CDR is a limited resource

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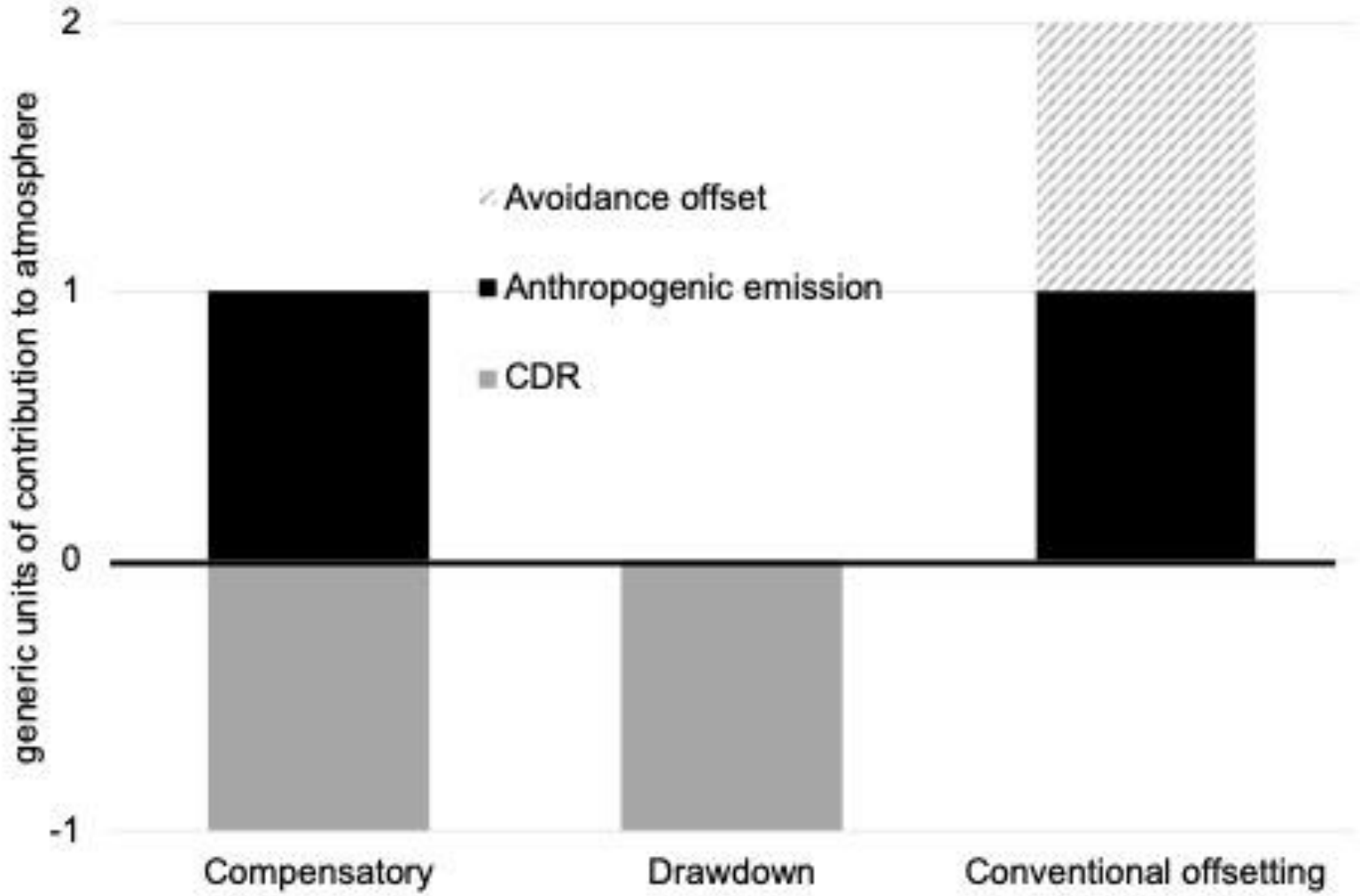
CDR has two major functions

Compensatory removal (offsets)

- Removing CO_2 to compensate for ongoing emissions
- “Luxury” removals (emission could have been eliminated)
- “Necessary” removals (emission could not have been eliminated)

