

Opportunities for International Emissions Reduction Partnerships Under Article 6 and Otherwise

Steven Rose

**18th IEA-IETA-EPRI Annual Workshop on
Greenhouse Gas Emission Trading**

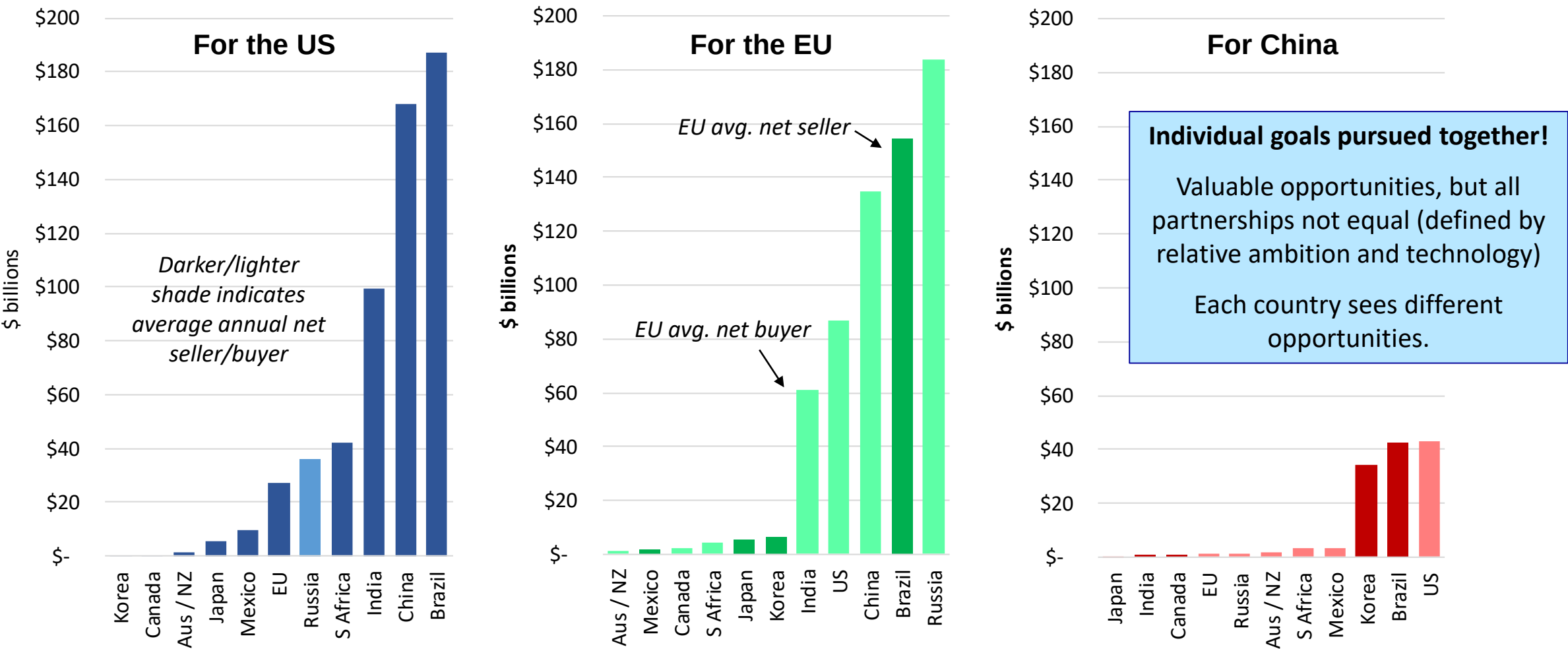
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Opportunities for International Emissions Trading Partnerships

NPV gains in regional consumption (all countries pursuing higher ambition policies)



