



David Edsey: A view from **outside** the nuclear community

This past October, the House Select Committee on the Climate Crisis held a hearing titled “Good for Business: Private Sector Perspectives on Climate Action.” The hearing reviewed perspectives on the importance of the government’s investments in climate action and how these investments would contribute to job creation and economic growth. Those testifying included the founder of a solar energy company, the head of communications and policy for a popular outdoors clothing company, a former deputy energy secretary for the Department of Energy, and an executive from an insurance company.

While the solar company founder and the communications head spoke out against nuclear energy, the former deputy energy secretary, during testimony, was in favor

of it. The insurance executive, David Edsey, also talked in support of nuclear during the committee’s Q&A session after testimony.

Edsey, an attorney, is Zurich North America’s climate director, responsible for identifying and developing insurance products and service solutions to address climate change mitigation and adaptation. Zurich North America is part of Zurich Insurance Group, which serves customers and provides insurance products and services in more than 215 countries and territories.

Nuclear News editor-in-chief Rick Michal sat down with Edsey to talk about why he, as someone from the outside looking in, supports nuclear as a part of the solution to climate change.

What is the role and responsibility of the climate director, which I understand is a new position at Zurich?

Yes, the position was created in March 2021. My primary responsibility is to look at Zurich North America's entire portfolio of insurance products and services and to identify and develop opportunities to assist our customers in transitioning their operations to net-zero emissions and to help them as they face the increased risks of climate change. My role also includes being a thought leader on climate change and serving as a Zurich North America resource on climate change-related issues.

How is Zurich moving toward net-zero emissions?

We have been operating as a carbon-neutral company since 2014 through the purchase of carbon offsets. But we have also set targets to reach net-zero emissions in our operations by 2050 and have set aggressive interim targets. We have committed to reducing our 2019-level carbon emissions by 50 percent by 2025 and 70 percent by 2029. We're doing this, in part, by committing to eliminating internal-combustion-only vehicles from our global fleet by 2025. We have also committed to using 100 percent renewable power in our office buildings by the end of 2022. In addition, we have committed to reductions in our business travel, data centers, printed paper, and many other aspects of our operations, including addressing the emissions of our service providers. In our role as institutional investor, we are a founding member of the United Nations Net-Zero Asset Owner Alliance and have committed to achieving a net-zero investment portfolio by 2050, with aggressive interim targets to achieve by 2025, including avoiding 5 million tons of greenhouse gas emissions per year through our impact investments.

How is Zurich helping customers adapt to net-zero emissions?

Many of our customers, especially those in the industrial and manufacturing sectors, face a greater challenge in reducing their emissions than Zurich itself does. We recognize that our customers have to address both the physical risks of climate change from more severe weather and the transition risks in getting to net-zero emissions. Zurich recognizes carbon as being one of the biggest risks that companies will face for the remainder of this century, and being in the risk management business, we are ready to engage with our customers on this issue.

Can you talk about some projects that have made significant progress toward zero-emissions targets?

One project that we are most proud of is our collaboration with Instituto Terra in what used to be the Atlantic Forest in Brazil. Due to deforestation, only 7 percent of this forest is left intact. Instituto Terra has been committed, since 1998, to replanting over 100 different native species of trees and other plants to restore this biodiverse ecosystem. Zurich's grant covers the planting of one million trees over eight years. Today, the reserve is a shelter for more than 250 species of animals and covers a total area 1,730 acres. Restoring this rain forest will significantly help the planet with capturing the excess carbon in the atmosphere.

What was Zurich's presence in Glasgow at COP26 in November?

Our most visible presence was our statue, which we erected in Merchant Square in Glasgow during COP26. The statue, which is made from captured carbon, depicts a circle of individuals standing elbow to elbow and invites individuals to step into it and join the circle and ask the question, "What can go right when we join together to combat climate change?" In addition, we were actively involved at COP26 in various meetings and events, including participation in the Race to Resilience meetings focusing on climate change adaptation. We are also one of the 450 members of the Glasgow Financial Alliance for Net Zero, which emerged from COP26, and which is mobilizing trillions of dollars to finance the decarbonization of the world's economy.

During your testimony before the House committee, you noted, "Commitments from industry and commerce will not be enough to eliminate greenhouse gas emissions by 2050 to keep global warming in check. Decisive governmental action is needed." What actions would you recommend?