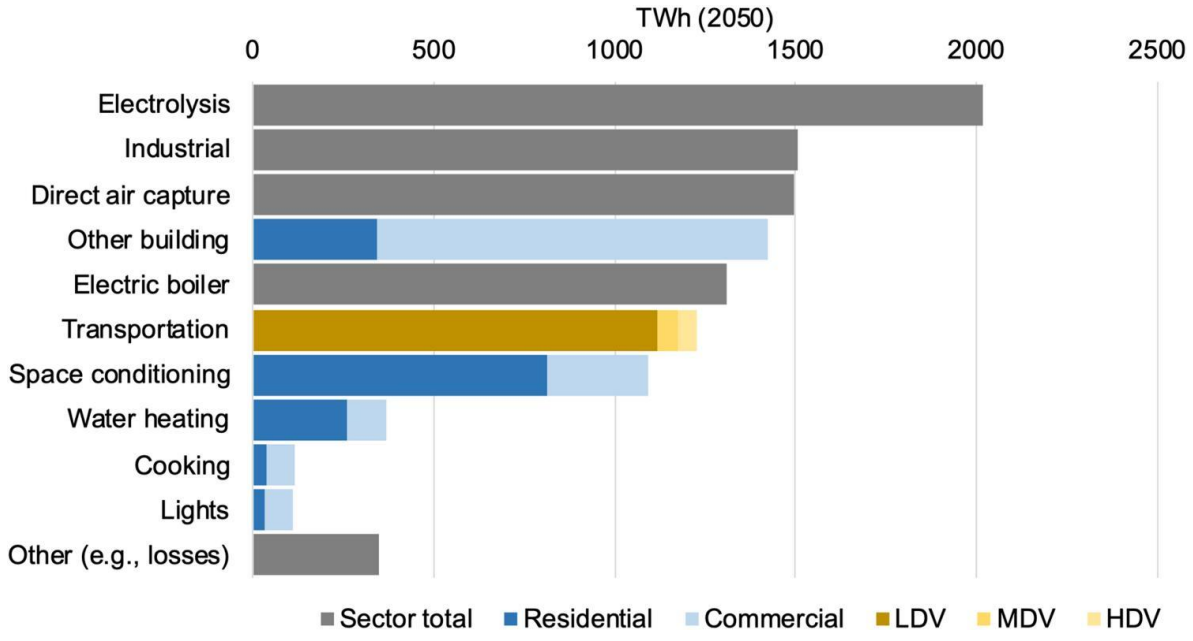
Drawdown removal

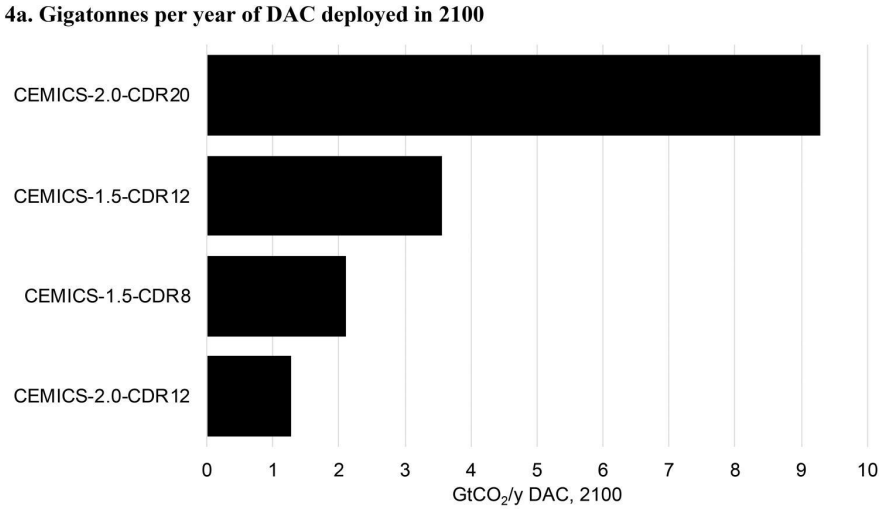
- “Net negative” emissions conditions
- Addressing legacy emissions
- Climate restoration

