From the "Home" page click the "Scenario Explorer" menu option

Scenario Explorer Home About Scenarios Consequences Background Instructions Temperature Explorer Scenario Explorer What If About

Home

We have almost certainly passed the point where greenhouse gas emission reductions alone can prevent very serious consequences from a changing climate (see Figure 1 below and the "About Scenarios" menu option), as the temperature increase will likely be over 2.0°C in 2050 for any realistic emissions pathway. The only way to avoid the very serious consequences appears to by proactively reducing the amount of sunlight reaching the Earth's surface until such time as sufficient CO2 can be removed from the atmosphere to reduce the temperature increase to 1.5°C or less.
The "Scenario Explorer" has been designed to help people to understand the assumptions that underly the temperature increase projections made by climate scientists so that they can make informed decisions about the climate policies that need to be implemented in order to avoid the likely serious consequences of global warming. It focuses is primarily on giving users the ability to discover the amount of sunlight that must be reflected or CO2 that must be removed from the atmosphere to reach a specific temperature goal: the "Temperature Explorer" allows a specific temperature increase goal (initially set to 1.5°C) and calculates the amount of both solar radiation dioxide removes to meet that goal, while the "Scenario Explorer" allows for the changing of many of the assumptions that are used to calculate the corresponding temperature increase.
This Website makes extensive use of "tooltips", which are available whenever the there is a "dotted underline" under the text.

There are nine menu options:

Home	This page
About Scenarios	Define a climate scenario, discuss the data item from a scenario which the model uses, shows several of the data items for 18 scenarios, and has graphs showing the temperature increase projections for 51 scenarios that had 2025 data relatively close to expected 2025 values for CO2 emissions, CO2 PPM, and temperature increase. Please review the charts and graphs in this section as they demonstrate why a temperature increase of over 2.0°C is expected in a "mitigation only" scenarios.
Consequences	This page will discuss the consequences of exceeding the 1.5°C temperature increase target for significant period of time
Background	Discusses some of the rational for the Scenario Explorer
nstructions	Instructions on using this Web site
Temperature Explorer	Allows a specific temperature increase goal (initially set to 1.5°C) and calculates the amount of both solar radiation management and carbon dioxide removes to meet that goal
Scenario Explorer	Allows for the changing of many of the assumptions that are used to calculate the corresponding temperature increase.

The data for the "Moderate" scenario will be automatically loaded.



You can select another scenario to explore via three options. From the "Scenario" dropdown list (upper left of the page)

		The second F	D: I		74 F													
Anderste Moderste		Items F	or Displa	<u>X</u>	Items F	or input			Option	IS: U CD		eedbacks	s ∪ Ag	gressivei	ness 🗆	Acceler	ation	
viouerate		2 CO2e	RF SRM	Cost C	02 RF	SRM CO	ost											
1.5° C (En-ROADS)		U		U		U												
AR6 1.5°C		Units								Input \	/alues							
AR6 2.0°C			2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085	2090	2095	210
AR6 2.5°C		GTCO2	42 ✔	45∨	43∨	40 🗸	35 🗸	30 🗸	25 🗸	20 🗸	15 🗸	10 🗸	5 🗸	~	~	~	~	
AR6 3.0°C		°C	1.50	1.65	1.75	1.90	2.01	2.15	2.26	2.35	2.43	2.48	2.54	2.56	2.60	2.60	2.63	2.6
AR6 3.5°C	issi	ons (GT C	02)	Globa	I SRM R	equireme	ent (W/m	-2)	Glob	al CDR Re	equireme	ent (GT C	02)	Glob	oal Temp	erature I	increase	(°C)
AR6 4.0°C	aseli	ne		1.0		Baselin	1e		1.0		Baseli	ne		3.0		Base	ine	
AR6 4.5°C				0.9					0.9									_
AR6 5.0°C	-			0.8					0.8					2.0				
BAU (En-ROADS)				0.7					0.7					2.0	\checkmark			
Mod CDR 1.5				0.5					0.5					1.5				
Mod SRM 1.5				0.4					0.4					1.0				
Mod Tmp Acc 1 5				0.3					0.3					1.0				
Anderste		\mathbf{h}		0.1					0.1					0.5				
Deak 2025 Zero 2050				0					0		+++			0				
Peak 2025 Zero 2056	ŝ	2070 2080	158	202 203	20 ²⁰ 15	\$° 26°	20 ¹⁰ 20 ⁸⁰	2000	202 20	2 10 ⁴² 1	99 . CC	2070 2080	2500	2020 20	3° 2042	15° 15°	2010 200	, 18 ⁵
-eas 2020 2010 2000																		
-eak 2025 Zero 2060																		

