **anti-nuclear** sentiment has decreased in importance in pushing a renewable energy revolution due to the country's decision to phase out nuclear power. Instead, **climate protection** and, more recently, a call for a **coal** phase-out are the most important environmental arguments for energy alternatives and renewables. Solar proponents argue that restricting the growth in solar and other renewables would ultimately secure the profitability of the centralized utilities' outdated coal capacity in the power system — an argument that is used in a similar fashion by environmental groups in the United States. Unlike in the United States, German activists can always connect the issue of coal with climate change, as the notion of climate change is widely accepted by the population.

As climate change remains a contentious issue in the United States, political support can be maximized when solar is framed as a **“clean” technology** that helps to replace “dirty” technologies, such as coal power. Linking those arguments to issues of **public health, air quality** and the protection of nature can further help to overcome political polarization. **Environmental protection** in particular can be linked to conservative and Christian beliefs (Gromet et al. 2013): If nature is a pristine creation by God, presenting solar as a step towards **preserving the purity of nature** and the **outdoors** for future generations can help to reach out to new audiences.

Economic arguments

While economic arguments were largely negligible for solar power in the 1980s, these arguments are becoming ever more significant in light of the dramatic drop in technology costs: it has become increasingly attractive to frame solar as a net-economic benefit to consumers and the economy as a whole.

In Germany, supporters argued that solar power would help **create well paying jobs** as early as the 1990s. Early investments in this technology would strengthen

Germany's technological leadership and, as a result, increase the country's overall **global competitiveness**. Those arguments still exist, but they have had to face harsh backlash: as retail power prices in Germany have risen in parallel to the success of the renewable energy law, conservative and neo-liberal interest groups have started to argue that the *Energiewende* is a risk to the national economy. Thus, economic storylines of macro-economic benefits, such as job creation and economic growth, do not carry the same weight anymore. This is unfortunate, as complaints about the cost of solar are basically obsolete today. On the other hand, arguments about the **local economic benefits**, particularly for rural areas, and increased **economic democracy** through **community energy** still enjoy broad support among most Germans. Furthermore, supporters of decentralized solar see **actor plurality** in the energy marketplace as a virtue in its own right, whereas **traditional utilities are predominantly interested in securing their own assets and revenues** through their lobbying power.

In the United States, arguments around jobs creation carry significance as well, especially for progressive groups that are pushing for a clean energy transition. Moreover, arguments about the economic benefits for the individual citizen or homeowner are much more common in the United States, especially in recent policy debates on net-metering. Here, solar power has been turned into an issue about **saving and lowering power bills** for homeowners, and about the **individual's economic choice**. Those arguments are particularly powerful with conservative voters and tea party activists, who put a lot of emphasis on the freedom of choice by the individual. They are also open to arguments on utilities and state agencies having too close of ties to and creating a **state-backed utility monopoly for power generation**. This can be broken up through decentralized solar power generation, spurring **genuine competition** in the power market. Labeling issues to push back net-metering through rate alterations, such as a **solar tax** is a good practical example for such a communicative strategy. Groups like the Green Tea Coalition in Georgia are proof that such arguments can attract conservative and progressive actors alike into a pro-solar coalition.

What is most striking in comparing American and German economic arguments around solar is that similar arguments are translated into specific contexts: whereas Americans favor competition, Germans tend to place high value on actor plurality. Where Americans call out state-backed utility monopolies, Germans criticize the influence that traditional utilities have on politics. In general, however, arguments in the United States tend to focus on the rights and benefits of individual homeowners, whereas German arguments are more focused on the public good, community well-being and the economy as a whole.

National security arguments

Another series of arguments that can possibly shift the political discussion around solar power are considerations of national security. Solar power can help decrease the dependency on foreign energy imports and thus increase **energy security**. The United States has increased its domestic oil and gas production in recent years, and arguments

