OTORITAS JASA KEUANGAN

CLIMATE RISK MANAGEMENT & SCENARIO ANALYSIS PERBANKAN 2024

BUKU 4

DATA MAKROEKONOMI

DEPARTEMEN PENGATURAN
DAN PENGEMBANGAN PERBANKAN
OTORITAS JASA KEUANGAN

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HALAMAN INI SENGAJA DIKOSONGKAN

DAFTAR ISI

HALAMAN INI SENGAJA DIKOSONGKAN

GAMBARAN UMUM BUKU 4

DATA MAKROEKONOMI

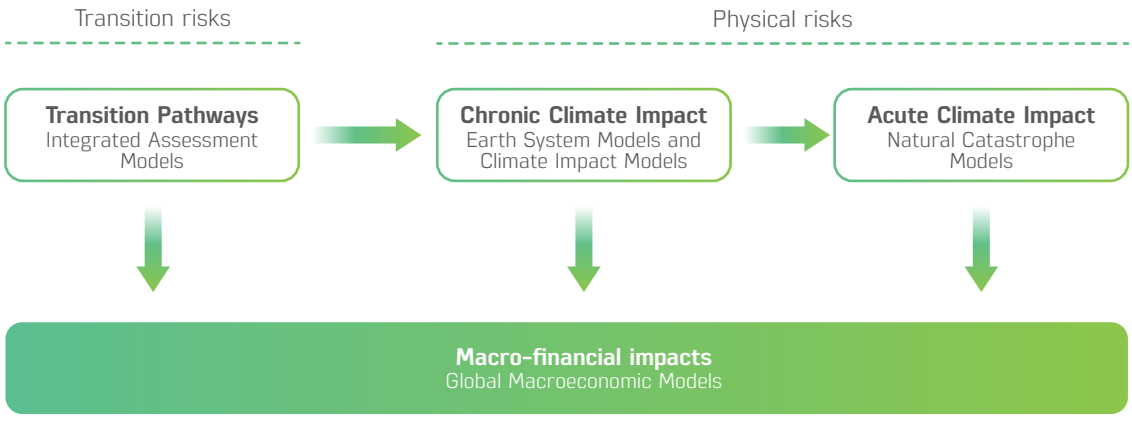
Buku 4 ini menjelaskan tentang data pendukung yang diperlukan oleh Bank dalam melakukan *Stress Test* terkait dampak risiko iklim khususnya dengan risiko transisi. Data dan metodologi menggunakan sumber dari Network for Greening the Financial System (NGFS) yang telah disesuaikan dengan kondisi Indonesia berdasarkan rilis resmi dari Kementerian/Lembaga antara lain Kementerian Energi Sumbar Daya Mineral dan Badan Pusat Statistik (BPS).

Banyak negara telah mulai merespons dengan menetapkan target dan strategi *Net-Zero Emissions* dalam rangka menghentikan kontribusinya terhadap pemanasan global. Transisi yang dilakukan tersebut dapat menimbulkan risiko yang signifikan dan membutuhkan investasi yang besar pada setiap sektor ekonomi. Teknologi dan pekerjaan baru akan dibutuhkan untuk mengurangi penggunaan energi dan emisi, serta pemulihan lahan. Hal ini akan menghadirkan tantangan dan peluang yang berbeda. Meskipun hasil akhirnya belum dapat dipastikan, namun dapat diperkirakan bahwa beberapa kombinasi dari tren tersebut akan terjadi dan dalam beberapa dekade ke depan akan menjadi periode perubahan yang kritis.

NGFS bersama dengan kelompok ahli ilmuwan iklim dan ekonom telah merancang serangkaian skenario hipotetis. Skenario tersebut memberikan titik acuan yang umum dan terkini untuk memahami bagaimana perubahan iklim (risiko fisik) dan kebijakan iklim serta tren teknologi (risiko transisi) dapat berevolusi di masa depan yang berbeda. Setiap skenario dipilih untuk menunjukkan dampak risiko yang lebih rendah maupun lebih tinggi.

Skenario iklim awalnya dirancang untuk memberikan saran kepada para pembuat kebijakan mengenai risiko dari perubahan iklim. Skenario ini merupakan bagian penting dari penilaian ilmiah seperti yang dilakukan oleh Panel Antarpemerintah tentang Perubahan Iklim (IPCC). Sejak tahun 2020, model ini telah diadaptasi oleh NGFS untuk membantu bank sentral dan otoritas pengawasan dalam mengeksplorasi kemungkinan dampak terhadap ekonomi dan sistem keuangan.

Skenario NGFS telah diperbaharui dengan data ekonomi dan iklim, model, dan komitmen kebijakan, yang mencerminkan komitmen untuk mencapai emisi nol bersih yang dibuat hingga Maret 2023. Skenario-skenario baru ini juga mencerminkan tren terbaru dalam teknologi energi terbarukan (misalnya tenaga surya dan angin), teknologi mitigasi utama, dan implikasi pasar energi dari perang di Ukraina.



01.

SUKU BUNGA ACUAN

No	Scenario	Region	Variable	Unit	
1	Baseline (Current Policies)	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; %	%	
2	Delayed transition	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; % (combined)	%	
3	Fragmented World	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; % (combined)	%	
4	Nationally Determined Contributions (NDCs)	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; % (combined)	%	
5	Net Zero 2050	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; % (combined)	%	
6	Below 2°C	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; % (combined)	%	

No	Scenario	Region	Variable	Unit	
1	Baseline (Current Policies)	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; %	%	
2	Delayed transition	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; % (combined)	%	
3	Fragmented World	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; % (combined)	%	
4	Nationally Determined Contributions (NDCs)	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; % (combined)	%	
5	Net Zero 2050	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; % (combined)	%	
6	Below 2°C	NiGEM NGFS v1.23.2 | Indonesia	Central bank Intervention rate (policy interest rate) ; % (combined)	%	

01.