By clicking the "Scenarios" tab and clicking a radio button. Many of the scenarios have "tool tips" (look for the "dashed underlines" under the scenario names.

Scenario Explorer	Scenarios Scen	ario List Options	Scenari	o Sum	imary]			
Sele	ct a Scenario To E	xplore and go to th	e 'Scenar	io Exp	olorer	' tab			
Shared Socio	economic Pathwa	ys (SSPs)	Simplif	ied Ne	et-Zer	o Emi	ssion	Scena	rios
O SSP1-19 O SSP1-2	26 O SSP2-45	O SSP3-Baseline		Pe	ak Ye	ar of (CO2 E	missio	ons
○ <u>SSP4-34</u> ○ <u>SSP4-6</u>	50 O SSP5-34	O SSP5-Baseline	# Years	2025	2030	2035	2040	2045	2050
<u> </u>	ther Scenarios		25	0	0	0	0	0	0
1.5° C (En-ROADS)	O AR6 1.5°C	O AR6 2.0°C	30	0	0	0	0	0	0
O AR6 2.5°C	O AR6 3.0°C	O AR6 3.5°C	35	0	0	0	0	0	0
O AR6 4.0°C	O AR6 4.5°C	AR6 5.0°C	- 35	0	0	0	0	0	0
BAU (En-ROADS)	O Mod CDR 1.5	O Mod SRM 1.5	40	0	0	0	0	0	0
O Mod Tmp Acc 1.5	Moderate								

By clicking the "Scenario List" tab and clicking a radio button. Note that this tab provides information about the various scenarios to assist you with your exploration.

