



THE GERMAN ENERGY TRANSITION – IMPLICATIONS FOR NEW YORK STATE

On April 29th 2015, Ecologic Institute US and the Guarini Center on Environmental, Energy and Land Use Law at NYU School of Law convened a program to discuss the lessons that New York State could draw from the path-breaking German Energy Transition (*Energiewende*) as it pushes forward with its own comprehensive energy reforms known as “Reforming the Energy Vision” (REV).

The program commenced with a public panel discussion featuring the following German and American experts:

- Justin Gillis, Environmental reporter for the New York Times;
- Chris King, Global Chief Regulatory Officer, Smart Grid Services, Siemens AB;
- R. Andreas Kraemer, Founder and Director Emeritus of the Ecologic Institute in Berlin;
- Michael Mehling, Executive Director of MIT’s Center for Energy and Environmental Policy Research; and
- Eleanor Stein, Advisor for Special Projects at the New York State Public Service Commission.

Georg Maue, First Secretary for Energy and Climate Issues at the German Embassy in Washington DC, welcomed an audience that included over 150 in-person attendees and dozens more who joined via Livestream. The video was subsequently posted on YouTube, where it continues to draw viewers.

Following the public discussion, the panelists met for a private lunch discussion with a group of high-level representatives from New York State government, the local utility companies, cleantech entrepreneurs, environmental organizations, and academics. The private stakeholders meeting, conducted under Chatham House Rule, provided an opportunity for a candid and detailed discussion about how New York could adapt elements of the German experience.

Key Messages

As Justin Gillis noted to open the public discussion, a crucial question facing New York State is how to take advantage of its status as the second mover behind Germany “to gain the benefits of the *Energiewende* without the problems.” “How do we get where they’re going,” he asked, “without destroying our utility sector in the process?”

Below we summarize some of the major points of consensus that emerged throughout the day as participants grappled with these questions.

New York has several key advantages over Germany that should make its transition to renewable energy less costly. Participants at the meeting universally agreed that it should be less complicated to expand renewable energy production in New York than it was in Germany. To begin with, renewable energy costs have fallen enormously in the twenty-plus years since Germany launched the Feed-in-Tariffs that catalyzed renewable energy growth there. Moreover, natural gas, which as one expert noted is “the perfect ally of policies that seek to quickly ramp up renewable energy,” costs approximately half as much in New York State as it does in Germany. Finally, New York receives far more solar radiation than Germany, which makes solar panels much more productive in New York.

Notably, though, experts warned that it may be more politically difficult to phase out peaker plants in New York than it has been in Germany; because local property taxes are much higher in New York and therefore power plants may comprise a significant portion of local tax bases, officials may encounter local resistance to policies that shutter plants. One expert suggested that New York policymakers could head off this opposition by siting renewable energy projects near plants that are slated for closure.

From an economic perspective, the Energiewende has produced both winners and losers. German experts stressed that to properly assess the costs and benefits of the *Energiewende*, one must consider the economy-wide impacts rather than just the impact on utilities, some of which have had their market values cut in half in recent years. When viewed on an economy-wide basis, the policy has conferred some meaningful economic benefits, they argued. “The policy has led to the creation of a new business – renewable electricity production – that is worth about 40 billion Euros a year and employs just over 400,000 people,” one German expert noted. The policy has been a windfall for German industry in general, which is largely exempt from paying the renewable energy surcharge and has seen power prices plunge as renewable production capacity has surged. “You can now buy electricity in



Germany for 0.33 Euro-cents per kWh on the wholesale electricity market,” a panelist noted.

As for German retail consumers, contrary to certain popular characterizations, the *Energiewende* has not had a dramatic impact; the policy costs households approximately €250 per year, which panelists described as “relevant” but not overwhelming. To put this price increase in context, one panelist noted that heating fuel costs had risen more significantly than retail electricity prices in recent years.

German utilities' shrinking market capitalizations are largely due to poor business decisions; this is not the inevitable consequence of increasing renewable energy production. German experts at the meeting argued that the decline in utilities' market values since the *Energiewende* took root was primarily of their own doing. “That’s the price for not seeing the writing on the wall and insisting on investing in nuclear and fossil generation well beyond the point at which it made sense to do so,” one expert noted. Another expert noted that because German utilities' generation businesses have been the primary drag on their valuations, New York’s fully restructured utilities should not suffer similar hardships.

Smart regulation can meaningfully reduce the soft costs associated with solar installations. German experts noted that the streamlined regulatory framework in Germany makes it far easier to install solar panels and has helped to drive down soft costs. It takes “weeks, rather than months,” experts noted, and you only need “one permit instead of the three or four you need in the US.” Meeting participants agreed that New York needs to muster the political will to simplify its bureaucratic processes.

The certainty of the German Feed-in-Tariff (FiT) has propelled rapid growth of renewable energy but has also caused some unexpected challenges. The FiT’s 20-year contracts to sell renewable energy at a guaranteed cost-based price has been key to Germany’s success in incentivizing renewable energy production. However, these long-term contracts have also made the policy quite costly, particularly in the early years when renewable energy installations were very expensive and required more generous subsidies. Moreover, the rigidity of the regime made it difficult for regulators to maintain tight control over the pace of renewable energy expansion and, at times, new resources came online faster than was anticipated or desired. As New York moves forward with REV, it must

grapple with how to create enough certainty to drive investment while building in enough flexibility to allow the system to adapt to changing market conditions.

Reliability in Germany has not suffered due to the expansion of renewable energy. German experts emphasized that the increase in renewable energy production has not caused grid reliability to decline. To the contrary, it has forced grid operators to take a more active role in maintaining grid balance. Whereas grid operators previously may have intervened once or twice a day to ensure supply and demand remained synchronized, they now intervene far more often. The sector’s professionalism has risen to meet the challenge and there have been no ill effects. New York State’s proposal to create a Distributed Service Platform provider indicates that it is well prepared to transition to the more active management approach that would be required to accommodate a significant expansion of renewable energy resources.

Next Steps – Continuing the Exchange

Germany and New York – two jurisdictions at the cutting edge of electricity policy reform – should establish strong and open lines of communication as they experiment with electricity policy innovations. There is a great deal of commonality between the goals the two states are promoting: growing the share of renewable energy while maintaining network stability and reliability; ensuring affordability of electricity; fostering competitiveness of businesses, particularly energy-intensive industry; and investing sufficiently in the grid to allow for continuous adaptation to a changing energy system. Sustained transatlantic exchanges of information and experiences in advancing these goals will drive least-cost realization of the energy reforms New York State and Germany aim to achieve.

To that end, we note with great satisfaction that the participants at the stakeholder meetings have already exchanged a number of emails since the event, asking follow up questions and diving deeper into the fine points of the German experience. We hope that the group can reconvene in person at some point again before the end of the year. REV, like the *Energiewende*, is an evolving, fluid process and we believe regulators on both sides of the Atlantic would benefit greatly from periodic meetings to update each other on their progress and latest challenges and to exchange ideas. Ecologic Institute US and the Guarini Center look forward to facilitating this conversation.