SUKU BUNGA ACUAN

	2023	2024	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	5,48	5,43	5,43	5,40	5,38	5,35	5,34	5,32	5,31	5,30	5,29	5,28	5,27	5,27	5,27
	5,48	5,43	5,43	5,40	5,38	5,35	5,34	5,32	5,31	5,12	4,58	4,33	4,61	4,88	4,98
	5,48	5,43	5,43	5,40	5,38	5,35	5,34	5,32	5,31	5,23	4,70	4,44	4,70	4,94	5,04
	5,54	5,44	5,44	5,37	5,36	5,39	5,43	5,46	5,47	5,47	5,45	5,41	5,39	5,37	5,36
	5,37	5,04	5,04	4,77	4,72	4,80	4,90	5,05	5,24	5,34	5,39	5,47	5,54	5,61	5,64
	5,36	5,13	5,13	4,95	4,93	4,98	5,03	5,09	5,16	5,21	5,26	5,32	5,40	5,49	5,55

	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	5,26	5,26	5,26	5,26	5,26	5,25	5,25	5,25	5,25	5,25	5,25	5,25	5,25	5,25
	5,01	5,05	5,14	5,24	5,32	5,38	5,43	5,46	5,46	5,43	5,42	5,44	5,45	5,48
	5,08	5,13	5,21	5,30	5,38	5,44	5,49	5,55	5,61	5,65	5,69	5,72	5,74	5,74
	5,35	5,35	5,35	5,35	5,36	5,36	5,36	5,37	5,36	5,36	5,36	5,36	5,36	5,36
	5,65	5,66	5,64	5,59	5,56	5,59	5,66	5,77	5,93	6,04	6,06	6,06	6,05	6,03
	5,58	5,63	5,67	5,71	5,73	5,74	5,74	5,73	5,71	5,68	5,66	5,65	5,64	5,63

02.

NILAI TUKAR USD/IDR

No	Scenario	Region	Variable	Unit	2023	2024	2025	
1	Baseline (Current Policies)	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$	local per US$	15.439	15.060	14.899	
2	Delayed transition	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$ (combined)	local per US$	15.439	15.060	14.899	
3	Fragmented World	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$ (combined)	local per US$	15.439	15.060	14.899	
4	Nationally Determined Contributions (NDCs)	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$ (combined)	local per US$	15.439	15.081	14.939	
5	Net Zero 2050	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$ (combined)	local per US$	15.439	14.662	14.449	
6	Below 2°C	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$ (combined)	local per US$	15.439	14.788	14.600	

No	Scenario	Region	Variable	Unit	2037	2038	2039	
1	Baseline (Current Policies)	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$	local per US$	14.189	14.160	14.139	
2	Delayed transition	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$ (combined)	local per US$	13.928	13.857	13.791	
3	Fragmented World	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$ (combined)	local per US$	14.127	14.072	14.022	
4	Nationally Determined Contributions (NDCs)	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$ (combined)	local per US$	14.257	14.226	14.202	
5	Net Zero 2050	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$ (combined)	local per US$	13.394	13.337	13.286	
6	Below 2°C	NiGEM NGFS v1.23.2 | Indonesia	Exchange rate; local per US$ (combined)	local per US$	13.706	13.665	13.634	

02.

NILAI TUKAR USD/IDR

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	14.778	14.673	14.574	14.482	14.397	14.319	14.247	14.182	14.124	14.072	14.225
	14.778	14.673	14.574	14.482	14.397	14.259	14.175	14.093	13.990	13.889	14.001
	14.778	14.673	14.574	14.482	14.397	14.350	14.291	14.229	14.143	14.058	14.186
	14.840	14.750	14.662	14.577	14.491	14.403	14.327	14.258	14.197	14.146	14.293
	14.266	14.090	13.919	13.758	13.611	13.479	13.359	13.250	13.151	13.062	13.462
	14.448	14.305	14.165	14.031	13.903	13.781	13.671	13.572	13.484	13.412	13.755

	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	14.125	14.115	14.106	14.097	14.087	14.078	14.069	14.059	14.050	14.040	14.031
	13.731	13.676	13.625	13.573	13.517	13.453	13.380	13.314	13.252	13.193	13.134
	13.980	13.945	13.916	13.890	13.866	13.844	13.825	13.811	13.801	13.794	13.788
	14.185	14.172	14.159	14.147	14.135	14.123	14.111	14.098	14.086	14.074	14.062
	13.236	13.183	13.133	13.088	13.049	13.020	13.004	13.002	13.009	13.019	13.031
	13.611	13.592	13.573	13.554	13.532	13.507	13.478	13.451	13.426	13.402	13.378

03.

TINGKAT INFLASI

No	Scenario	Region	Variable	Unit	
1	Baseline (Current Policies)	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; %	%	
2	Delayed transition	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
3	Fragmented World	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
4	Nationally Determined Contributions (NDCs)	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
5	Net Zero 2050	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
6	Below 2°C	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	

No	Scenario	Region	Variable	Unit	
1	Baseline (Current Policies)	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; %	%	
2	Delayed transition	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
3	Fragmented World	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
4	Nationally Determined Contributions (NDCs)	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
5	Net Zero 2050	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
6	Below 2°C	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	

03.

TINGKAT INFLASI

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	2,61	2,32	1,64	1,48	1,36	1,25	1,12	0,96	0,83	0,74	0,69	0,67	0,66	0,66
	2,61	2,31	1,66	1,51	1,39	1,28	1,14	0,99	0,86	0,70	0,60	0,65	0,73	0,76
	2,61	2,31	1,66	1,52	1,39	1,28	1,14	0,99	0,91	0,73	0,60	0,64	0,71	0,75
	2,61	2,31	1,65	1,52	1,41	1,31	1,18	1,02	0,89	0,78	0,72	0,69	0,68	0,69
	2,61	2,21	1,53	1,44	1,40	1,34	1,24	1,13	0,98	0,84	0,77	0,73	0,71	0,69
	2,61	2,25	1,58	1,47	1,42	1,34	1,22	1,08	0,95	0,84	0,79	0,76	0,76	0,75

	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	0,67	0,70	0,73	0,77	0,81	0,85	0,89	0,93	0,95	0,96	0,96	0,94	0,92	0,89
	0,77	0,79	0,83	0,87	0,90	0,92	0,94	0,96	0,95	0,93	0,91	0,89	0,87	0,85
	0,78	0,81	0,85	0,90	0,94	0,97	1,01	1,03	1,05	1,05	1,05	1,03	1,00	0,97
	0,70	0,73	0,76	0,80	0,84	0,88	0,92	0,95	0,97	0,98	0,98	0,97	0,94	0,92
	0,69	0,71	0,73	0,75	0,77	0,83	0,90	0,96	1,02	1,04	1,00	0,94	0,89	0,83
	0,75	0,77	0,80	0,84	0,87	0,89	0,92	0,94	0,95	0,95	0,94	0,92	0,90	0,87

04.