cenario Explo	orer	Clic	k here	to view	instruct	ions foi	r using t	the Tem	peratur	e Explo	rer										
Scenario Explorer	Scena	rios	Scena	rio List	Opti	ons	Scenar	rio Sun	mary												
L	· · ·		•)					_											
(Total CO2 emissions w	ere abou	t 41.6	GTCO2	in 2024	were a	about a	nd are i	not exp	ected t	o chang	ge muc	h in 20	25. In 2	025 the	e atmos	pheric (concen	tration	of CO2	is expe	ected
to hit about 427 PPM ar	nd the av	erage g	global t	emperat	ture inc	rease v	vill likel	y be at	least 1	.5°С. К	eet thi	s in mir	nd when	review	ing any	of thes	se scen	arios.)			
				Se	lect a S	Scenar	io To E	xplore	and g	o to th	e 'Sce	nario I	xplore	r' tab							
		2025					20	50									2100				
					CO2	Emiss	ions							CO2	Emiss	ions					
Scenario	Anthro	CO2	Temp	Anthro	CCS	DAC	Feed-	Net	CO2	Cum	Total	Temp	Anthro	CCS	DAC	Feed-	Net	CO2	Cum	Total	Ter
0		PPM	incr				backs	CO2	PPM	CO2	RF	Incr				backs	CO2	PPM	CO2	RF	In
1.5° C (En-ROADS)	44	426	1.51	20	0.0	-15.0	6.8	12	431	718	3.55	1.85	2	0.0	-16.0	10.4	-4	364	773	2.49	1.4
○ AR6 1.5°C	28	422	1.37	15	-12.9	0.0	0.6	2	429	333	3.05	1.60	9	-16.9	0.0	0.4	-8	391	120	2.44	1.4
O AR6 2.0°C	36	427	1.37	25	-10.1	0.0	0.7	16	467	/10	3.56	1.79	13	-20.4	0.0	0.7	-/	445	811	3.27	1.0
O AR6 2.5°C	38	428	1.38	35	-4.1	0.0	0.8	31	487	918	3.88	1.91	17	-16.0	0.0	1.0	2	516	1677	4.11	2.
O AR6 3.0°C	37	426	1.38	37	-0.7	0.0	0.8	37	490	9//	4.01	1.97	32	-4.6	0.0	1.3	29	604	2682	5.29	2.9
O AR6 3.5°C	43	429	1.38	50	-2.3	0.0	0.9	49	515	1216	4.26	2.03	52	-/./	0.0	1.8	46	693	3634	6.25	3.4
O AR6 4.0°C	44	430	1.38	53	-0.6	0.0	0.9	53	522	1283	4.51	2.13	63	-0.5	0.0	2.3	65	/58	4253	7.20	3.0
AR6 4.5-C	47	431	1.37	04	-0.4	0.0	1.0	75	557	1400	4.70	2.10	100	-0.3	0.0	2.0	111	000	5310	0.00	4
	40	430	1.39	/5	-0.6	0.0	12.2	75	531	1407	4.95	2.20	100	-0.4	0.0	3.5	77	970	4921	0.00	4.4
Mod CDP 1 5	44	420	1.49	4/	0.0	-3.0	65	34	400	1407	4.04	2.25	50	0.0	-34.0	20.0	-19	372	4031 536	2.48	4
Mod SPM 1.5	42	420	1.51	30	0.0	-3.0	3.3	34	490	11/0	4.10	2.03	5	0.0	-34.0	0.0	-15	1/10	1780	2.40	1.0
O Mod Tmp Acc 1.5	42	426	1.60	30	0.0	-3.0	5.6	33	488	1165	4.03	2.12	5	0.0	-50.0	6.9	-38	318	-110	1.81	1.
Moderate	42	426	1.50	30	0.0	0.0	9.0	39	497	1215	4.41	2.15	5	0.0	0.0	17.0	22	504	2428	4.62	2.0
0 SSP1-19	29	425	1.38	9	-6.0	0.0	2.2	5	434	397	3.03	1.58	-1	-10.0	0.0	1.5	-10	392	246	2.22	1.
O SSP1-26	34	425	1.37	21	-5.3	0.0	2.5	18	459	675	3.44	1.74	7	-12.2	0.0	2.3	-3	445	979	3.02	1.7
O SSP2-45	45	429	1.36	40	-3.7	0.0	3.1	40	505	1179	4.18	2.02	29	-19.7	0.0	4.3	13	553	2351	4.72	2.0
O SSP3-Baseline	51	432	1.36	66	-1.4	0.0	3.6	68	542	1565	4.68	2.16	87	-1.1	0.0	10.6	96	859	5657	8.15	4.
O SSP4-34	42	429	1.36	33	-8.4	0.0	2.7	27	481	921	3.69	1.83	15	-19.5	0.0	3.1	-2	487	1582	3.83	2.
O SSP4-60	44	429	1.37	51	-2.2	0.0	3.4	52	519	1289	4.45	2.11	26	-5.4	0.0	7.0	28	661	3487	6.39	3.
O SSP5-34	44	429	1.38	43	-20.7	0.0	3.1	26	492	1021	4.02	1.97	34	-37.8	0.0	3.4	-1	492	1586	3.95	2.
O SSP5-Baseline	50	431	1.38	80	-1.1	0.0	4.1	83	560	1717	5.10	2.30	110	-0.7	0.0	13.5	123	1002	6998	9.12	4.5

Click on the "Options" tab to view and/or change the values that the model uses to calculate the cost. For example, for "Carbon Removal" costs for removing CO2 from the atmosphere, the model defaults to a value of \$100/ton in 2025 and \$30/ton in 2100. Costs are currently significantly higher right now, but there is hardly any removal. The Department of Energy is hoping that costs can be reduced to \$100/ton by 2030. (NOTE: Expert opinion on costs is needed here!)



Click on the "Scenario Summary" tab to see a summary of the calculations. This can be used to validate the model's calculations.