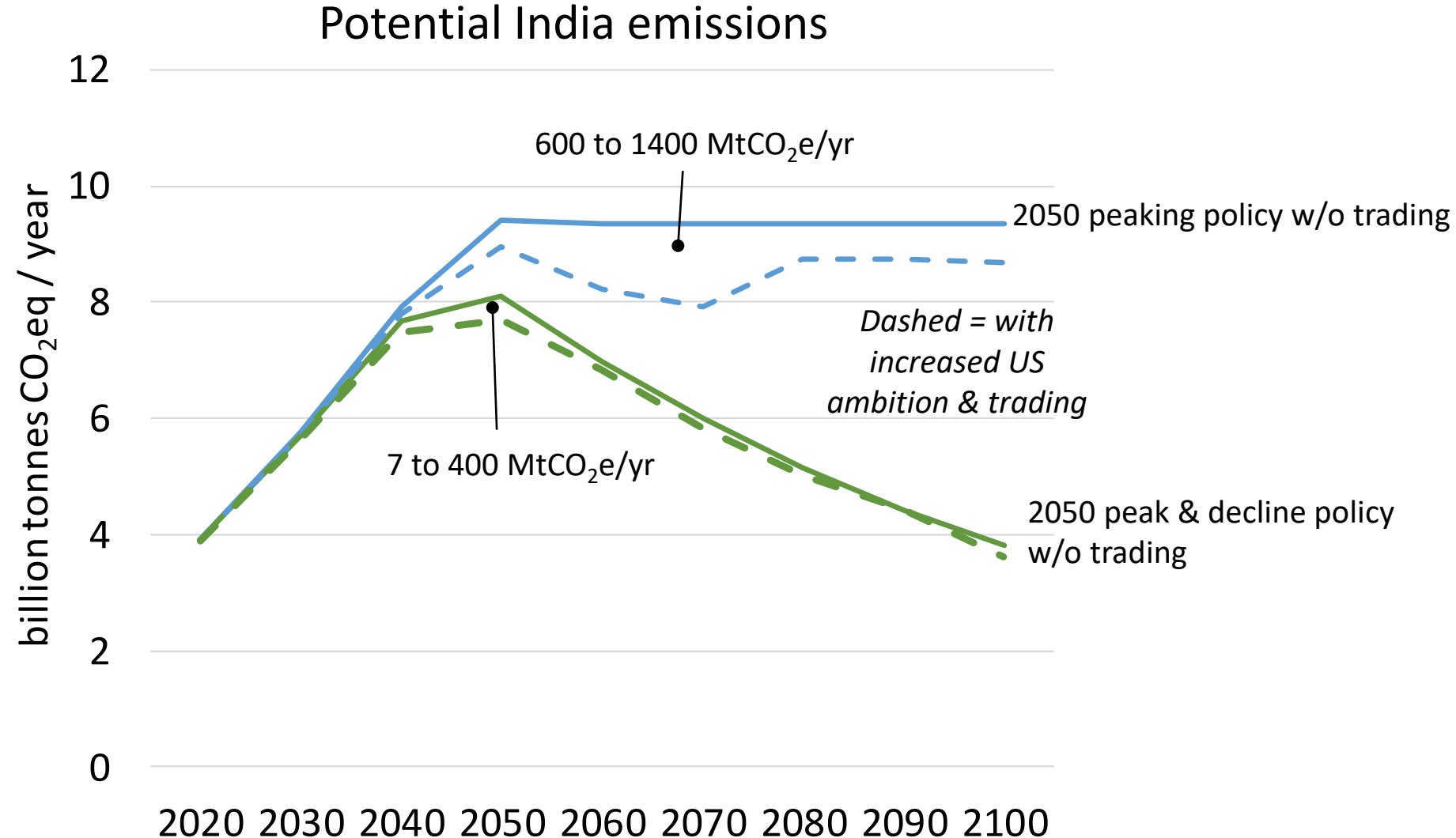
Emissions Trading a Means for Increasing Ambition?

May be possible in particular circumstances

e.g., US increases ambition with trading partnership with India

→ India reduces more to sell credits, lower total emissions, lower US costs, India revenues