TINGKAT PERTUMBUHAN PDB

No	Scenario	Region	Variable	Unit	
1	Baseline (Current Policies)	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP)	% growth	
2	Delayed transition	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP) (combined)	% growth	
3	Fragmented World	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP) (combined)	% growth	
4	Nationally Determined Contributions (NDCs)	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP) (combined)	% growth	
5	Net Zero 2050	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP) (combined)	% growth	
6	Below 2°C	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP) (combined)	% growth	

No	Scenario	Region	Variable	Unit	
1	Baseline (Current Policies)	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP)	% growth	
2	Delayed transition	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP) (combined)	% growth	
3	Fragmented World	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP) (combined)	% growth	
4	Nationally Determined Contributions (NDCs)	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP) (combined)	% growth	
5	Net Zero 2050	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP) (combined)	% growth	
6	Below 2°C	NiGEM NGFS v1.23.2 | Indonesia	Gross Domestic Product (GDP) (combined)	% growth	

04.

TINGKAT PERTUMBUHAN PDB

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	5,05	5,62	5,28	4,30	3,99	3,78	3,56	3,35	3,16	3,02	2,88	2,74	2,60	2,50
	5,05	5,94	5,57	4,54	4,22	3,98	3,74	3,50	2,78	2,34	3,02	3,30	2,85	2,56
	5,05	6,07	5,71	4,63	4,27	4,00	3,77	3,54	2,86	2,45	3,10	3,35	2,86	2,55
	5,05	5,89	5,57	4,57	4,26	4,02	3,76	3,51	3,29	3,11	2,97	2,81	2,66	2,56
	5,05	5,74	5,45	4,55	4,28	4,03	3,81	3,60	3,37	3,24	3,15	3,02	2,85	2,73
	5,05	5,84	5,52	4,56	4,25	3,99	3,74	3,51	3,30	3,16	3,06	2,93	2,78	2,66

	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	2,46	2,42	2,39	2,36	2,32	2,27	2,22	2,17	2,13	2,08	2,04	2,00	1,97	1,93
	2,50	2,52	2,55	2,55	2,53	2,50	2,45	2,41	2,36	2,32	2,29	2,25	2,23	2,23
	2,49	2,49	2,48	2,46	2,42	2,37	2,33	2,28	2,21	2,14	2,10	2,05	2,00	1,97
	2,54	2,52	2,50	2,47	2,43	2,39	2,33	2,27	2,20	2,14	2,10	2,07	2,03	2,00
	2,69	2,67	2,64	2,60	2,59	2,58	2,54	2,49	2,46	2,36	2,31	2,31	2,28	2,25
	2,63	2,60	2,59	2,56	2,52	2,48	2,43	2,37	2,32	2,26	2,22	2,19	2,18	2,17

05.

JUMLAH PENDUDUK

No	Model	Scenario	Region	Variable	Unit	
1	BPS	All	Indonesia	Population	million	

No	Model	Scenario	Region	Variable	Unit	
1	BPS	All	Indonesia	Population	million	

No	Model	Scenario	Region	Variable	Unit	
1	BPS	All	Indonesia	Population	million	

*) Tidak terdapat perbedaan jumlah penduduk untuk semua Skenario NGFS (Sumber: BPS)

05.

JUMLAH PENDUDUK

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	269,58	272,68	275,72	278,70	281,60	284,44	287,20	289,88	292,48	295,00

	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
	297,43	299,78	302,05	304,24	306,34	308,37	310,31	312,16	313,93	315,62

	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	317,23	318,75	320,19	321,56	322,85	324,05	325,18	326,24	327,21	328,11	328,93

06.

TINGKAT PENGANGGURAN

No	Scenario	Region	Variable	Unit	
1	Baseline (Current Policies)	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; %	%	
2	Delayed transition	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
3	Fragmented World	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
4	Nationally Determined Contributions (NDCs)	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
5	Net Zero 2050	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
6	Below 2°C	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	

No	Scenario	Region	Variable	Unit	
1	Baseline (Current Policies)	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; %	%	
2	Delayed transition	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
3	Fragmented World	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
4	Nationally Determined Contributions (NDCs)	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
5	Net Zero 2050	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	
6	Below 2°C	NiGEM NGFS v1.23.2 | Indonesia	Inflation rate ; % (combined)	%	

06.

TINGKAT PENGANGGURAN

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	5,32	5,24	5,17	5,10	5,03	4,97	4,93	4,90	4,82	4,70	4,60	4,51	4,44	4,32
	5,32	5,18	5,05	4,88	4,68	4,51	4,35	4,21	4,08	4,29	4,35	3,96	3,63	3,39
	5,32	5,18	5,05	4,88	4,68	4,51	4,35	4,21	4,06	4,17	4,20	3,83	3,51	3,29
	5,32	5,23	5,16	5,01	4,82	4,64	4,50	4,38	4,24	4,10	3,97	3,84	3,72	3,55
	5,32	5,30	5,27	5,08	4,77	4,48	4,18	3,89	3,56	3,23	2,88	2,53	2,21	1,84
	5,32	5,25	5,17	4,98	4,71	4,49	4,29	4,09	3,86	3,61	3,34	3,08	2,82	2,53

	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	5,32	5,24	5,17	5,10	5,03	4,97	4,93	4,90	4,82	4,70	4,60	4,51	4,44	4,32
	5,32	5,18	5,05	4,88	4,68	4,51	4,35	4,21	4,08	4,29	4,35	3,96	3,63	3,39
	5,32	5,18	5,05	4,88	4,68	4,51	4,35	4,21	4,06	4,17	4,20	3,83	3,51	3,29
	5,32	5,23	5,16	5,01	4,82	4,64	4,50	4,38	4,24	4,10	3,97	3,84	3,72	3,55
	5,32	5,30	5,27	5,08	4,77	4,48	4,18	3,89	3,56	3,23	2,88	2,53	2,21	1,84
	5,32	5,25	5,17	4,98	4,71	4,49	4,29	4,09	3,86	3,61	3,34	3,08	2,82	2,53

07.