Scenario Explorer S	cenarios	Scenar	io List (Options	Scena	rio Sum	mary										
Item	Units								Val	Jes							
		2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085	2090	2095	2100
Anthropogen. CO2	GTCO2	42	45	43	40	35	30	25	20	15	10	5	5	5	5	5	5
Carbon Rmvs (Scen)	GtCO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CCS, BECCS, etc.	GtCO2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feedbacks	GtCO2	5.0	5.8	6.6	7.4	8.2	9.0	9.8	10.6	11.4	12.2	13.0	13.8	14.6	15.4	16.2	17.0
Total Net CO2	GtCO2	47	51	49	47	43	39	35	31	26	22	18	19	20	20	21	22
CO2 PPM	РРМ	426	444	461	476	488	497	504	508	510	510	508	507	506	505	504	504
CO2	W/m-2	2.35	2.57	2.77	2.96	3.10	3.21	3.28	3.33	3.35	3.35	3.33	3.32	3.30	3.29	3.29	3.29
CH4	W/m-2	0.58	0.60	0.60	0.60	0.60	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.60	0.60	0.59
N20	W/m-2	0.22	0.23	0.25	0.26	0.27	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.36	0.37	0.38
Total Other GHGs	W/m-2	1.19	1.19	1.10	1.11	1.06	1.05	1.02	0.99	0.97	0.93	0.94	0.88	0.90	0.85	0.87	0.86
Aerosol	W/m-2	-1.0	-0.9	-0.9	-0.8	-0.8	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5
Albedo	W/m-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	W/m-2	3.34	3.66	3.86	4.11	4.26	4.41	4.51	4.56	4.60	4.59	4.62	4.57	4.61	4.58	4.61	4.62
Temperature Incr.	°C	1.50	1.65	1.75	1.90	2.01	2.15	2.26	2.35	2.43	2.48	2.54	2.56	2.60	2.60	2.63	2.63
Solar Rad. Mgt.	W/m-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Temp Incr (SRM)	°C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carbon Removal	\$B/Yr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sea Level Rise Costs	\$B/Yr	38	46	55	67	80	97	116	139	165	195	231	270	321	376	447	526
CCS, BECCS, etc	\$B/Yr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Disaster Costs	\$B/Yr	226	249	268	294	315	341	364	385	406	423	443	456	477	490	510	526
Total Costs	\$B/Yr	263	295	323	361	395	438	480	523	571	617	674	726	798	866	957	1053

The model provides multiple ways to change some of the underlying assumptions that are used in the calculations. Click on the checkboxes to the left of the "Options:" text to make the desired changes.

Options: 🗹 CDR 🗹 Feedbacks 🗹 Ag	gressiveness 🗹 Acceleration
Feedback Emissions in 2100	—— 7.0 GTCO2/°C
'Aggressiveness' For M	tigation (Default: 5
For All (1-10)	
<u>CH4</u> (1-10)	<u>N20</u> (1-10)
Other (1-10)	Aerosols (1-10)
Adjustment For Ter	perature Acceleration
Aujustment for fer	iperature Acceleration
Albedo Change in 2023	0.00 W/m-2
Albedo Change in 2023	0.00 W/m-2
Albedo Change in 2023	0.00 W/m-2 0.00 W/m-2 0.26 °C
Albedo Change in 2023 Albedo Increase Per Decade Temperature Increase Per Decade Carbon Dioxid	0.00 W/m-2 0.00 W/m-2 0.26 °C e Removal (CDR)

There are over 100 "data elements" that can be viewed. Check one or more of the checkboxes under the "Items For Display" text to view the corresponding data items.