→ Repeatable with US-India? Yes, but likely diminishing

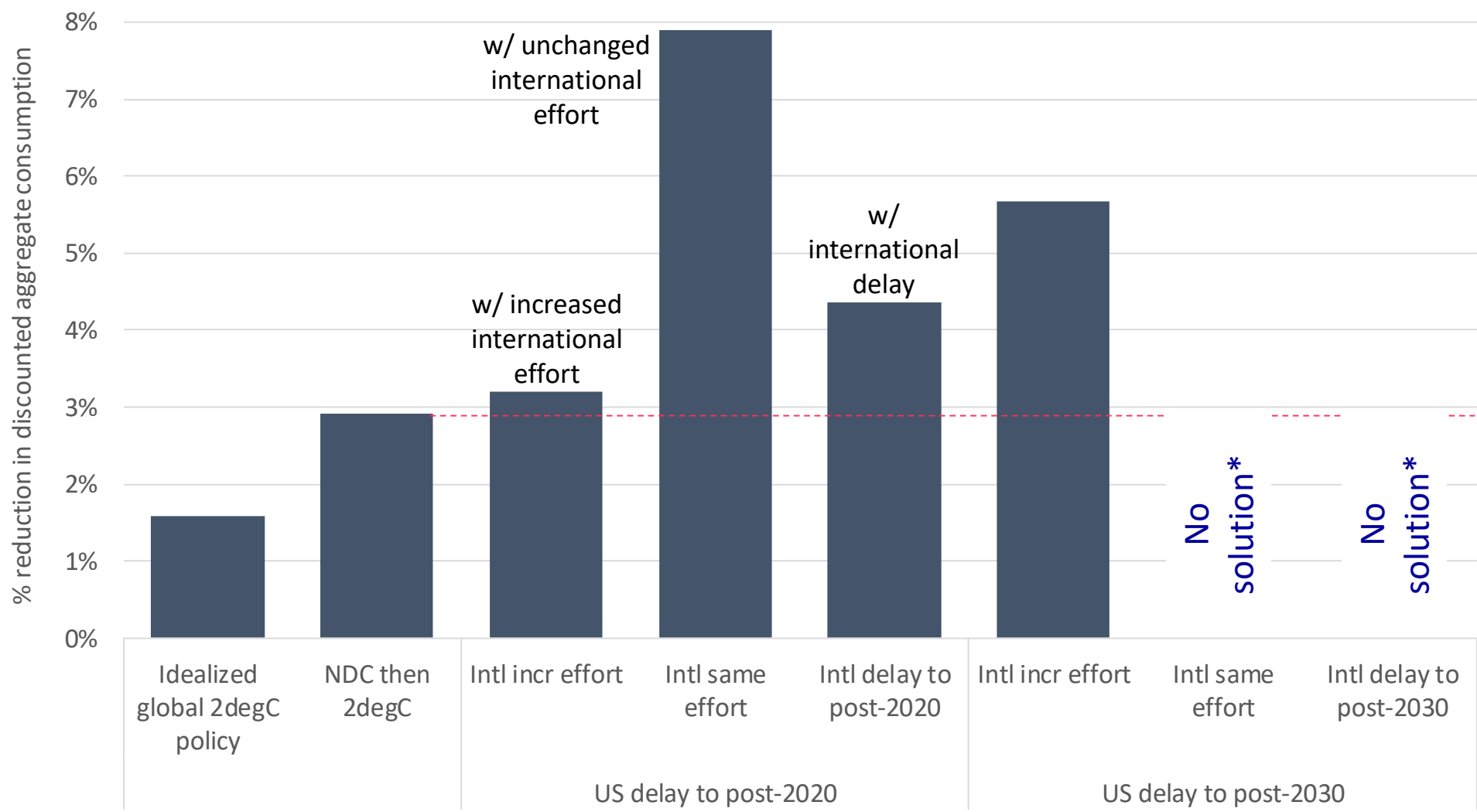


Implications of Delayed U.S. Participation in the Paris Agreement?

- Trump Administration withdrawing U.S. from the Paris Agreement
- Delaying policy to reduce emissions represents...
 - A company & societal cost risk; and, a risk to achieving global climate goals
- Evaluating helps define risk and inform policy and stakeholders
- **Analytical design**
 - US delayed action towards pursuing limiting global warming to 2°C – with shorter and longer delays (post-2020 & post-2030 delays)
 - Alternative international community responses/actions
 1. Increased effort to compensate for US delay