HARGA BATUBARA

No	Scenario	Variable	Unit	2023	2024	2025	2026	
1	Baseline (Current Policies)	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	117,38	109,11	106,70	108,25	
2	Delayed transition	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	117,38	109,11	106,70	108,25	
3	Fragmented World	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	117,38	109,11	106,70	108,25	
4	Nationally Determined Contributions (NDCs)	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	117,38	110,65	109,55	111,05	
5	Net Zero 2050	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	117,38	116,97	121,54	175,88	
6	Below 2°C	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	117,38	116,45	120,55	147,32	

No	Scenario	Variable	Unit	2037	2038	2039	2040	
1	Baseline (Current Policies)	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	126,79	128,63	130,49	132,38	
2	Delayed transition	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	582,36	665,30	749,31	833,99	
3	Fragmented World	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	85,09	81,46	78,32	75,52	
4	Nationally Determined Contributions (NDCs)	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	186,45	203,08	220,11	237,50	
5	Net Zero 2050	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	1.368,63	1.533,84	1.699,23	1.864,77	
6	Below 2°C	Coal price ; US$ per ton (equiv)(combined)	US$ per ton (equiv)	732,78	803,90	875,25	946,79	

07.

HARGA BATUBARA

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	109,81	111,40	113,02	114,65	116,31	118,00	119,71	121,44	123,20	124,98
	109,81	111,40	113,02	114,65	163,08	233,03	298,43	362,85	427,61	501,32
	109,81	111,40	113,02	114,65	115,44	112,17	106,57	100,68	94,98	89,53
	110,41	107,96	104,00	98,64	101,98	113,41	126,73	140,80	155,08	170,29
	258,15	339,94	421,14	501,65	600,82	713,41	827,53	942,32	1.057,40	1.203,63
	184,53	220,22	254,62	287,84	337,60	399,78	463,65	528,30	593,32	661,92

	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	134,29	136,24	138,21	140,21	142,24	144,30	146,39	148,51	150,66	152,84
	941,14	1.062,50	1.184,62	1.307,15	1.429,91	1.584,99	1.759,70	1.934,66	2.109,75	2.284,93
	73,23	72,32	72,47	73,20	74,27	75,58	77,23	79,13	81,18	83,32
	261,35	289,07	316,92	344,86	372,86	404,20	437,45	470,63	503,78	536,93
	2.147,01	2.499,39	2.851,93	3.204,54	3.557,19	3.861,20	4.136,12	4.411,12	4.686,18	4.961,27
	1.037,75	1.140,65	1.243,85	1.347,20	1.450,61	1.586,34	1.741,52	1.896,78	2.052,08	2.207,40

08.

HARGA GAS

No	Scenario	Variable	Unit	
1	Baseline (Current Policies)	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	
2	Delayed transition	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	
3	Fragmented World	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	
4	Nationally Determined Contributions (NDCs)	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	
5	Net Zero 2050	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	
6	Below 2°C	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	

No.	Scenario	Variable	Unit	
1	Baseline (Current Policies)	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	
2	Delayed transition	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	
3	Fragmented World	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	
4	Nationally Determined Contributions (NDCs)	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	
5	Net Zero 2050	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	
6	Below 2°C	Gas price ; US$ per MMBTU (equiv)	US$ per MMBTU (equiv)	

08.

HARGA GAS

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	6,00	5,58	5,45	5,53	5,61	5,69	5,78	5,86	5,95	6,03	6,12	6,21	6,30	6,39
	6,00	5,58	5,45	5,53	5,61	5,69	5,78	5,86	6,49	7,32	8,05	8,75	9,45	10,23
	6,00	5,58	5,45	5,53	5,61	5,69	5,78	5,86	5,94	5,97	5,96	5,95	5,95	5,95
	6,00	5,63	5,55	5,65	5,73	5,79	5,84	5,89	6,04	6,29	6,55	6,82	7,09	7,38
	6,00	5,67	5,64	6,47	7,64	8,73	9,79	10,83	12,13	13,59	15,04	16,50	17,96	19,89
	6,00	5,64	5,58	5,98	6,52	7,03	7,53	8,01	8,72	9,54	10,34	11,14	11,93	12,77

	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	6,48	6,57	6,67	6,77	6,86	6,96	7,06	7,17	7,27	7,38	7,48	7,59	7,70	7,81
	11,04	11,85	12,66	13,47	14,54	15,77	16,99	18,23	19,48	21,12	23,01	24,92	26,86	28,80
	5,94	5,91	5,88	5,85	5,82	5,79	5,77	5,76	5,75	5,74	5,74	5,76	5,78	5,80
	7,65	7,91	8,16	8,41	8,73	9,07	9,40	9,72	10,03	10,39	10,77	11,15	11,54	11,93
	22,08	24,29	26,51	28,75	32,69	37,68	42,71	47,75	52,80	57,15	61,10	65,06	69,03	73,01
	13,62	14,47	15,32	16,17	17,30	18,57	19,85	21,14	22,43	24,17	26,20	28,24	30,29	32,35

09.

HARGA MINYAK

No	Scenario	Variable	Unit	
1	Baseline (Current Policies)	Oil price ; US$ per barrel	US$ per barrel (equiv)	
2	Delayed transition	Oil price ; US$ per barrel (combined)	US$ per barrel (equiv)	
3	Fragmented World	Oil price ; US$ per barrel (combined)	US$ per barrel (equiv)	
4	Nationally Determined Contributions (NDCs)	Oil price ; US$ per barrel (combined)	US$ per barrel (equiv)	
5	Net Zero 2050	Oil price ; US$ per barrel (combined)	US$ per barrel (equiv)	
6	Below 2°C	Oil price ; US$ per barrel (combined)	US$ per barrel (equiv)	

No	Scenario	Variable	Unit	
1	Baseline (Current Policies)	Oil price ; US$ per barrel	US$ per barrel (equiv)	
2	Delayed transition	Oil price ; US$ per barrel (combined)	US$ per barrel (equiv)	
3	Fragmented World	Oil price ; US$ per barrel (combined)	US$ per barrel (equiv)	
4	Nationally Determined Contributions (NDCs)	Oil price ; US$ per barrel (combined)	US$ per barrel (equiv)	
5	Net Zero 2050	Oil price ; US$ per barrel (combined)	US$ per barrel (equiv)	
6	Below 2°C	Oil price ; US$ per barrel (combined)	US$ per barrel (equiv)	

09.