_							_							Download	o Detail C	SV File		
Sc	enario	Items F	or Displa	<u>y</u>	Items F	or Input			Option	ıs: 🗆 CD	R 🗆 Fe	eedbacks	🗌 🗌 Agg	pressiver	ness 🗆	Accelera	ition	
Mo	derate V CO	2 CO2e	RF SRM	Cost C	D2 RF	SRM Co	st											
Clie	k the 'Scenarios'																	
tab	above to view the																	
ava	ailable scenarios																	
	Item	Units								Input \	/alues							
			2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085	2090	2095	2100
~	Anthropogen. CO2	GTCO2	42 ❤	45∨	43∨	40 🗸	35 🗸	30 🗸	25 🗸	20 🗸	15∨	10 🗸	5 🗸	>	~	>	~	~
~	Anthropogen. CO2	GTCO2	42	45	43	40	35	30	25	20	15	10	5	5	5	5	5	5
\sim	Carbon Rmvs (Scen)	GtCO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
~	CCS, BECCS, etc.	GtCO2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
\sim	Feedbacks	GtCO2	5.0	5.8	6.6	7.4	8.2	9.0	9.8	10.6	11.4	12.2	13.0	13.8	14.6	15.4	16.2	17.0
~	Total Net CO2	GtCO2	47	51	49	47	43	39	35	31	26	22	18	19	20	20	21	22
\sim	Cum Anthro. CO2	GtCO2	42	260	478	685	872	1035	1172	1285	1372	1435	1472	1497	1522	1547	1572	1597
~	Cum Feedback CO2	GtCO2	5	32	63	98	137	180	227	278	333	392	455	522	594	669	748	831
~	Cum Carb Rem CO2	GtCO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\sim	Cumultative CO2	GtCO2	47	292	541	783	1009	1215	1399	1563	1705	1827	1927	2019	2116	2216	2320	2428
\sim	Airborne Fraction	Percent	45	55	53	50	44	37	30	21	11	0	0	0	0	0	0	0
\sim	Ocean & Land Sink	GtCO2	25.85	22.79	23.22	23.59	24.25	24.56	24.52	24.13	23.38	22.29	20.84	21.14	21.43	21.71	21.97	22.23
~	CO2 To Atmosph	GtCO2	21.15	28.01	25.88	23.82	18.95	14.44	10.29	6.48	3.03	-0.07	-2.82	-2.32	-1.81	-1.29	-0.75	-0.20
\sim	PPM Added/Yr	РРМ	2.71	3.59	3.31	3.05	2.43	1.85	1.32	0.83	0.39	-0.01	-0.36	-0.30	-0.23	-0.17	-0.10	-0.03
~	CO2 PPM	РРМ	426	444	461	476	488	497	504	508	510	510	508	507	506	505	504	504
~	Natural CH4	TG	0	1	2	4	5	7	9	11	14	16	19	23	26	30	35	40
\sim	Temp/RF Ratio		0.45	0.45	0.45	0.46	0.47	0.49	0.50	0.51	0.53	0.54	0.55	0.56	0.57	0.57	0.57	0.57
\sim	Temperature Incr.	°C	1.50	1.65	1.75	1.90	2.01	2.15	2.26	2.35	2.43	2.48	2.54	2.56	2.60	2.60	2.63	2.63

Click on the "Down Arrow" to the left of the data item to view additional information about the item. If the "Down Arrow" is green the additional information will include graphs

	Item	Units								Input \	Values							
			2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085	2090	2095	2100
\sim	Anthropogen. CO2	GTCO2	42∨	45∨	43∨	40 🗸	35 🗸	30 🗸	25♥	20 🗸	15 🗸	10 🗸	5 🗸	~	~	~	<	<
^	Anthropogen. CO2	GTCO2	42	45	43	40	35	30	25	20	15	10	5	5	5	5	5	5
	Anthropogenic (h User can enter v This graph compa	numan caus alues res the pr	ed) CO2 e	emissions value (he	, includin eavy blac	g those fi t <mark>k line) t</mark>	rom the b	ourning of	fossil fue	els, manu s graph c	facturing	cement,	and land	use chan alue (he	ges avy blac	k line) to	o other 2	050
		value	s from se	ome of t	he SSPs.								scena	arios.				
		An	throp	ogen.	CO2							Anth	nropo	gen.	CO2			
				-									•	-				
	Baseline	Linear	Extr.	SSP1-19	s	SP1-26	SSP	2-45			Baselin	e 📃	Accel. Actio	ons (MIT)	Anr	nced Pldgs ((IEA)	
	SSP3-Baseline	SSP4	-34] SSP4-60	S	SP5-34	SSP5	-Baseline	45	Cu	irrent Trends	s (MIT)	Net Ze	ero E 2050 ((IEA)	Statd Po	olicies (IEA)	
	100								40									
	80								35									
	60								30							_		
	40								25									
	20								15									
	0							-	10									
	-20								5									
	200 200 200 200 200 200	192 193 193	2040 2040	100 100 1	ig ag ag	° 10' 108	1985 1980	10° 10°	0 2025		2030		2035	20	40	2045	ō	2050
~	Carbon Rmvs (Scen)	GtCO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
\sim	CCS, BECCS, etc.	GtCO2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
\sim	Feedbacks	GtCO2	5.0	5.8	6.6	7.4	8.2	9.0	9.8	10.6	11.4	12.2	13.0	13.8	14.6	15.4	16.2	17.0
\sim	Total Net CO2	GtCO2	47	51	49	47	43	39	35	31	26	22	18	19	20	20	21	22
\sim	Cum Anthro. CO2	GtCO2	42	260	478	685	872	1035	1172	1285	1372	1435	1472	1497	1522	1547	1572	1597
~	Cum Feedback CO2	GtCO2	5	32	63	98	137	180	227	278	333	392	455	522	594	669	748	831
\sim	Cum Carb Rem CO2	GtCO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
$\overline{}$	Cumultative CO2	GtCO2	47	292	541	783	1009	1215	1399	1563	1705	1827	1927	2019	2116	2216	2320	2428