 2. Unchanged effort because unwilling to do more to offset US delay
 3. Delayed effort for political and economic reasons
 - Potential role for bi-lateral emissions trading partnerships in this context
 - Application of EPRI's MERGE model: global intertemporally optimizing coupled energy-economic and climate model

Potential Cost of Delayed Participation in the Paris Agreement

U.S. costs for limiting warming to 2°C with delayed participation
(% losses in discounted aggregate consumption)



If pursuing 2°C, U.S. delay is costly—to the U.S. and others.

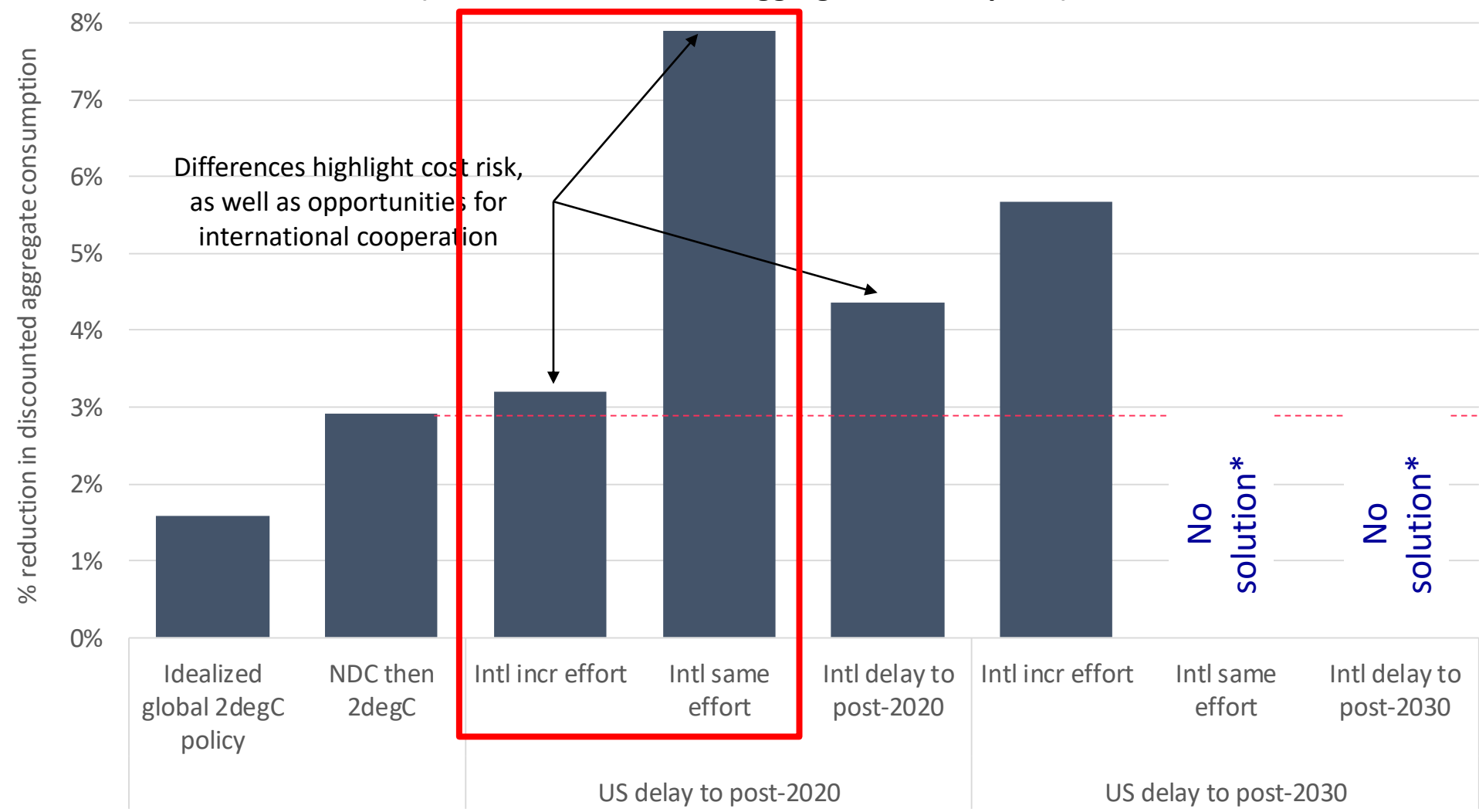
How much will depend on international response, length of delay, and opportunities for international cooperation.