HARGA MINYAK

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	75,51	70,19	68,64	69,63	70,64	71,67	72,70	73,76	74,82	75,91	77,01	78,12	79,25	80,40
	75,51	70,19	68,64	69,63	70,64	71,67	72,70	73,76	81,40	92,36	102,85	113,38	124,01	135,64
	75,51	70,19	68,64	69,63	70,64	71,67	72,70	73,76	74,83	75,70	76,45	77,45	78,66	79,93
	75,51	70,67	69,53	70,79	72,00	73,20	74,39	75,59	78,10	81,44	84,83	88,25	91,68	95,27
	75,51	72,74	73,30	84,00	99,14	113,99	128,64	143,18	160,67	179,61	198,21	216,63	234,95	258,34
	75,51	71,96	71,89	77,33	84,58	91,72	98,79	105,81	115,46	126,60	137,62	148,58	159,49	170,90

	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	81,56	82,74	83,94	85,16	86,39	87,64	88,91	90,20	91,50	92,83	94,17	95,54	96,92	98,32
	147,85	160,01	172,13	184,21	199,13	215,45	231,47	247,35	263,15	283,11	304,97	326,32	347,47	368,54
	81,30	82,76	84,28	85,82	87,37	88,90	90,45	92,02	93,60	95,18	96,75	98,32	99,92	101,56
	98,94	102,61	106,29	109,97	114,52	119,53	124,50	129,45	134,39	139,82	145,51	151,20	156,89	162,60
	284,58	310,60	336,52	362,40	407,71	464,26	520,45	576,50	632,52	680,46	724,00	767,95	812,12	856,42
	182,58	194,21	205,82	217,42	232,02	248,27	264,37	280,41	296,40	317,44	341,19	364,66	388,00	411,28

10.

DATA EMISI

No	Scenario	Region	Variable	Unit	2020	2025	
1	Below 2°C	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	1.379,66	1.223,52	
2	Current Policies	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	1.379,66	1.337,61	
3	Delayed transition	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	1.379,66	1.337,61	
4	Fragmented World	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	1.379,66	1.337,61	
5	Low demand	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	1.379,66	1.214,45	
6	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	1.379,66	1.313,44	
7	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	1.379,66	1.203,18	

No	Scenario	Region	Variable	Unit	2065	2070	
1	Below 2°C	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	237,35	267,07	
2	Current Policies	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	805,46	714,89	
3	Delayed transition	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	200,53	239,75	
4	Fragmented World	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	788,81	791,77	
5	Low demand	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	378,73	384,72	
6	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	225,44	70,68	
7	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Emissions | CO2	Mt CO2/ yr	399,56	392,91	

10.

DATA EMISI

	2030	2035	2040	2045	2050	2055	2060
	976,39	663,93	361,52	96,76	124,12	171,99	205,71
	1.273,96	1.228,71	1.178,76	1.111,55	1.033,55	962,41	888,89
	1.273,96	964,08	606,90	273,69	47,16	117,37	162,54
	1.273,96	1.134,75	993,25	849,53	713,85	747,52	775,02
	925,14	525,04	179,06	67,90	287,34	349,88	361,73
	1.234,20	1.140,52	1.026,20	876,70	711,64	546,36	383,62
	799,21	420,38	140,00	102,19	325,72	380,04	389,06

	2075	2080	2085	2090	2095	2100
	292,87	295,59	301,83	306,48	310,01	314,20
	612,94	501,43	390,82	282,51	268,52	246,11
	288,29	329,27	333,16	339,10	343,86	349,03
	781,55	761,67	739,40	717,71	712,29	705,93
	389,05	398,06	406,16	411,28	415,77	421,56
	30,45	9,68	35,96	50,21	70,56	95,66
	397,26	405,02	412,94	414,56	416,62	420,68

11.

HARGA KARBON

No	Scenario	Variable	Unit	2023	2024	
1	Baseline (Current Policies)	Carbon pricing ; $ per Tn CO2	$ per Tn CO2	N/A	N/A	
2	Delayed transition	Carbon pricing ; $ per Tn CO2 (combined)	$ per Tn CO2	N/A	N/A	
3	Fragmented World	Carbon pricing ; $ per Tn CO2 (combined)	$ per Tn CO2	N/A	N/A	
4	Nationally Determined Contributions (NDCs)	Carbon pricing ; $ per Tn CO2 (combined)	$ per Tn CO2	10,81	14,93	
5	Net Zero 2050	Carbon pricing ; $ per Tn CO2 (combined)	$ per Tn CO2	58,26	80,45	
6	Below 2°C	Carbon pricing ; $ per Tn CO2 (combined)	$ per Tn CO2	40,37	55,75	

No	Scenario	Variable	Unit	2037	2038	
1	Baseline (Current Policies)	Carbon pricing ; $ per Tn CO2	$ per Tn CO2	N/A	N/A	
2	Delayed transition	Carbon pricing ; $ per Tn CO2 (combined)	$ per Tn CO2	724,45	846,91	
3	Fragmented World	Carbon pricing ; $ per Tn CO2 (combined)	$ per Tn CO2	N/A	N/A	
4	Nationally Determined Contributions (NDCs)	Carbon pricing ; $ per Tn CO2 (combined)	$ per Tn CO2	195,32	221,55	
5	Net Zero 2050	Carbon pricing ; $ per Tn CO2 (combined)	$ per Tn CO2	2.473,10	2.777,86	
6	Below 2°C	Carbon pricing ; $ per Tn CO2 (combined)	$ per Tn CO2	1.198,40	1.322,58	

11.