There are about 11 "data elements" that whose values can be changed. Check one or more of the checkboxes under the "Items For Input" text to view the dropdown lists for corresponding data items.

Sc	enario	Items F	or Displa	y I	Items F	or Input	:		Option	ns: 🗆 CD	RDF	eedbacks	Age	gressiver	ness 🗆	Accelera	tion	
M Cli tal	oderate CO Co Ck the 'Scenarios' C Co Chabove to view the C C C C C C C C C C C C C C C C C C C	2 CO2e	RF SRM		D2 RF	SRM Co	ost											
av	ailable scenarios Item	Units								Input \	/alues							
			2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085	2090	2095	2100
~	Anthropogen. CO2	GTCO2	42∨	45∨	43∨	40 🗸	35 🗸	30 🗸	25 🗸	20 🗸	15 🗸	10 🗸	5 🗸	~	~	~	~	~
~	Temperature Incr.	°C	1.50	1.65	1.75	1.90	2.01	2.15	2.26	2.35	2.43	2.48	2.54	2.56	2.60	2.60	2.63	2.63
\sim	Solar Rad. Mgt.	W/m-2	V	~	~	~	~	P	~	~	~	~	~	~	~	~	~	~
\sim	Temp Incr (Goal)	°C	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	
	Global Net CO2 Emissi	ons (GT C	02)	Globa	02)	Glob	al Tempe	erature I	ncrease	(°C)								
45	Basel	ine		10		Baselin	le		1.0		Baseli	ne		3.0	Base	line	With SRI	М
40				0.9					0.9					0.0				
35				0.8					0.8					2.5		_		
30				0.7					0.7					2.0	/			
25				0.6					0.6									
20	\sim			0.5					0.4					1.5				
15				0.3					0.3					1.0				
10		\mathbf{N}		0.2					0.2					0.5				
5		\rightarrow		0.1					0.1									
0 ~\$	15 15 15 15 15 15	2515 2555	2055	1929 1929	204 ⁵ 25	20 A	2015 2055	2005	2020 202	2 19 12 12	\$ ⁵ 26 ⁶	2010 2000	2050	2020 202	\$ 20 ^{\$}	19 ⁵⁵ 19 ⁶⁵	2010 2000	2005

When values for the "Temp. Incr" items are changed, the model will calculate the global CO2 removal requirement and the corresponding SRM requirement.

