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Sent:	18/04/2019 16:23:40
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	@npc.org; @npc.org
Subject:	RE: Congratulations and a few thoughts re: Updated Steering Committee Slide Deck + Initial Draft Findings &
	Recommendations

This is a great job, thank you for all your efforts.

I have two comments:

-I agree with Jody's comments on CCUS use on dispatchable power sources as a complement to renewables. This had been captured previously with the sentence "CCUS is an essential technology solution for achieving an economically efficient transition to a lower carbon intensive system"

So maybe in 4, "essential" could become "essential and economically efficient"

- In slide 7 we should put a more precise title to the X Axis: "CO2 emissions in mtpa associated with stationary power and industrial emissions". (The scope of our study is not all US emissions, but roughly 55% of them (transport, buildings, agriculture not included))

Thanks again.

Pierre

From: @oxy.com [mailto Sent: Thursday, April 18, 2019 12:02				
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Subject: RE: Congratulations and a few thoughts re: Updated Steering Committee Slide Deck + Initial Draft Findings & Recommendations

I agree with Jan's comments, however if we add "other areas identified in the report" (point 5), John Minge will need to be prepared to answer the question "So what are some of those areas identified in the report?".

Two other thoughts for consideration in the Findings section:

- 1. I believe it was Bill Elliott? who mentioned a recent EPRI study that raised the issue of managing the electrical grid when renewables reached ~30%. Is that a finding worth mentioning since there are some factions who believe CCUS is not required, instead just keep adding more renewables to the grid. Maybe it goes with #4.
- 2. Not sure where it fits, but is there a finding that market development is needed for a more diverse use of CO2 to grow CCUS beyond just EOR and saline opportunities, especially in areas that have sources without sinks or pipeline access.

I echo Jan's comments on the job well done to turn this around! Well done.

Jody

Jody Elliott | Sr Consultant, Domestic Oil and Gas | | (O) | | (F) | |

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Subject: [EXTERNAL] Congratulations and a few thoughts re: Updated Steering Committee Slide Deck + Initial Draft Findings & Recommendations

Congratulations to Sally, Jane, Cindy, Nigel and others who abandoned rest in order to develop and share the updated slide deck and draft findings and recommenations.

I have a few suggestions re the Summary Key Findings and Recommendations:

- 1. Finding 8. Add "CO2e" after "ton" so it reads: "...policy support of about \$100/ton CO2e"
- 2. In Summary Recommendations, Theme 1 item 2 and Theme 2 item 4 delete "may" so that the identical sentences start as "Options include:.." instead of "Options may include:.". My reason for deleting "may" is that it implies we don't know for sure what we think should be done. We believe the listed options should be considered.
- 3. In Summary Recommendations, Theme 2, item 6, I believe we should start item by indicating who should do action. Thus it would start "6. Government should create an interagency working group...."
- 4. In Summary, Theme 3, item 8 first bullet, even though report is about CCUS, I would be inclined to change bullet to read: "Allow for equal treatment of gas fired generation and coal for CCUS projects."
- 5. More importantly in Summary Theme 3, Item 9 I would add a new bullet. The three listed bullets are important and not normally considered areas for government support. However, the technology chapter will have suggestions for several areas of more traditional types of research that should receive additional support. Thus I would add the following bullet: "Other areas identified in the Report".

My only suggestions about the slide deck are to make the same changes as listed in 1 and 3 above.

Again congratulations on a comprehensive, understandable, thoughtful slide deck, findings and recommendations.

Regards,

Jan

Jan W. Mares	Senior Advisor	Resources for the Futi	ıre
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Importance: High

From: Kolenda, Sally [mailto: @bp.com] **Sent:** Thursday, April 18, 2019 1:49 AM To: Ann Satsangi @hq.doe.gov>; Bill Elliott < Dbechtel.com>; Bob Perciasepe @c2es.org>; Brian Donovan < @valero.com>; Yeilding, Cindy · @bp.com>; @equinor.com>; Fiji George @cheniere.com>; Giovanni Dubon Desikan Sundararajan • sipa.columbia.edu>; Guy Powell @exxonmobil.com>; Mares, Jan < @rff.org>; @hq.doe.gov>; Jason Bordoff <</pre> Jarad Daniels < @columbia.edu>; Jeff Brown @gmail.com>; Jeff Shellebarger @chevron.com>; JF Poupeau < @slb.com>; Jody Elliott < @oxy.com>; John Gunn · @exxonmobil.com>; John Litynski @hq.doe.gov>; Karina Perez @deloitte.com>; Leslie Savage < @rrc.texas.gov>; Nancy @hq.doe.gov>; Nigel Jenvey (Gaffney-Cline) Johnson < @gaffney-cline.com>; Pierre @total.com>; Ravi Patel < Germain < @deloitte.com>; Roxann Walsh @southernco.com>; Sarah Forbes < @hq.doe.gov>; Scott Anderson @edf.org>; Steinar <u> Phq.doe.gov</u>>; Tlm Wiwchar < @equinor.com>; Steven Winberg < shell.com> Cc: Dan Domeracki < @gmail.com>; Stricker, Jane @bp.com>; Williams, Daniel Brian (Procom) @bp.com>; Kolenda, Sally @bp.com>; Minge, John C · @bp.com>; Ung, Poh Boon < @bp.com>; John Guy @npc.org>; Marshall Nichols < @npc.org>; James Slutz < @npc.org> Subject: FOR REVIEW BY 12 PM CDT: Updated Steering Committee Slide Deck + Initial Draft Findings & Recommendations

Dear Members of the CCUS CSC,

Attached are the revised materials for the Steering Committee meeting on April 24. **Please review and send any comments/edits/concerns to Jane Stricker and me by 12 p.m. CDT.** Our goal is to get the pre-read out to CEOs by COB today.

Many thanks to everyone for your commitment to this study. An extra special thanks to the folks in Chapter 7 that helped transform these documents so quickly!

Regards,

Sally

Sally Kolenda