HARGA KARBON

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A	N/A	65,68	170,78	275,87	380,97	486,06	602,00
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	19,05	22,04	24,34	26,64	28,94	31,25	47,18	71,30	95,42	119,53	143,65	169,09
	102,64	210,47	369,68	528,89	688,10	847,31	1.040,87	1.255,04	1.469,21	1.683,38	1.897,55	2.168,34
	71,13	119,94	188,81	257,68	326,55	395,42	493,16	608,24	723,31	838,38	953,45	1.074,21

	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	969,36	1.091,81	1.244,06	1.414,19	1.584,32	1.754,45	1.924,59	2.138,61	2.378,96	2.619,31	2.859,66	3.100,02
	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	247,79	274,02	309,14	349,60	390,05	430,51	470,97	516,25	564,44	612,63	660,81	709,00
	3.082,62	3.387,39	3.905,15	4.550,71	5.196,28	5.841,84	6.487,41	7.044,00	7.547,21	8.050,42	8.553,64	9.056,85
	1.446,76	1.570,94	1.727,62	1.903,78	2.079,95	2.256,11	2.432,28	2.663,07	2.926,64	3.190,20	3.453,77	3.717,33

12.

ENERGI

No	Scenario	Region	Variable	Unit	
1	Below 2°C (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
2	Current Policies (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
3	Delayed transition (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
4	Fragmented World (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
5	Low demand (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
6	Nationally Determined Contributions (NDCs) (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
7	Net Zero 2050 (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	

No	Scenario	Region	Variable	Unit	
1	Below 2°C (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
2	Current Policies (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
3	Delayed transition (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
4	Fragmented World (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
5	Low demand (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
6	Nationally Determined Contributions (NDCs) (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	
7	Net Zero 2050 (version: 1)	GCAM 6.0 NGFS | Indonesia	Final Energy	EJ/yr	

12.

ENERGI

	2020	2025	2030	2035	2040	2045	2050	2055	2060
	7,69	8,58	9,21	9,56	9,78	9,73	9,47	9,37	9,31
	7,69	8,71	9,62	10,33	10,97	11,51	11,98	12,40	12,75
	7,69	8,71	9,62	9,88	10,10	9,97	9,67	9,49	9,38
	7,69	8,71	9,62	10,36	11,04	11,68	12,20	12,62	12,94
	7,69	8,40	8,64	8,81	8,66	7,87	7,70	7,57	7,90
	7,69	8,70	9,59	10,24	10,82	11,34	11,77	12,16	12,46
	7,69	8,56	8,90	8,89	8,45	7,74	7,87	8,00	8,41

	2065	2070	2075	2080	2085	2090	2095	2100
	9,29	9,34	9,38	9,62	9,82	9,97	10,07	10,13
	12,99	13,15	13,25	13,29	13,28	13,25	13,18	13,11
	9,37	9,41	9,52	9,60	9,80	9,95	10,07	10,14
	13,16	13,28	13,35	13,37	13,36	13,32	13,25	13,16
	8,21	8,45	8,62	8,76	8,86	8,94	9,01	9,06
	12,64	12,76	12,82	12,82	12,77	12,69	12,58	12,45
	8,79	9,08	9,30	9,47	9,58	9,67	9,76	9,79

13.

JALUR TRANSISI ENERGI

No	Scenario	Region	Variable	Unit	
1	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	
2	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	
3	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	
4	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	
5	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	
6	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	
7	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	
8	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	
9	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	
10	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	
11	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	
12	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	
13	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	
14	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	
15	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	
16	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	
17	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	
18	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	
19	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	

13.

JALUR TRANSISI ENERGI

	2020	2025	2030	2035	2040	2045	2050	2055
	0,051	0,053	0,055	0,056	0,058	0,060	0,062	0,064
	6,940	7,461	6,882	5,578	4,388	3,566	3,243	2,784
	1,835	1,822	1,502	0,953	0,570	0,427	0,419	0,423
	3,337	3,463	2,981	2,138	1,359	0,854	0,798	0,546
	2,684	3,061	3,952	4,979	5,722	5,643	4,613	3,993
	1,768	2,176	2,399	2,486	2,459	2,285	2,026	1,815
	0,000	0,001	0,004	0,010	0,016	0,023	0,032	0,039
	0,121	0,325	0,594	1,029	1,601	2,384	3,457	4,558
	0,051	0,053	0,055	0,056	0,058	0,060	0,062	0,064
	6,941	7,794	8,408	9,223	9,939	10,447	10,821	11,302
	1,835	2,093	2,239	2,528	2,923	3,275	3,554	3,815
	3,338	3,503	3,564	3,589	3,452	3,163	2,892	2,810
	2,684	3,026	3,405	3,497	3,616	3,808	3,982	4,047
	1,768	2,199	2,604	3,106	3,564	4,008	4,376	4,677
	0,000	0,000	0,002	0,004	0,006	0,007	0,008	0,008
	0,121	0,295	0,495	0,704	0,926	1,130	1,344	1,493
	0,051	0,053	0,055	0,056	0,058	0,060	0,062	0,064
	6,941	7,792	8,402	7,679	6,492	5,500	4,490	3,693
	1,835	2,092	2,237	1,890	1,174	0,617	0,495	0,473

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JALUR TRANSISI ENERGI

No	Scenario	Region	Variable	Unit	
20	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	
21	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	
22	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	
23	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	
24	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	
25	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	
26	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	
27	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	
28	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	
29	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	
30	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	
31	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	
32	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	
33	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	
34	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	
35	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	
36	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	
37	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	
38	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	

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JALUR TRANSISI ENERGI

	2020	2025	2030	2035	2040	2045	2050	2055
	3,337	3,502	3,563	3,081	2,563	2,253	1,640	1,171
	2,684	3,025	3,402	4,020	4,489	4,031	3,530	3,059
	1,768	2,198	2,602	2,708	2,755	2,631	2,355	2,049
	0,000	0,000	0,002	0,006	0,012	0,023	0,033	0,042
	0,121	0,295	0,495	0,750	1,353	2,280	3,385	4,530
	0,051	0,053	0,055	0,057	0,058	0,060	0,062	0,064
	6,941	7,794	8,408	8,956	9,487	10,020	10,659	11,282
	1,835	2,093	2,239	2,246	2,291	2,326	2,354	2,359
	3,338	3,503	3,565	3,667	3,674	3,665	3,853	4,130
	2,684	3,025	3,403	3,562	3,612	3,604	3,363	3,077
	1,768	2,199	2,604	3,043	3,522	4,029	4,452	4,794
	0,000	0,000	0,002	0,005	0,007	0,009	0,010	0,010
	0,121	0,295	0,495	0,694	0,975	1,270	1,556	1,793
	0,051	0,053	0,055	0,057	0,059	0,060	0,062	0,064
	6,939	7,457	6,470	4,309	2,709	2,268	2,359	1,678
	1,834	1,841	1,411	0,674	0,393	0,344	0,313	0,191
	3,337	3,481	2,878	1,492	0,395	0,373	0,649	0,316
	2,685	2,892	3,727	5,297	6,039	4,365	3,253	2,566
	1,767	2,135	2,180	2,142	1,920	1,552	1,398	1,171