With the possibility of not being able to limit warming to < 2°C.

Notes: Central equilibrium climate sensitivity assumption used for results shown. “No solution” = model solution infeasible, i.e., model unable to limit warming to below 2°C given economic, technology, and climate system assumptions modeled.

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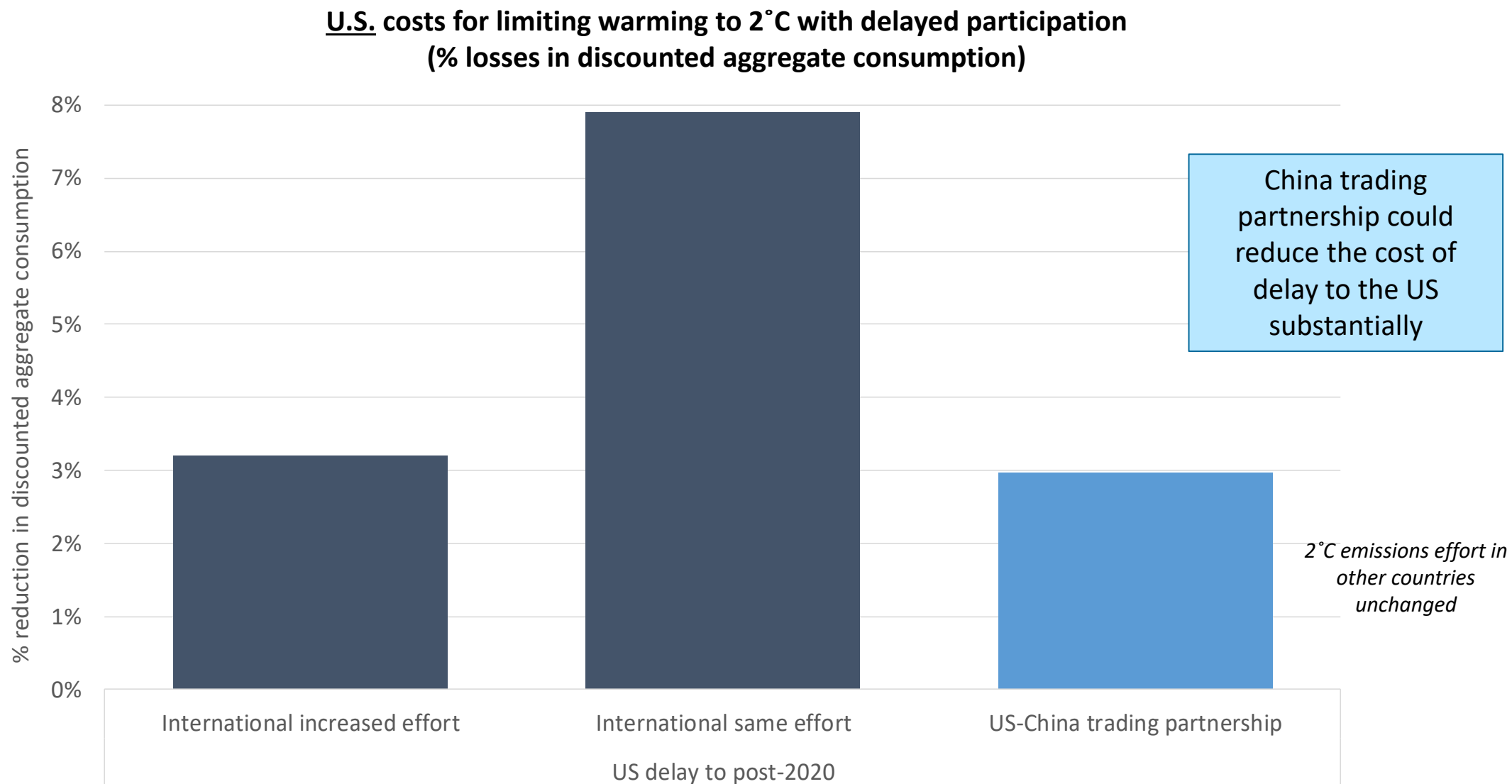
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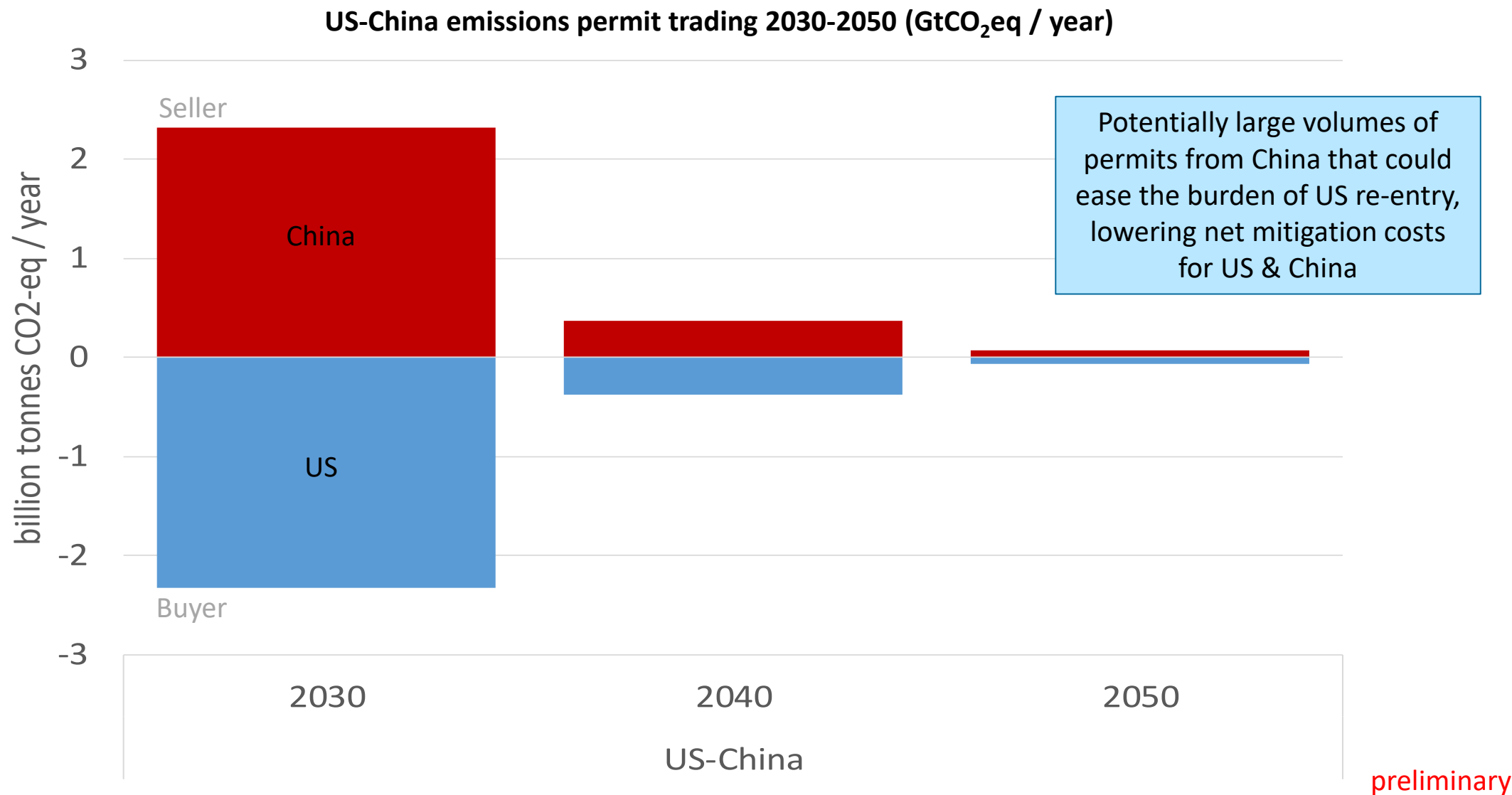
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Emissions Trading Partnerships Could Reduce Cost of Delay