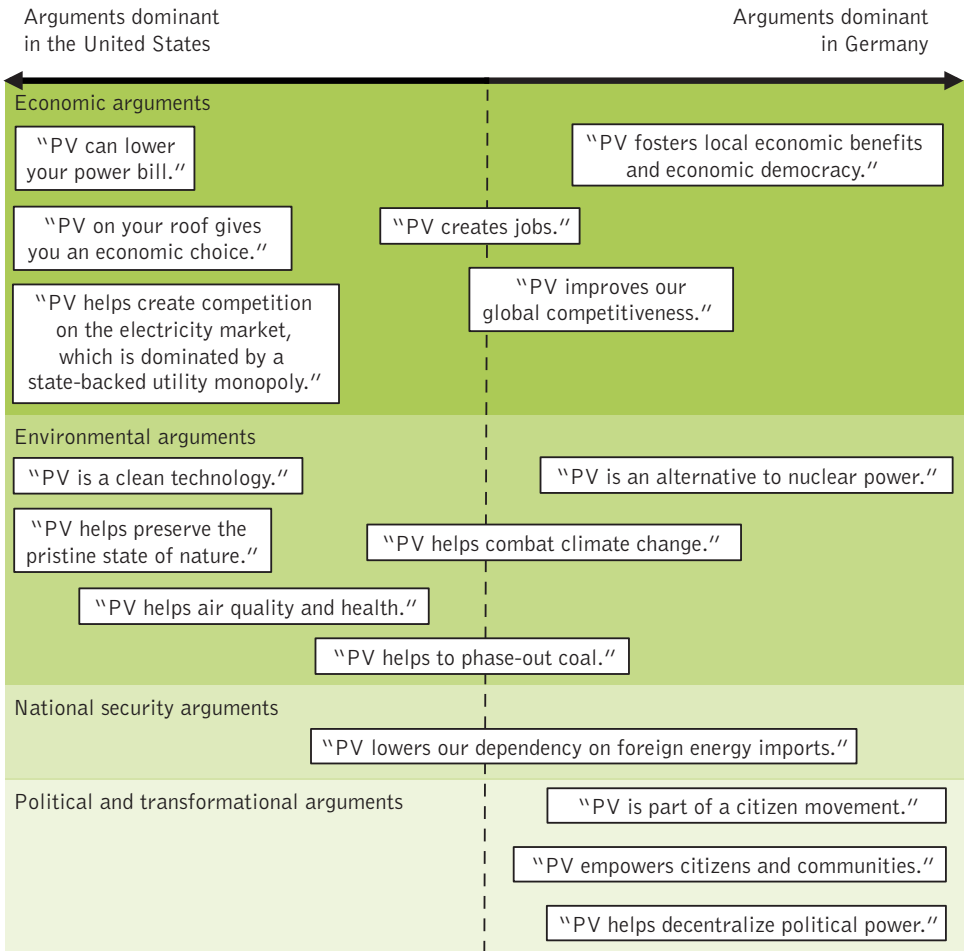
of national security do not carry as much weight as they did ten years ago when US foreign policy was driven in large part by considerations of energy security. In Germany, on the other hand, recent discussions on the dependency on Russian oil and gas imports and the Ukraine crisis could help to move the issue of energy security back on the agenda, and with it renewables and solar power. In summary, energy security arguments can be a powerful tool for clean energy solutions in policy fields where they have not been perceived as a solution to an existing policy issue.

Political and transformational arguments

Increasingly, arguments on community engagement and the decentralization of power generation have become viable arguments by themselves. As current debates between small-scale decentralized solar and centralized utilities unfold, many supporters of solar see decentralized power generation as a means for broader social change, such as more economic and political fairness.

In Germany in particular, solar power is closely linked to the idea of **empowering communities** and citizens: many supporters of the *Energiewende* actually see the project predominantly as a **movement of citizens** trying to collectively produce their power through cooperatives and become independent of large utilities. By doing so, ordinary people are taking their economic destiny into their own hands and collectively building a better and more sustainable future for themselves and for their community. In this view, decentralization of power generation fosters **economic and ecological resilience** and builds stronger communities, especially in rural areas. As rural constituents tend to vote more conservatively, it is not surprising to find some conservative politicians from rural areas at the forefront of the community power movement. In turn, German Conservatives also had to adjust their position towards renewables as a whole in order to not risk losing key constituents to the pro-renewable Green Party.

In the United States, transformational arguments only play a minor role at the moment, partly because discussions are too focused on the benefits for the individual. Here, activists should consider whether a strategic focus on decentralization and communities could work in the United States as it does in Germany. Culturally, the United States favors decentralization and individual liberties over federal and centralized policy solutions. Therefore, the public could be open to arguments of energy autonomy and community level engagement as the primary driver of the energy transition.