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JALUR TRANSISI ENERGI

No	Scenario	Region	Variable	Unit	
39	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	
40	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	
41	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	
42	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	
43	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	
44	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	
45	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	
46	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	
47	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	
48	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	
49	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	
50	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	
51	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	
52	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	

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JALUR TRANSISI ENERGI

	2020	2025	2030	2035	2040	2045	2050	2055
	0,000	0,000	0,003	0,010	0,017	0,031	0,043	0,059
	0,121	0,289	0,502	0,983	1,623	2,861	4,018	5,489
	0,051	0,053	0,055	0,056	0,058	0,060	0,062	0,064
	6,941	7,690	8,306	8,753	8,940	8,633	8,126	7,716
	1,835	1,978	2,042	2,070	2,057	1,944	1,774	1,550
	3,338	3,497	3,602	3,576	3,383	2,958	2,456	2,119
	2,684	3,066	3,343	3,564	3,896	4,476	5,035	5,465
	1,768	2,215	2,662	3,108	3,499	3,731	3,897	4,047
	0,000	0,000	0,003	0,005	0,007	0,009	0,010	0,012
	0,121	0,308	0,530	0,760	1,035	1,329	1,718	2,093
	0,051	0,053	0,055	0,057	0,058	0,060	0,062	0,064
	6,939	7,388	5,083	3,137	2,466	2,107	2,080	1,305
	1,834	1,804	0,924	0,512	0,411	0,348	0,259	0,140
	3,337	3,432	1,939	0,586	0,321	0,292	0,535	0,232

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JALUR TRANSISI ENERGI

No	Scenario	Region	Variable	Unit	
53	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	
54	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	
55	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	
56	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	

No	Scenario	Region	Variable	Unit	2060	
1	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	0,066	
2	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	2,415	
3	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	0,400	
4	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	0,400	
5	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	3,256	
6	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	1,615	
7	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	0,051	
8	Below 2°C	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	5,707	
9	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	0,065	
10	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	11,763	
11	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	4,012	
12	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	2,854	
13	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	4,018	
14	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	4,897	

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JALUR TRANSISI ENERGI

	2020	2025	2030	2035	2040	2045	2050	2055
	2,684	3,079	4,839	5,999	5,265	3,453	2,570	1,897
	1,767	2,152	2,220	2,039	1,735	1,467	1,286	0,934
	0,000	0,001	0,007	0,018	0,031	0,049	0,067	0,092
	0,121	0,328	0,749	1,350	2,362	3,907	5,262	7,021

	2065	2070	2075	2080	2085	2090	2095	2100
	0,067	0,069	0,071	0,073	0,074	0,076	0,078	0,080
	2,006	1,640	1,248	1,277	1,300	1,347	1,408	1,491
	0,323	0,225	0,139	0,157	0,187	0,206	0,217	0,223
	0,267	0,199	0,134	0,122	0,084	0,060	0,050	0,050
	2,595	2,119	1,602	1,768	1,952	2,092	2,218	2,350
	1,416	1,216	0,976	0,999	1,029	1,080	1,142	1,218
	0,064	0,077	0,103	0,099	0,097	0,098	0,100	0,101
	6,851	7,856	8,881	8,990	9,047	9,060	9,006	8,895
	0,067	0,069	0,071	0,073	0,074	0,076	0,078	0,080
	12,082	12,289	12,362	12,262	12,077	11,890	11,621	11,285
	4,155	4,263	4,288	4,242	4,156	4,109	3,955	3,711
	2,895	2,950	2,949	2,930	2,907	2,884	2,887	2,912
	3,964	3,878	3,810	3,767	3,734	3,706	3,688	3,675
	5,032	5,076	5,124	5,090	5,014	4,896	4,779	4,663

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JALUR TRANSISI ENERGI

No	Scenario	Region	Variable	Unit	2060	
15	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	0,008	
16	Current Policies	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	1,627	
17	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	0,065	
18	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	3,186	
19	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	0,447	
20	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	0,959	
21	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	2,414	
22	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	1,780	
23	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	0,053	
24	Delayed transition	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	5,680	
25	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	0,065	
26	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	11,827	
27	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	2,316	
28	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	4,466	
29	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	2,730	
30	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	5,044	
31	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	0,011	
32	Fragmented World	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	2,029	
33	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	0,066	

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JALUR TRANSISI ENERGI

	2065	2070	2075	2080	2085	2090	2095	2100
	0,009	0,009	0,010	0,011	0,012	0,012	0,013	0,014
	1,761	1,899	2,046	2,210	2,366	2,498	2,627	2,757
	0,067	0,069	0,071	0,073	0,074	0,076	0,078	0,080
	2,766	2,333	1,818	1,413	1,430	1,446	1,490	1,564
	0,388	0,293	0,219	0,163	0,197	0,225	0,241	0,249
	0,830	0,704	0,426	0,210	0,170	0,116	0,086	0,073
	1,888	1,540	1,598	1,693	1,886	2,058	2,212	2,375
	1,548	1,337	1,173	1,040	1,063	1,104	1,163	1,241
	0,064	0,076	0,086	0,100	0,095	0,096	0,097	0,099
	6,743	7,695	8,410	8,954	8,989	9,004	8,970	8,848
	0,067	0,069	0,071	0,073	0,074	0,076	0,078	0,080
	12,161	12,341	12,360	12,261	12,005	11,706	11,550	11,364
	2,243	2,153	1,996	1,752	1,455	1,214	1,156	1,097
	4,706	4,871	4,923	4,898	4,843	4,772	4,712	4,674
	2,391	2,086	1,831	1,647	1,525	1,436	1,357	1,309
	5,212	5,317	5,442	5,611	5,706	5,720	5,682	5,593
	0,012	0,013	0,014	0,015	0,016	0,017	0,017	0,018
	2,295	2,553	2,820	3,064	3,309	3,530	3,663	3,764
	0,067	0,069	0,071	0,073	0,074	0,076	0,078	0,080