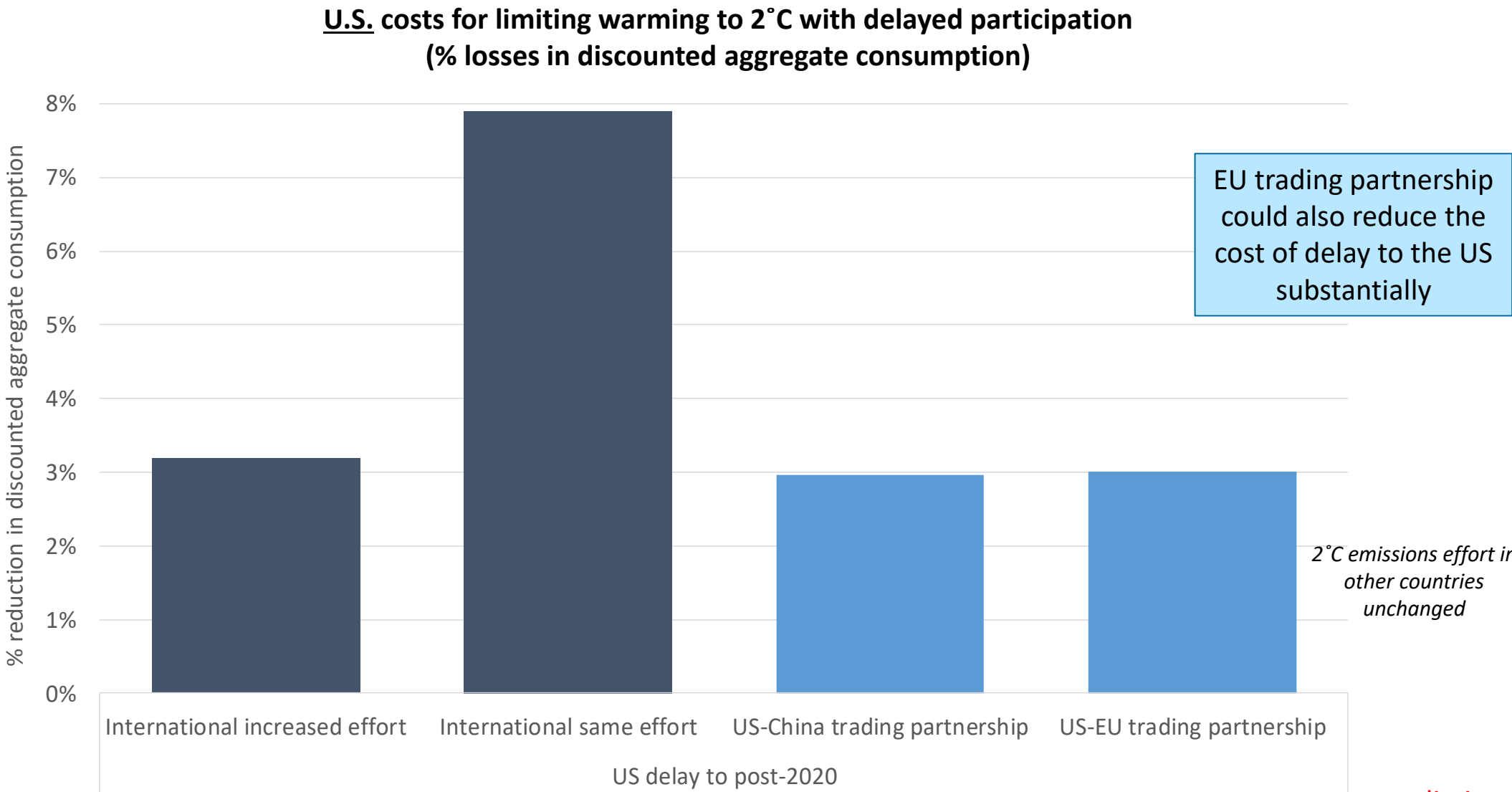


preliminary

Emissions Trading Partnerships Could Reduce Cost of Delay

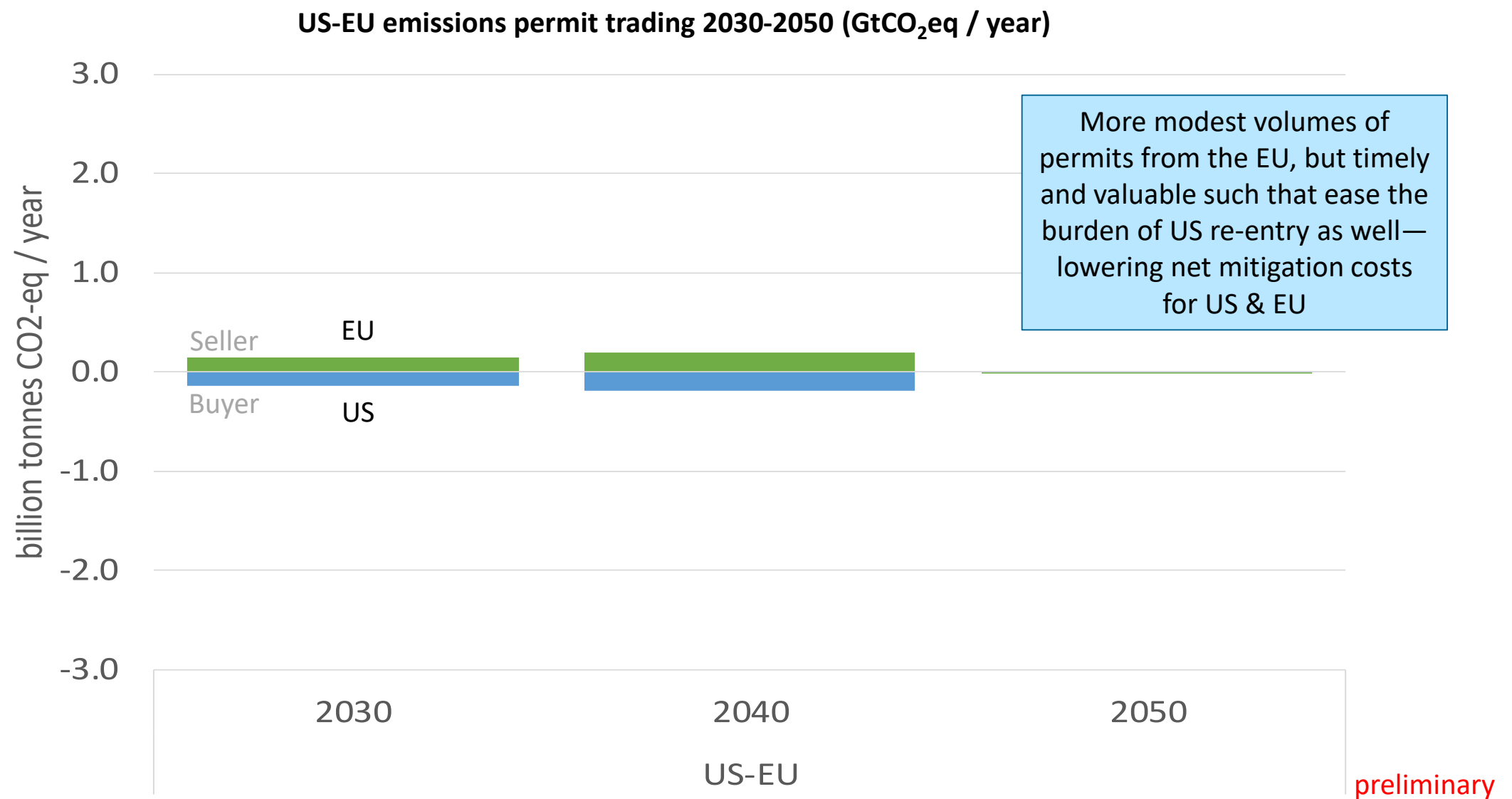


Emissions Trading Partnerships Could Reduce Cost of Delay



preliminary

Emissions Trading Partnerships Could Reduce Cost of Delay



Concluding Thoughts

- Results suggest that international bi-lateral (and larger) emissions trading partnerships are valuable
