THE ROLE OF TRANSITION FINANCE FOR CLIMATE MITIGATION

A JUST CLIMATE TRANSACTION FOR SOUTH AFRICA

MERIDIAN ECONOMICS
NAVIGATING COMPLEXITY

21 April 2020

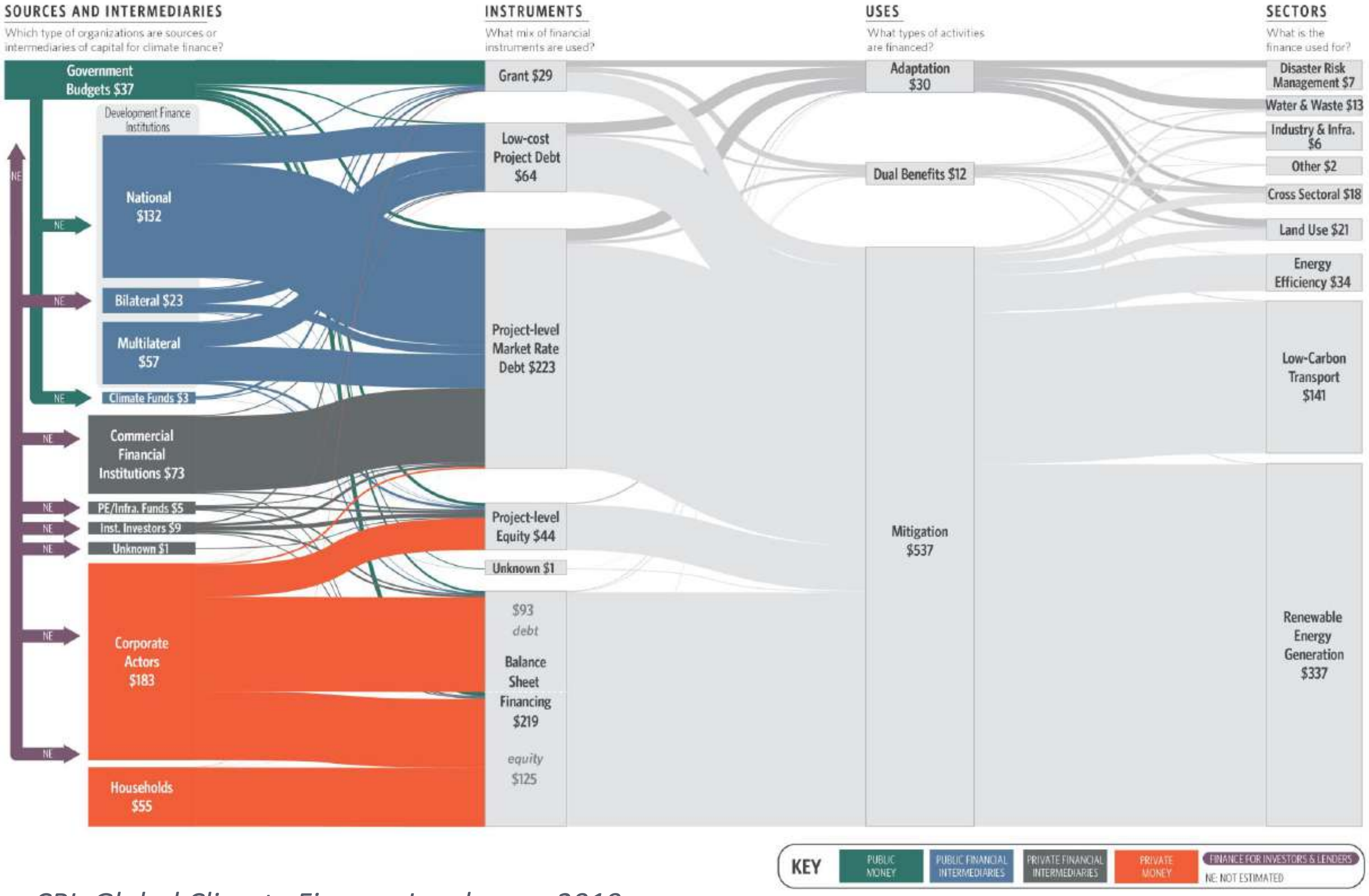
THERE IS GLOBAL AGREEMENT THAT DEVELOPED COUNTRIES WILL ASSIST DEVELOPING COUNTRIES TO FINANCE CLIMATE CHANGE MITIGATION