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JALUR TRANSISI ENERGI

No	Scenario	Region	Variable	Unit	2060	
34	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	1,423	
35	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	0,170	
36	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	0,214	
37	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	2,319	
38	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	1,039	
39	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	0,066	
40	Low demand	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	6,375	
41	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	0,065	
42	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	7,347	
43	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	1,337	
44	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	1,886	
45	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	5,740	
46	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	4,124	
47	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	0,015	

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JALUR TRANSISI ENERGI

	2065	2070	2075	2080	2085	2090	2095	2100
	1,231	1,196	1,214	1,159	1,125	1,063	1,018	0,994
	0,159	0,140	0,128	0,112	0,104	0,092	0,084	0,081
	0,119	0,166	0,222	0,197	0,170	0,153	0,129	0,109
	2,268	2,089	1,960	1,942	1,953	1,939	1,931	1,945
	0,953	0,890	0,864	0,850	0,850	0,818	0,805	0,804
	0,072	0,076	0,083	0,090	0,098	0,106	0,112	0,117
	7,035	7,565	7,913	8,188	8,351	8,518	8,642	8,710
	0,067	0,069	0,071	0,073	0,074	0,076	0,078	0,080
	6,995	6,646	6,243	5,816	5,457	5,260	4,987	4,668
	1,171	1,041	0,917	0,784	0,698	0,637	0,577	0,531
	1,700	1,563	1,374	1,199	1,053	0,948	0,818	0,675
	5,861	5,889	5,909	5,891	5,819	5,720	5,646	5,626
	4,124	4,043	3,952	3,833	3,706	3,676	3,592	3,462
	0,017	0,020	0,022	0,023	0,024	0,026	0,027	0,028

13.

JALUR TRANSISI ENERGI

No	Scenario	Region	Variable	Unit	2060	
48	Nationally Determined Contributions (NDCs)	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	2,485	
49	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Hydro	EJ/yr	0,065	
50	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Fossil	EJ/yr	1,082	
51	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Coal	EJ/yr	0,116	
52	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Oil	EJ/yr	0,159	
53	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Biomass	EJ/yr	1,715	
54	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Gas	EJ/yr	0,806	
55	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Nuclear	EJ/yr	0,106	
56	Net Zero 2050	GCAM 6.0 NGFS | Indonesia	Primary Energy | Non-Biomass Renewables	EJ/yr	7,883	

13.

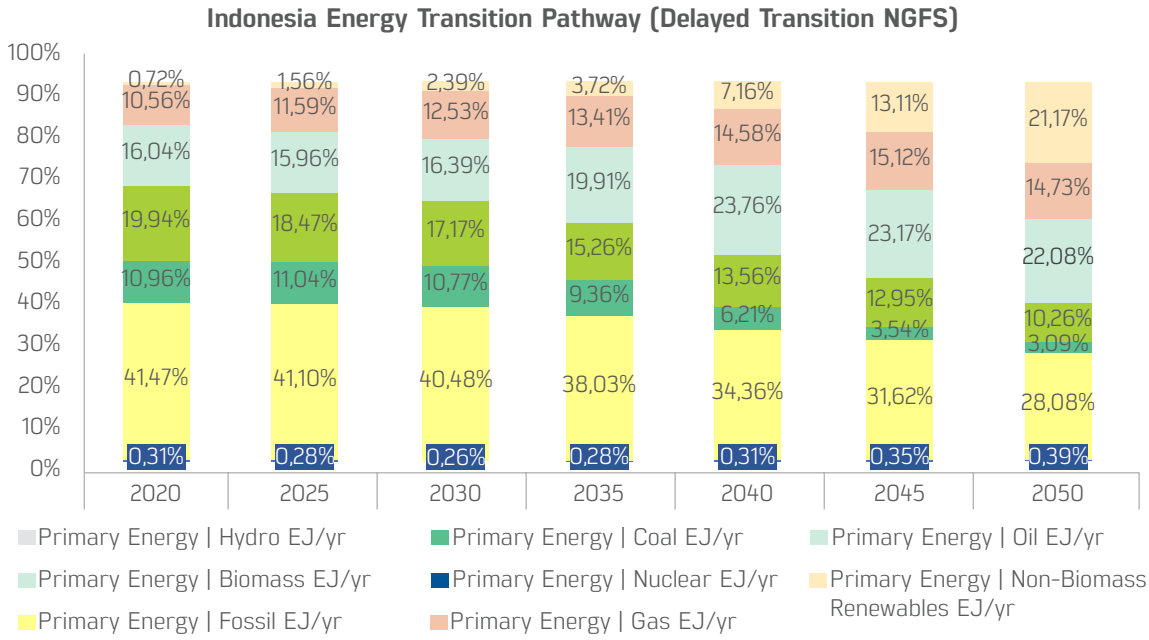
JALUR TRANSISI ENERGI

	2065	2070	2075	2080	2085	2090	2095	2100
	2,884	3,280	3,673	4,045	4,376	4,605	4,826	5,018
	0,067	0,069	0,071	0,073	0,074	0,076	0,078	0,080
	0,951	1,112	1,142	1,089	1,046	1,016	1,030	1,042
	0,110	0,104	0,098	0,086	0,081	0,068	0,062	0,061
	0,084	0,289	0,324	0,307	0,292	0,285	0,281	0,291
	1,698	1,439	1,387	1,405	1,460	1,438	1,425	1,439
	0,757	0,720	0,719	0,696	0,673	0,662	0,687	0,690
	0,112	0,117	0,125	0,132	0,139	0,146	0,151	0,155
	8,487	8,968	9,287	9,552	9,695	9,833	9,924	9,947

13.

JALUR TRANSISI ENERGI

Contoh Jalur Transisi Energi di Indonesia untuk Skenario Delayed Transition



Catatan:

Seluruh data dan metodologi bersumber dari NGFS diolah DPNP OJK dengan asumsi beberapa rilis data dari Kementerian/Lembaga di Indonesia

NGFS Phase 4 Scenario Explorer and Data

HALAMAN INI SENGAJA DIKOSONGKAN

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Otoritas Jasa Keuangan

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