3. Outlook

Solar power is at the center of a struggle of ideologies. In Germany and the US particularly, utilities fight against the decentralized competition threatening their business model and investments. 2016 will probably see new and renewed public relation fights around net-metering in several US states like Arizona, Maine, New York and Massachusetts, while Germany will discuss another reform of its renewable energy law that will most likely be another push against citizens and co-ops in the energy market. So how do PV proponents build strong and broad alliances with long-lasting support?

A number of arguments can be used that resonate with progressive and conservative world views alike, be it the issues of individual rights and choice, economic competition or national security. This shows how deeply embedded political fights around renewables are in broader national discourses. Nevertheless, solar proponents in Germany and the US can learn a lot from each other's successes and setbacks.

Arguments for solar power need to cater to specific core needs and convictions of different audiences. This is why ecological arguments, job creation, self-sufficiency and community empowerment can all play a role in promoting solar power, but need to be used strategically and in a targeted manner. An argument involving economic benefits for rural communities through PV will not convince an urban Democrat. Reversely, talking about PV's role in tackling climate change might not be the best argument to convince a rural southern Republican.

The German example shows that concentrating on economic issues can be risky, as opponents of solar can discredit the technology by selectively focusing on negative economic effects like rising power prices. In debates, switching to renewables should not be reduced to an issue of economics. The current successes of the divestment movement proves that talking about the environmental and even moral aspects of fossil fuels and renewables can be a powerful strategic narrative.

Meanwhile, proponents of decentralized solar power have not yet found convincing ways to integrate racial and social issues into their arguments. The German example of energy cooperatives that allow individuals to take a small financial stake in the energy transition could serve as a positive example for a democratically driven and just transition. American groups such as the Community Power Network have successfully advocated this concept in the US for years. Furthermore, churches and other religious communities could become catalysts for citizen-driven green change.

It is clear that many utilities have an economic interest in slowing the rise of decentralized solar in the coming years. As the recent example of Nevada shows, utilities are still able to organize their political lobby and push back against net-metering and similar measures. Hence, it is all the more important for supporters of decentralized PV to win new allies for their energy visions. Finally, if supporters of solar truly want to

level the playing field, innovative ways to reconcile the interests of solar supporters and utilities need to be found.

The state of Oregon is a good example demonstrating that the struggle for the future of energy does not need to be antagonistic: the Clean Energy and Coal Transition Act was passed in March 2016 with bipartisan support and was supported by a broad group of stakeholders. It envisions a coal phase-out by 2030 and foresees a community solar program which allows utility customers to participate in the ownership of utility solar. More generally, regulators should adopt new energy market rules which ensure that community power groups and utilities no longer have incompatible interests. In today's regulated power markets, the utilities' business model still relies on building power plants and grid capacity. It is natural they fear outside competition. Therefore, by making sure that regulated utilities profit from the introduction of smart grids, decentralized power generation and energy conservation instead of dirty power plants and static grids, much of the current conflict of interests can be mediated (Roberts 2015). New York's Reforming the Energy Vision (REV) proposal is leading the way in this regard and Germany would do well to learn from these innovative American examples.

There really is no reason why decentralized solar should remain a green dream. It can become a non-partisan reality.

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For supporters of renewable energy, particularly solar, it is becoming increasingly important to leverage an array of arguments that can galvanize further public support and diffuse current political deadlocks. Renewables have witnessed unprecedented global growth in recent years, including in Germany and the US. The growing clean energy transition and its emerging decentralized actors threaten the traditional business model of large utilities, contributing to a deadlock around laws, regulations, and political support. This article elaborates and compares a number of arguments from US and German renewable energy advocates, dividing them into the categories of environmental, economic, national security, political and transformational arguments. To build strong and broad alliances with long-lasting support for renewables, it is important to cater to the needs and convictions of diverse audiences. Used strategically, ecological arguments, job creation, self-sufficiency and community empowerment can all play a role in promoting renewables. Advocates in Germany and the US can learn from each other's successes and setbacks in building public support and help pave the way for a "green dream" to become a non-partisan reality.