Blockchain Technology in Carbon and Energy Markets - Case Study Comparison

Case Study	Sample Size	Objective	Benefits	Challenges
Shanghai Environment and Energy Exchange	Not specified	Impact of integrating BCT into the carbon trading market.	• Accurate data • Trusted transactions • Cross-regional trade • Stable pricing	• Steep learning curve • Scalability issues • Integration complexity • No legal support
China's Carbon Market	20 industries, 3,000 companies	Effect of BCT on China's carbon market from various perspectives.	• Increased trust • Real-time settlement • Automation • Market stability	• Low market size • Less awareness • Need for legal backing
Shenzhen & Beijing Pilot Programs	8 pilot systems in China	Impact and evolution of carbon trading with BCT.	• Lower admin costs • Better privacy	• Fewer participants • Slow adoption
Urawa Misono Microgrid, Japan	10 consumers, 5 prosumers, 1 mall	Challenges of BCT in the energy sector.	• Not specified	• Scalability issues • Low data storage • No legal framework • Poor interoperability • Security risks