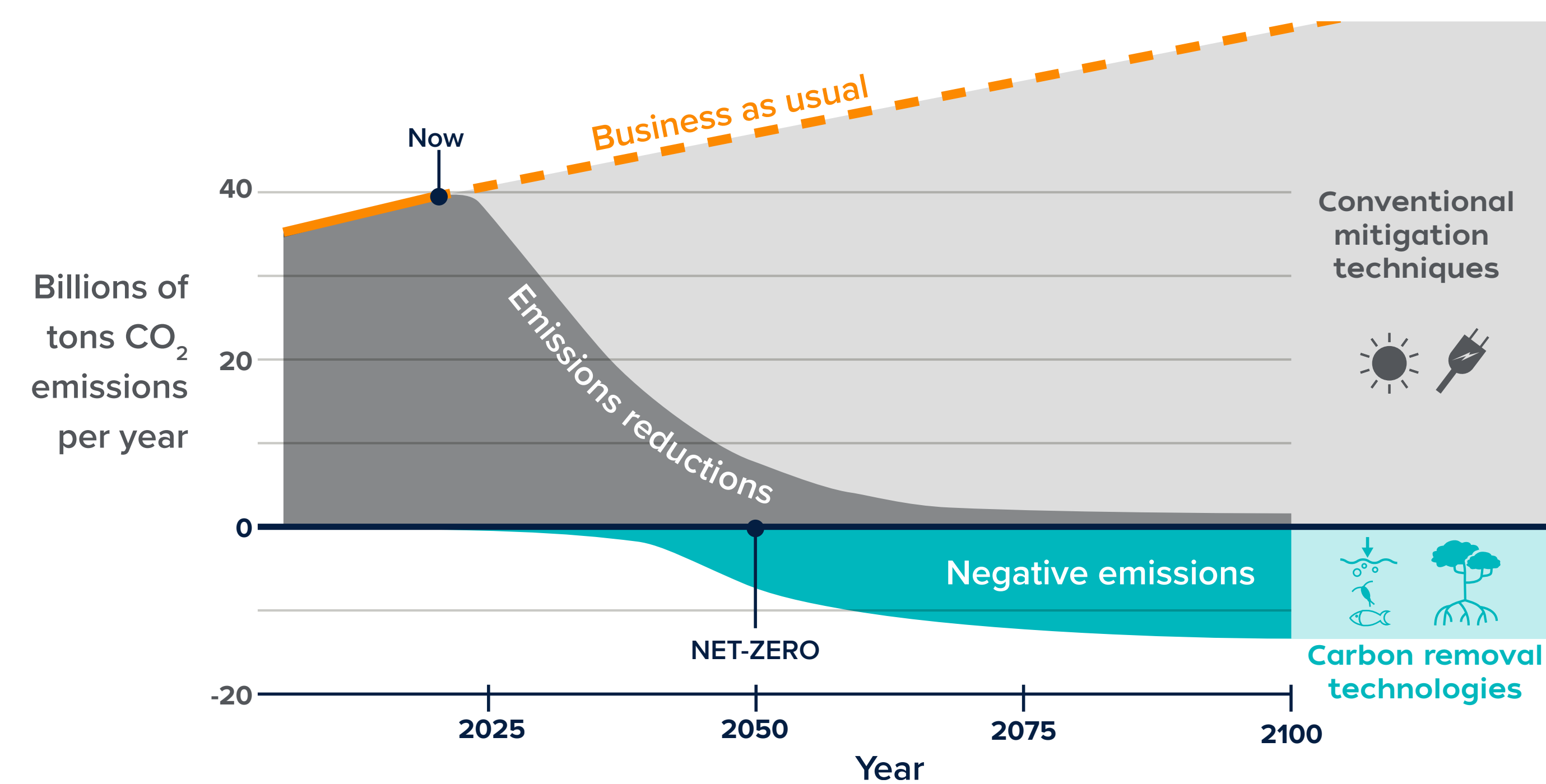
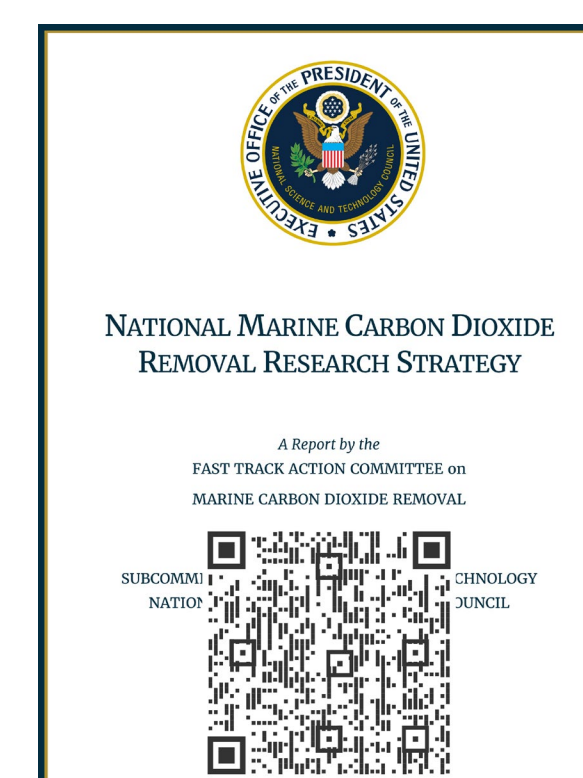


