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Let's Unite to Accelerate the Energy Transition

Renewable Energy

Decarbonizing the energy sector is crucial for combating climate change, improving air quality, ensuring energy security, fostering economic growth, and promoting sustainable development. Energy plays a significant role in the emission of greenhouse gases worldwide, with the foremost contributor being electricity and heat generation, predominantly powered by coal and natural gas.

Sweden consistently places among the most innovative countries in the world and is a leader in sustainability, with nearly all its electricity sourced from renewables and nuclear power. By forging strategic partnerships, Sweden and the United States can accelerate the adoption of cleaner energy in both nations and globally.





The Pursuit of a Sustainable Energy System

Sweden aims to become the first fossil-free OECD country by 2045, working closely with various sectors of industry and society. Exceeding expectations, Sweden reached its 50% renewable energy goal in 2012, well ahead of the 2020 target. Now, Sweden is aiming for 100% carbon-free electricity by 2040. This progress stems from market-driven policies prioritizing energy efficiency and sustainability, such as carbon tax, aligning with ambitious climate objectives, and collaborative efforts, such as closer integration within regional power markets. Innovative companies spearhead Sweden's efforts to address global energy challenges, alongside policymakers and world-class researchers through pioneering solutions.

Harnessing Nature to Decarbonize the Grid

With abundant flowing water and biomass reserves, Sweden relies heavily on renewable energy sources. Hydropower is harnessed for electricity generation, and bioenergy is used for heating.

In the field of wind power, innovative companies include Hexicon, which develops floating offshore wind turbines, and Modvion, which builds wind turbine towers out of wood. Project developers Vattenfall, OX2, and Eolus are advancing onshore and offshore wind power deployment in Sweden and globally. Meanwhile, Alfa Laval and Trelleborg play crucial roles in promoting sustainable supply chains on a global scale.

Despite solar power only constituting 1% of Sweden's electricity generation, innovative companies such as Midsummer and SunRoof focus on building integrated solar panels.

Although still an emerging sector, Corpower Ocean, Ocean Harvesting, and Waves4Power are at the forefront of pioneering wavepower technologies. Minesto develops an innovative concept for tidal power generation.

Leading the Way in Heating and Cooling for Urban Decarbonization

With one of the world's most sophisticated and integrated district heating and cooling systems, leveraging sustainable bioenergy and waste, the decarbonization efforts of cities around the nation are accelerated. Additionally, innovative carbon capture and storage projects target reducing greenhouse gases in the atmosphere.

Experiencing a surge recently in the United States, heat pumps have been adopted at a large scale in Sweden since the 1990s. NIBE, Thermia, Rototec, Qvantum, Muovitech, and Aira are Swedish leaders in innovative heat pumps and related solutions.

Driving Sustainability and Innovation in Battery Value Chains

Sweden strives to become one of the leading nations in sustainable battery value chains. Northvolt is committed to leading the way in developing the world's most sustainable batteries. Volvo Energy provides comprehensive solutions for battery optimization and lifecycle management. Atlas Copco Power Technique develops temporary energy storage solutions for industrial applications. Moreover, the supply chain benefits from alternative cathode active material providers like Altris, specializing in sodium-ion battery technology, and Enerpoly, leading the charge with zinc-ion battery technology.

Advancing Grid Build-Out and Integration of Renewables

Critical to large-scale electrification of society, Sweden has one of the most stable electricity grids in the world. ABB, Ericsson, Roxtec, Plexigrid and dLab contribute to cutting-edge transmission, distribution, and grid management technologies, further enhancing energy systems' efficiency and flexibility.