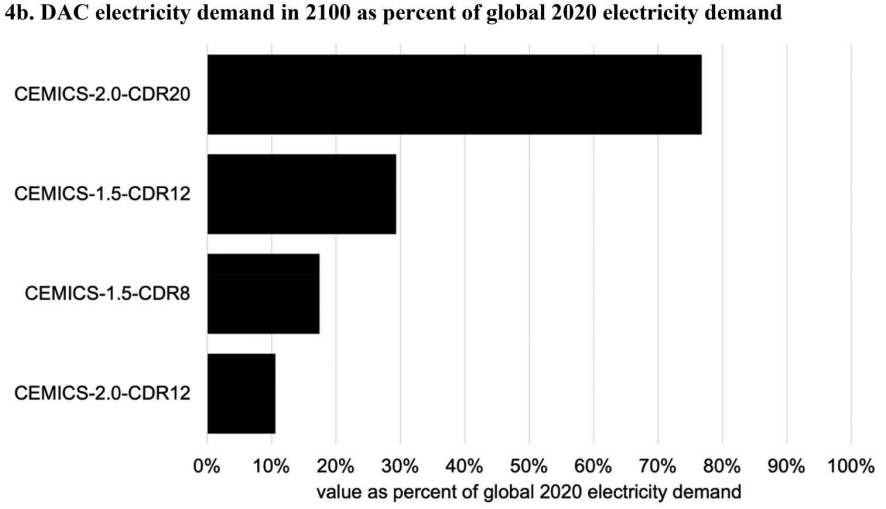


Source: Grubert and Talati 2023

CDR is limited: as one example, it could be very energy intensive







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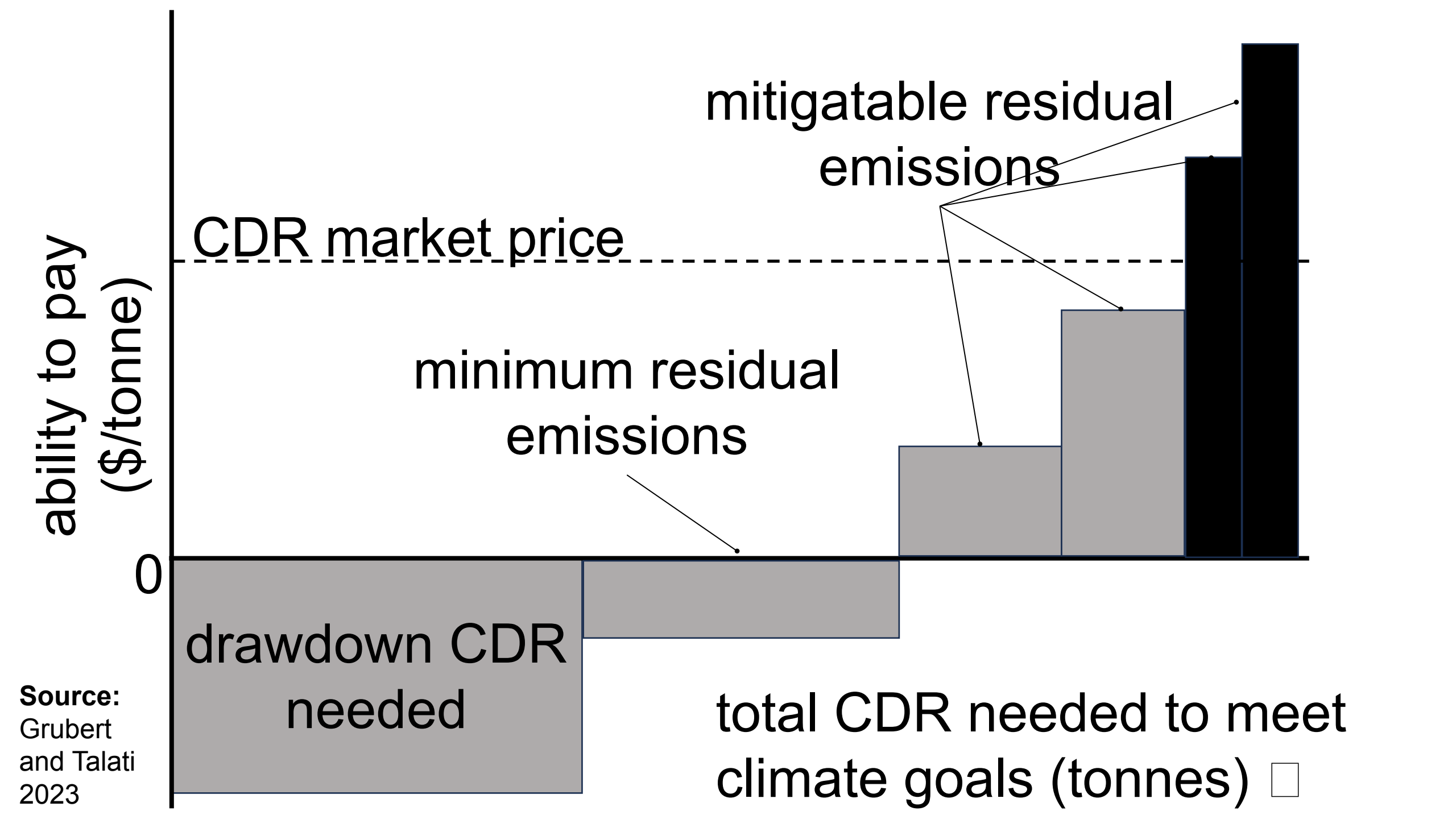