Sce	enario	Items F	or Displa	v	Items F	or Input			Option	s: 🗆 CD		eedbacks		gressive	ness 🗆	Accelera	tion	
Mo	derate Y CC	2 CO2e	RF SRM	Cost C	D2 RF	SRMC	ost											
Clic	k the 'Scenarios'																	
tab	above to view the																	
ava	ilable scenarios																	
	Item	Units								Input \	/alues							
			2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085	2090	2095	210
>	Anthropogen. CO2	GTCO2	42 ✔	45∨	43∨	40 🗸	35 🗸	30 🗸	25 🗸	20 🗸	15 🗸	10 🗸	5 🗸	~	~	~	>	~
~	Temperature Incr.	°C	1.50	1.65	1.75	1.89	2.00	2.13	2.23	2.31	2.39	2.42	2.48	2.47	2.51	2.49	2.51	2.49
~	Temp Incr (Goal)	°C	<	~	>	>	>	2.00 🗸	>	>	1.75 ¥	>	>	>	~	1.50 🗸	<	
~	Solar Rad. Mgt.	W/m-2	0.00	0.00	0.00	0.00	0.00	0.27	0.63	0.93	1.20	1.33	1.49	1.55	1.69	1.73	1.75	1.72
~	Temp Incr (Goal)	°C	1.50	1.65	1.75	1.89	2.00	2.00	1.92	1.83	1.75	1.70	1.65	1.60	1.55	1.50	1.50	1.50
	Global Net CO2 Emiss	ions (GT C	02)	Globa	I SRM Re	quireme	nt (W/m	-2)	Globa	al CDR Re	equireme	ent (GT C	02)	Glob	al Temp	erature I	ncrease	(°C)
45	Base	line				Baselin	e				Baselir	ne		C 1	Base	eline 📃	Projecter	d
45				1.8				\frown	0					2.0		Goa		
40				1.0			/		-5					3.0				
35				1.4			/				\backslash			2.5		-		
30-				1.2		1			-10		\mathbf{N}			2.0				
25				1.0		/			-15									
20				0.8		/								1.5				
15				0.6		1			-20					1.0				
10		\mathbf{N}		0.4		/			-25					0.5				
5		\rightarrow		0.2	1							\searrow		0.0				
0				0	/				-30					0				
201	" 15" 15" 15" 15"	2010 2080	255	2020 2020	2049 25	1 ⁶ 67 ⁶ 6	2575 2585	20 ⁸⁵	2020 203	10 ⁴⁰ 15	5° 25°	2010 2000	2000	2020 20	3° 202° 1	19 CA	2010 2080	2000

When values for the "Solar Rad. Mgt." items are changed, the model will calculate the global CO2 removal requirement and the corresponding temperature increase. You can use this feature to determine the amount of SRM needed to reach a specific temperature goal based on the corresponding scenario's emissions pathway.

Scenario	Items Fo	or Displa	<u>y</u>	Items F	or Input			Option	ns: 🗆 CD	R	eedbacks	; 🗆 Ag	gressive	ness 🗆	Accelera	ition	
Moderate Click the 'Scenarios' tab above to view the available scenarios	2 CO2e	RF SRM	Cost C	02 RF	SRM Co	ost											
Item	Units								Input \	/alues							
		2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085	2090	2095	210
Anthropogen. CO2	GTCO2	42▼	45∨	43∨	40 🗸	35 🗸	30 🗸	25~	20 🗸	15 🗸	10 🗸	5 🗸	_	~	~	~	Ľ
✓ Temperature Incr.	°C	1.50	1.65	1.75	1.89	2.00	2.13	2.23	2.31	2.39	2.43	2.48	2.47	2.51	2.49	2.51	2.49
✓ Solar Rad. Mgt.	W/m-2	~	0.30 🗸	0.60 🗸	0.80		V	1.30 V	•		1.70	1 70	1 70	1 70	1 70	1 70	<u> </u>
✓ Temp Incr (SRM)	°C	1.50	1.51	1.48	1.52	1.54	1.15	1.50	1.43	1.57	1.70	1.70	1.70	1.70	1.70	1.70	1.5
Global Net CO2 Emissi	ons (GT C	02)	Globa	I SRM Re	quireme	nt (W/m	-2)	Globa	al CDR Re	equireme	nt (GT C	02)	Glob	al Temp	erature I	ncrease	(°C)
45 40 35 30 25 20 15 10 5 0 0 5 0 0 5 0 0 5 0 0 0 0 5 0 0 0 0	ine	- And	1.8 1.6 1.4 1.2 1.0 0.8 0.4 0.2 0 0 0 0 0 0 0 0 0 0 0 0 0		Baselin		aller - aller	1.0 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Baselin	ne	Star	2.5 2.0 1.5 0 6 6 6 6 6 7 6 7 6 7 6 7 6 7 8 7 8 7 8 7	Base	With S	Projected RM	d Less