 - Reducing societal costs with cost savings and revenue opportunities in general
 - As a potential mechanism for increasing participation and ambition
 - As a means to reduce the cost of delayed action – for the delaying country and others
 - And, potentially increasing the likelihood of limiting warming to 2°C (much less 1.5°C)

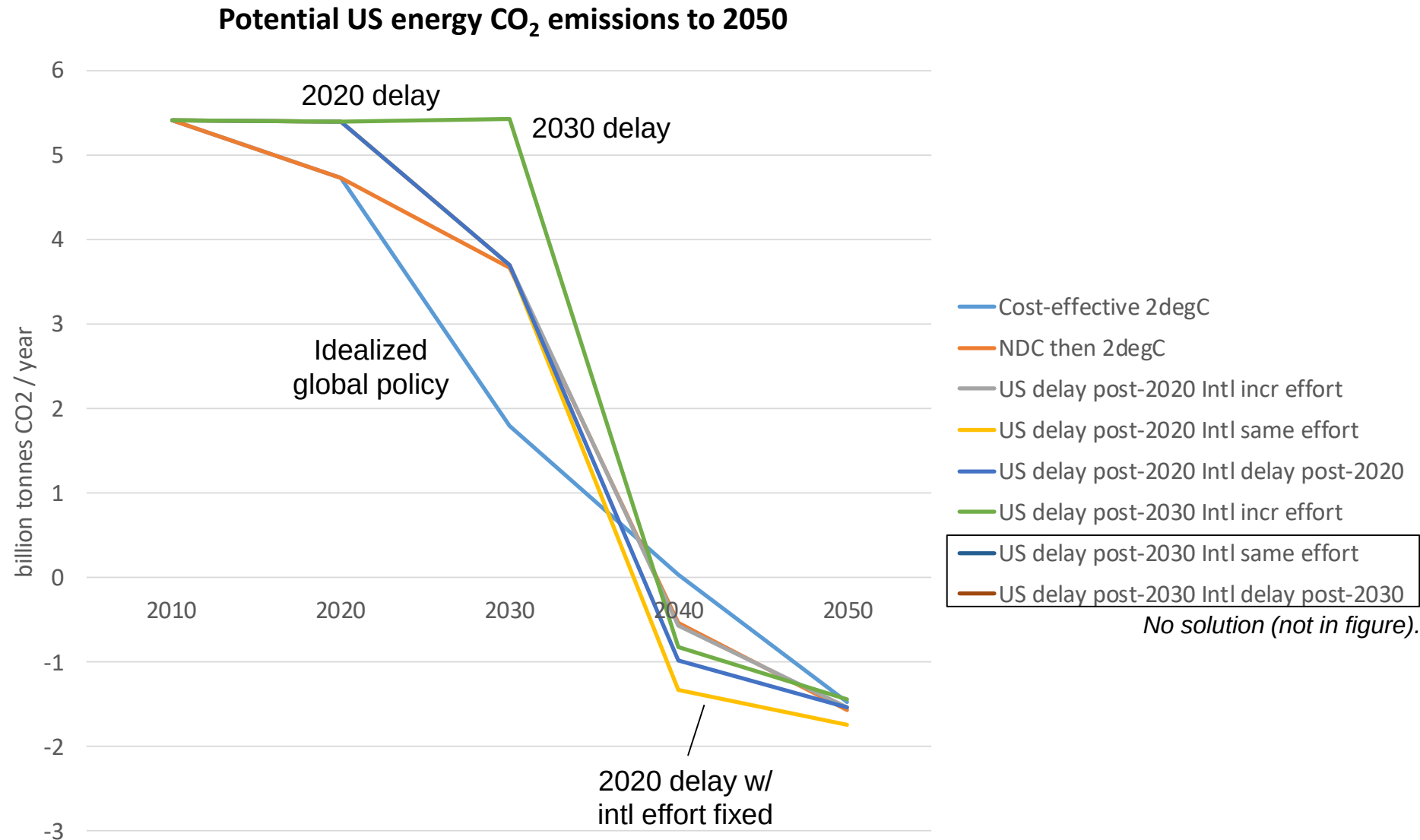


Thank you!