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Governance is a core issue for CDR

- Current US approaches incentivize maximizing CO_2 storage
- Marketized CDR encourages substitution of mitigation by compensatory removals, increasing the overall system scale
- Even small systems will be large: but it is not a foregone conclusion that “incumbent” fossil industry players must manage these systems

Carbon dioxide removal is a limited resource with a critical atmospheric function

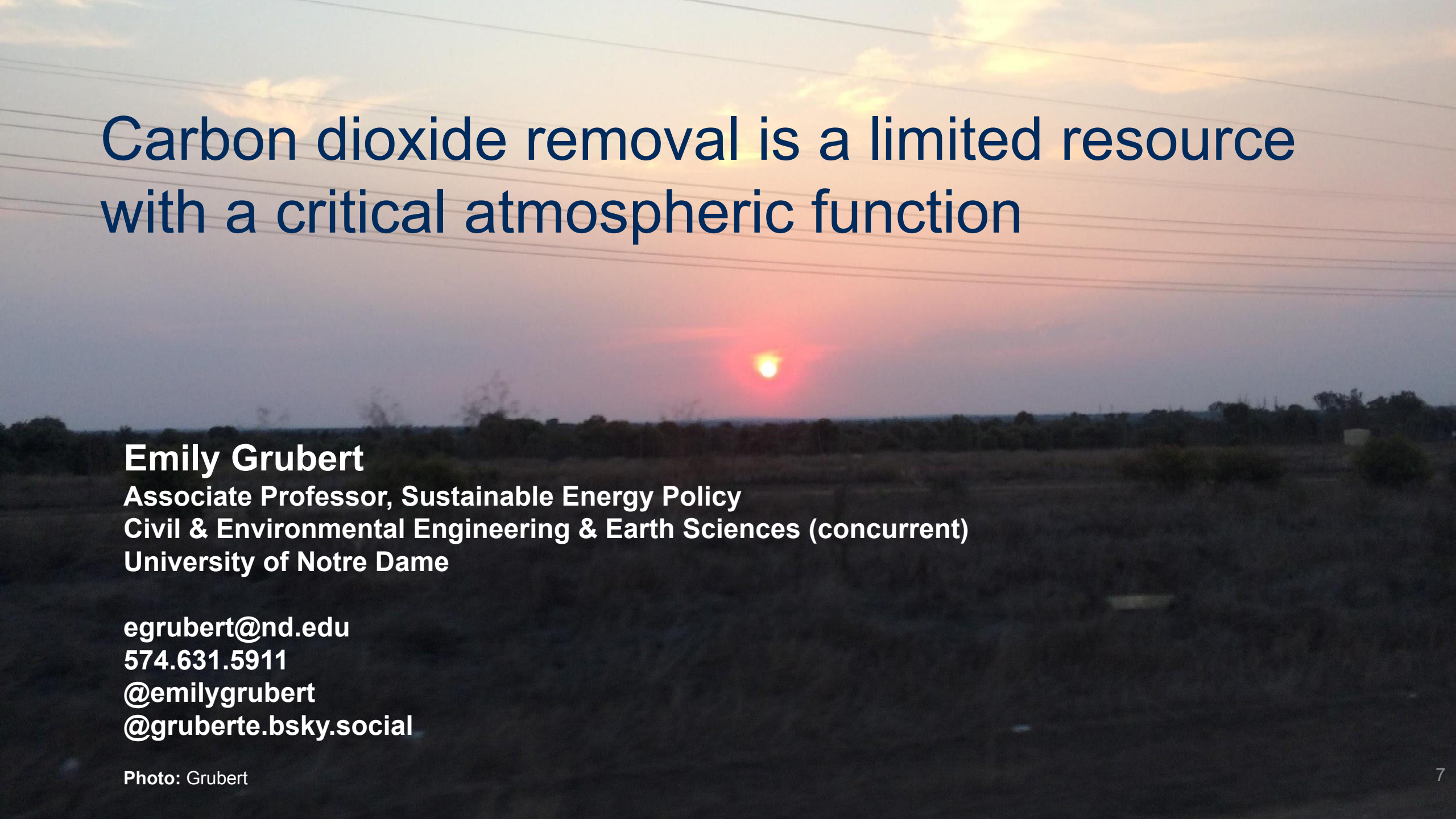

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Photo: Grubert