To decarbonize our economy, we really need governments to stop subsidizing the fossil fuel industry and to create incentives to transition to carbon-free energy sources. The most efficient way to do this would be through some form of carbon tax or cap-and-trade mechanism. Per the World Economic Forum, about 21 percent of global greenhouse gas emissions are currently covered under some form of carbon pricing. One example of such a bill

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Edsey testifies before the House committee.

pending before the U.S. Congress is the Energy Innovation and Carbon Dividend Act, which places a fee on fossil fuels at their source and distributes 100 percent of these revenues to all U.S. households as a dividend. Such a law would incentivize industry and consumers to move away from carbon-intensive energy sources and toward carbon-free sources. The nuclear power sector would certainly benefit from such carbon pricing mechanisms, as it provides a carbon-free source of power.

Another area where governmental action is needed is in setting data standards and disclosure requirements for companies' climate-related risks and emissions. Trillions of dollars of private capital are ready to be deployed to support the technologies and industries needed for the transition to net zero and to support the companies that are aligning their goals and operations with the Paris climate agreement.

But investors need clarity, transparency, and consistency in climate-related disclosures in order to avoid the risk of greenwashing and misallocation of funds. By providing a framework for disclosures, governments can effectively unleash trillions of private investment dollars to support the transition to a carbon-free economy.

How can federal action help address the increasing cost of climate when it comes to insurance rates?

In the United States, the insurance industry is largely regulated at the state level, so federal action to address

insurance rates is unlikely. However, there are actions that the federal government can take to support the insurability of certain regions, and this basically boils down to providing financial support for communities to build resilient infrastructure that can withstand the effects of climate change. The \$1 trillion infrastructure bill that recently was signed into law includes billions in funding to do just that. The federal government can also incentivize local governments to adopt modern building codes, and the use of construction industry best-practice standards in high-risk areas would also mitigate losses and have a positive impact on insurance rates. Sound land-use planning that takes into account climate change models can also effectively mitigate the damage from climate shocks and have a positive impact on insurability.

You noted during your hearing comments, "What we need is an orderly transition to net zero. In managing risk, we take the science and engineering of risk very seriously." Does nuclear energy fit into Zurich's science and engineering stance as a solution to climate change?

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Risk engineering focuses in large part on identifying the root causes of risks and then recommending changes in structures or processes to eliminate those causes of risk. The cause of climate change has been identified as human-generated greenhouse gases. The solution to climate change has also been identified: modifying our energy systems to elimi-

nate greenhouse gas emissions or substituting non-carbon energy generation systems. Because nuclear power does not emit carbon dioxide as a by-product, it can be part of the solution to climate change.

However, finding permanent storage solutions for nuclear waste remains a challenge. Therefore, the extent to which the world's reliance on nuclear power increases, as a carbon-free solution to the climate crisis, will likely depend on appropriate storage solutions, which will differ from region to region. So, the climate crisis should add a new sense of urgency to solving the nuclear waste challenge.

The issue of nuclear waste is often brought up during discussion about electricity generators. At the same time, there is not a good solution for end-of-life solar panels and wind turbines. Do the problems of those technologies have implications on insurance rates for customers?

Probably not, but your question brings to mind a recent life-cycle assessment of the carbon emissions of electricity generators completed by the United Nations Economic Commission for Europe. Their findings are contained in a white paper, “Life Cycle Assessment of Electricity Generation Options.” The study looked at the cradle-to-grave emissions of six electricity sources—coal, natural gas, nuclear power, solar, wind power, and hydropower. Not surprisingly, coal had the highest rates of greenhouse gas emissions per kilowatt-hour of electricity generated, followed by natural gas. Nuclear power had the lowest rates of life-cycle greenhouse gas emissions in the study, at 5.1–6.6 g CO₂ eq./kWh. The next lowest rates were wind power (7.8–16 g CO₂ eq./kWh for onshore and 12–23 g CO₂ eq./kWh for offshore), followed by hydropower and solar.

Does Zurich have an image in mind of what a clean electricity grid would look like?

It wouldn't emit any carbon dioxide into the atmosphere. So, fossil fuels could only be part of the clean grid if it employed carbon capture technology to remove the carbon from the emissions and sequester it underground or elsewhere. Otherwise, a clean grid would be made up of a mix of solar, wind, hydro, geothermal, and nuclear power sources. Currently, the U.S. energy grid is made up of about 40 percent natural gas, 20 percent coal, 20 percent nuclear, and 20 percent renewables, which includes solar, wind, hydro, and geothermal. The percentage of solar is quickly expanding as the price of solar panels has dropped significantly over the past several years. However, it is also anticipated that electricity demand is going to increase dramatically over the next 30 years as the transportation, industrial, and building sectors electrify themselves, so we'll need all the carbon-free generation capacity we can get to keep up with rising demand. ☒