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US Energy CO₂ Emissions and Delayed Effort in Pursuing 2°C

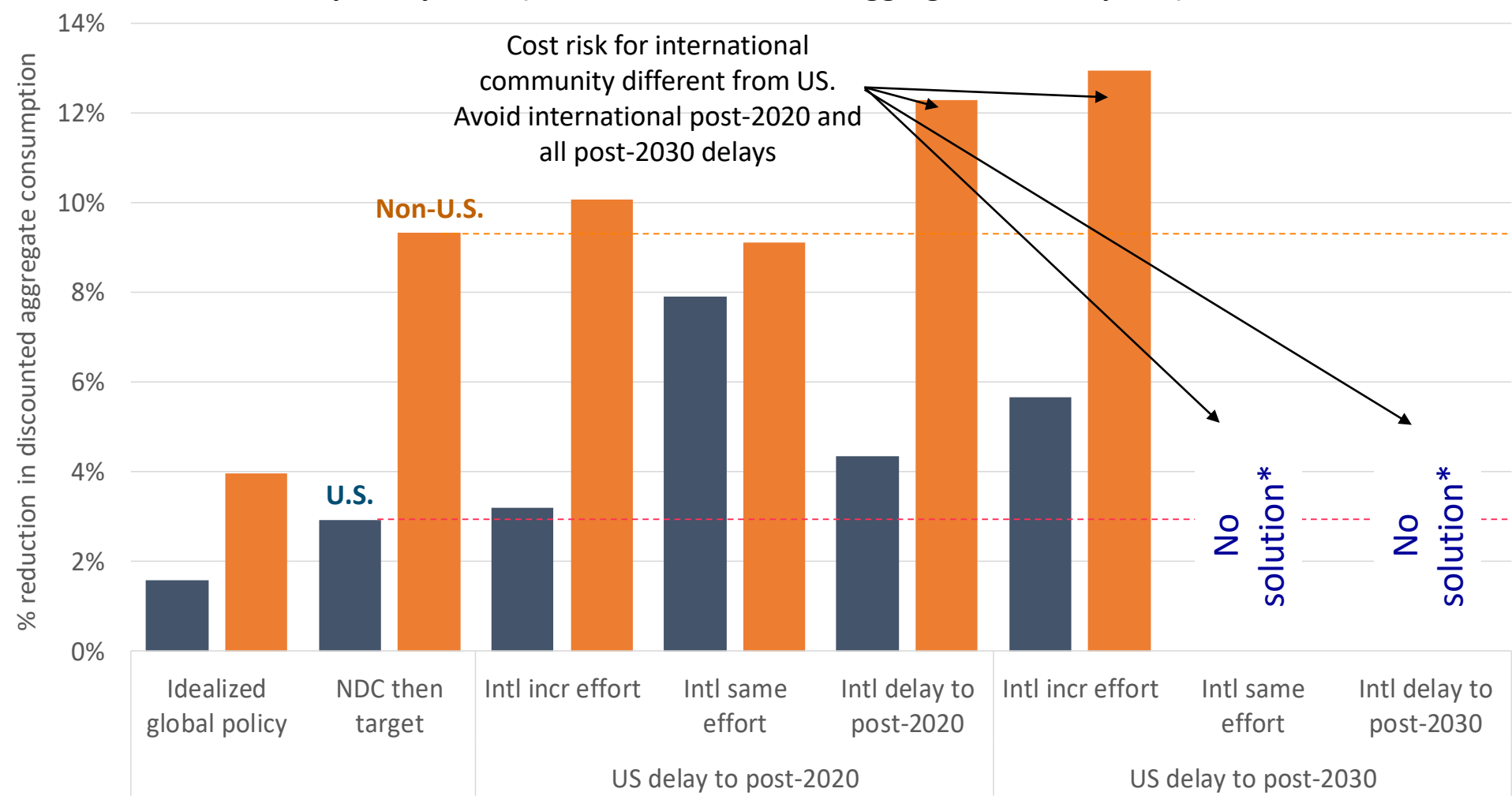


Delay implies more rapid future US emissions reductions if 2°C is going to be pursued.

Negative emission technology likely essential globally, even without delay (e.g., biopower with CCS).

Potential Costs of Delayed Effort Pursuing 2°C

U.S. & international costs for limiting warming to 2°C with delayed participation (% losses in discounted aggregate consumption)



If pursuing 2°C, U.S. delay is costly to others as well.

Some outcomes are less appealing than others—for the U.S., for the international community.

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Country Risks Could Affect Partner Appeal

Country risks represent uncertainty and additional costs