Marine Carbon Dioxide Removal and Ocean Alkalinity Enhancement

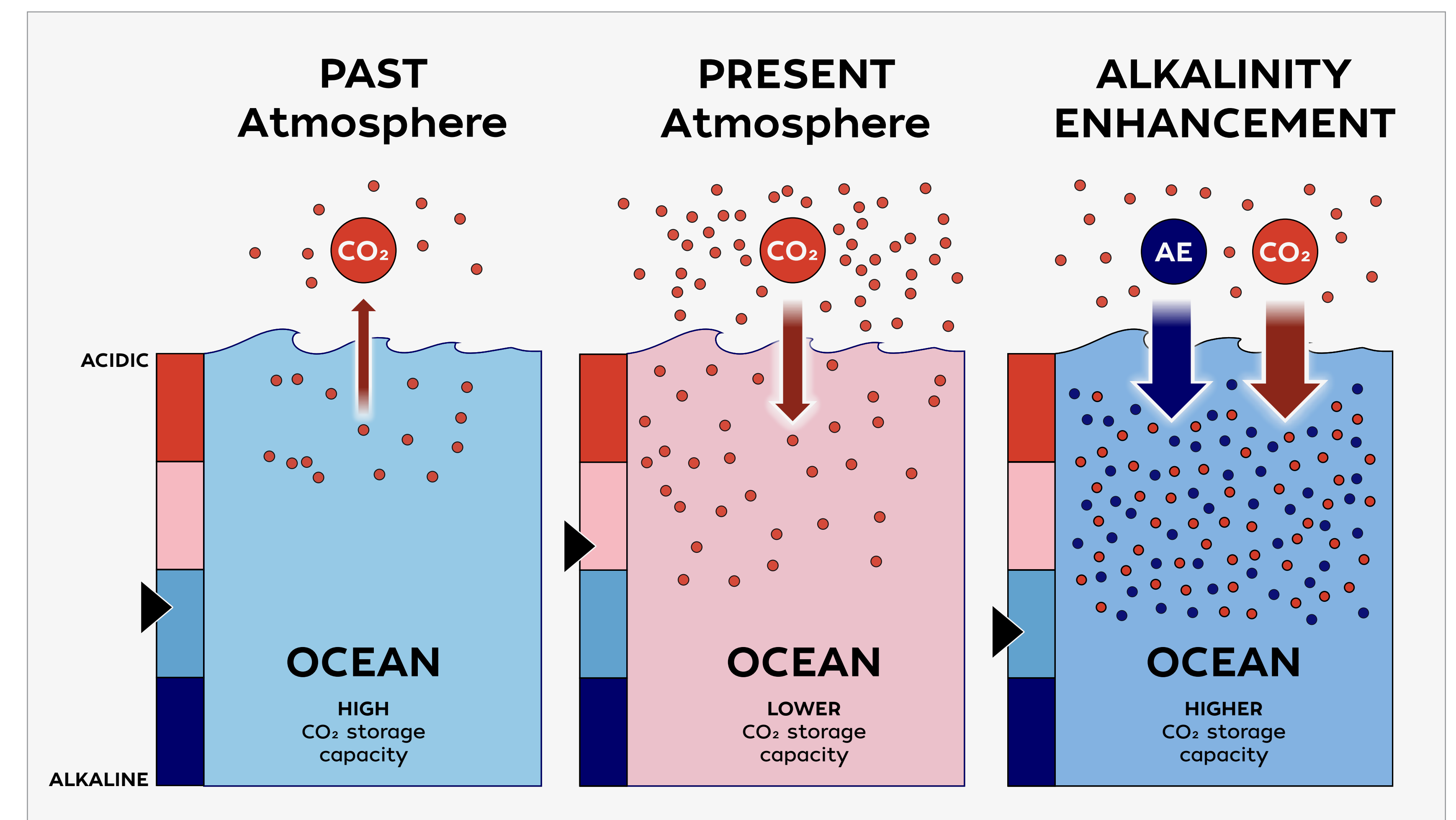
Marine carbon dioxide removal (mCDR), if shown to be safe and effective, has the potential to store atmospheric carbon in the ocean, slowing the warming of the planet. National and international scientific bodies have recognized the need for research into this topic.



There is a growing industry surrounding the sale of carbon credits from mCDR in a \$1 billion voluntary carbon market.







One proposed mCDR strategy is ocean alkalinity enhancement (OAE), which involves adding alkaline materials to the ocean to increase its ability to absorb carbon dioxide while also temporarily reducing acidity of surface waters.



The LOC-NESS Project is using lab and field experiments along with computer models to answer key questions about the safety and effectiveness of OAE:

1. Can carbon dioxide absorption by the ocean be measured and verified? What are the best methods to do so?
2. Where will alkaline material go once it is in the ocean?
3. How will adding alkalinity to the sea surface affect ocean life and ecosystems?

A limited, highly monitored field experiment is needed to fully address these questions.

	100 tonnes per year CO ₂ removal from the ocean and high-pH discharge
	8,200 tonnes olivine sand added to N.C. sediments in ~25 ft. of water
	300+ tonnes MgOH discharged in Halifax Harbor and the Chesapeake--C credits officially issued
	Contracted by Microsoft for 350,000 tonnes removal via NaOH by 2035

LOC-NESS IS NOT A PATHWAY TO OR AN ENDORSEMENT OF OAE. The project is not selling carbon credits and is not participating in the carbon market. We are committed to a transparent, rigorous, scientific evaluation of OAE to guide the formation of fact-based regulation and policy.