- Given the global concern about the climate crisis:
- The Paris Agreement (Art.9.) stipulates developed countries are to:
  - **provide financial assistance**, and
  - **lead the mobilisation of finance** from a wide variety of sources **to support developing countries to mitigate** and adapt to climate change.
- It sets a collective **goal of USD$100bn in climate finance assistance per year** by 2020 (to be revised upwards in 2025)
- This is largely concessionary finance, whose efficacy is assessed according to **$/tCO2e mitigated**

LATTERLY, THE NEED FOR 'TRANSITION FINANCE' MODELS AS CATEGORY OF MITIGATION-RELATED CLIMATE FINANCE HAS EMERGED

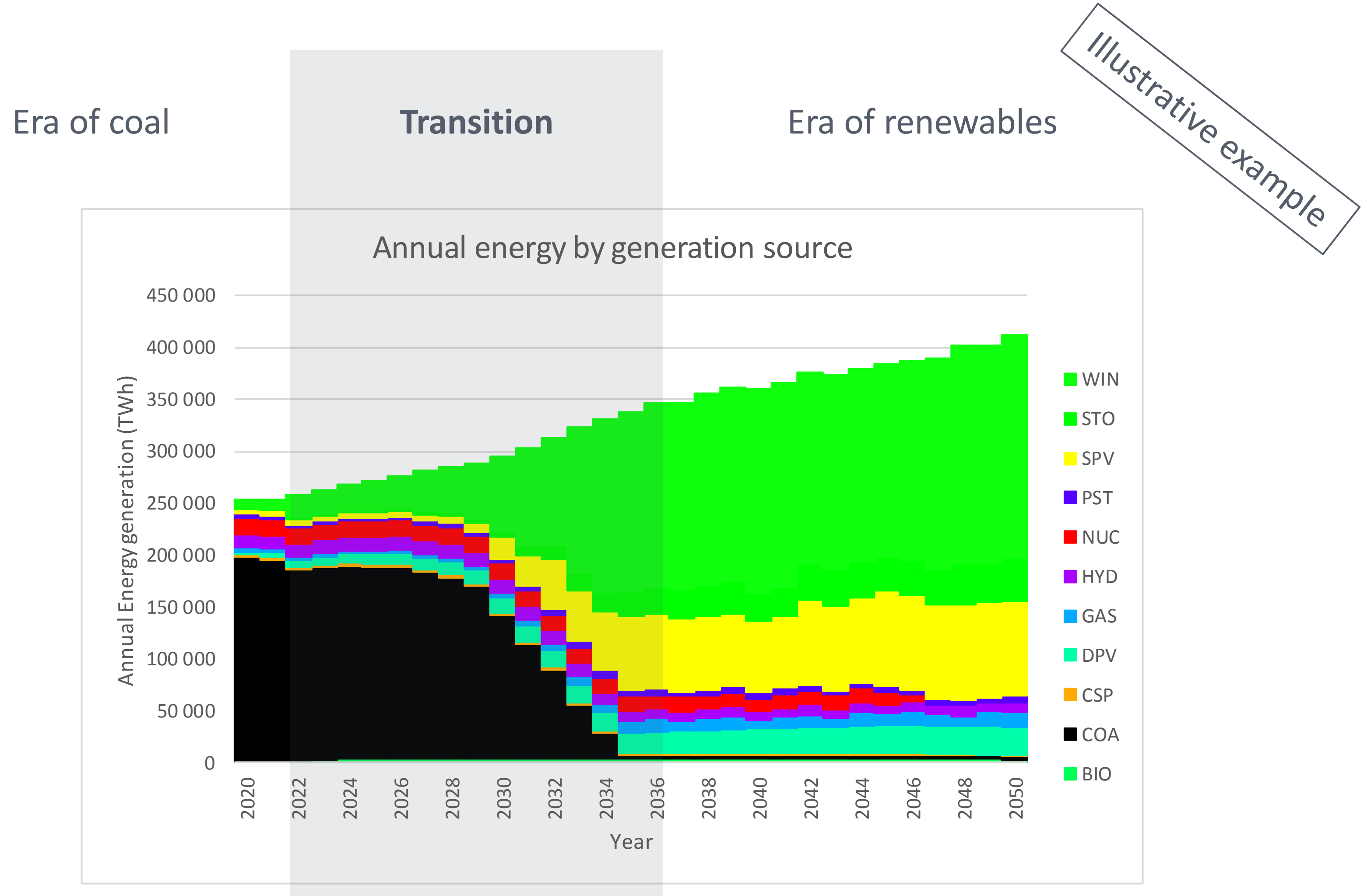
- For instance, divestment can happen much faster than power systems can be reconfigured to clean energy
  - Even for most aggressive renewable rollout scenarios
- Existing generation (often coal-based) is required for power system adequacy during (even an accelerated) transition
  - Capital is required to keep this required capacity going. Under indiscriminate divestment, who will fund this?
  - Mitigation of transition related negative economic, employment and social impacts also has to be funded.
- For a transition to be just, incumbents cannot just be pushed to collapse. This will trigger significant negative economic and social impacts. Transition support is required.
- In many countries renewable energy is now bankable and does not need concessionary climate finance, but these transition requirements need climate funding support.

