Wind Energy Planning and Simulation in the Context of Landscape

Wind energy is competing with fossil fuels in many areas of the world. Smart City projects are springing up all across the globe and together with these projects also comes the huge demand for Clean Energy to power these cities, Wind Energy being one of them. According to an article in MIT Technology Review, for wind power, the bigger is the better. Higher altitudes have steadier winds, while longer turbine blades generate more power. However, bigger wind turbines raise questions on Smart City planning that needs to be answered every day: With the existing landscape, where should the wind farm be positioned? If land grows scarce, what happens if we plan to have new buildings near the wind farm? Can we think bigger wind turbines and place them offshore, not far from our city? What is the cost? What is the impact on the environment? These questions require the help of simulation to test different scenarios taking the landscape, wind farm and buildings into consideration but that's not the end of the story. The 3DEXPERIENCE platform not only brings the technology to do design integrated simulation scenarios to give quick feedbacks but also a complete environment to connect all the stakeholders to the innovation process and tools to instantly collaborate and share ideas.

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