WITHIN CLIMATE FINANCE THERE IS NO CATEGORY YET FOR TRANSITION FINANCE



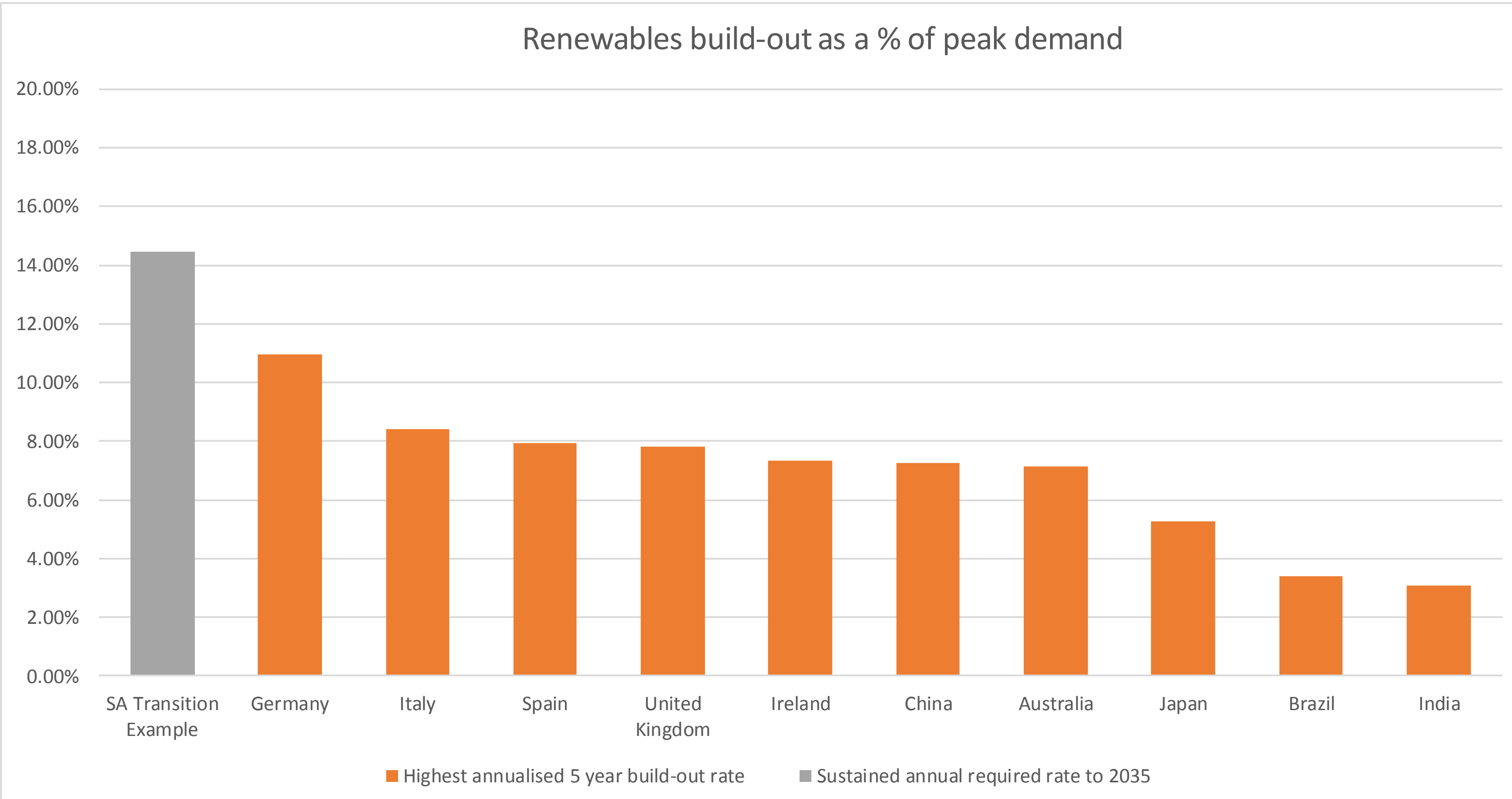
Source: CPI: Global Climate Finance Landscape 2019

EXAMPLE[1]: THE TRANSITION PERIOD IN A SOUTH AFRICAN POWER SYSTEM SCENARIO COMPATIBLE WITH < 2˚



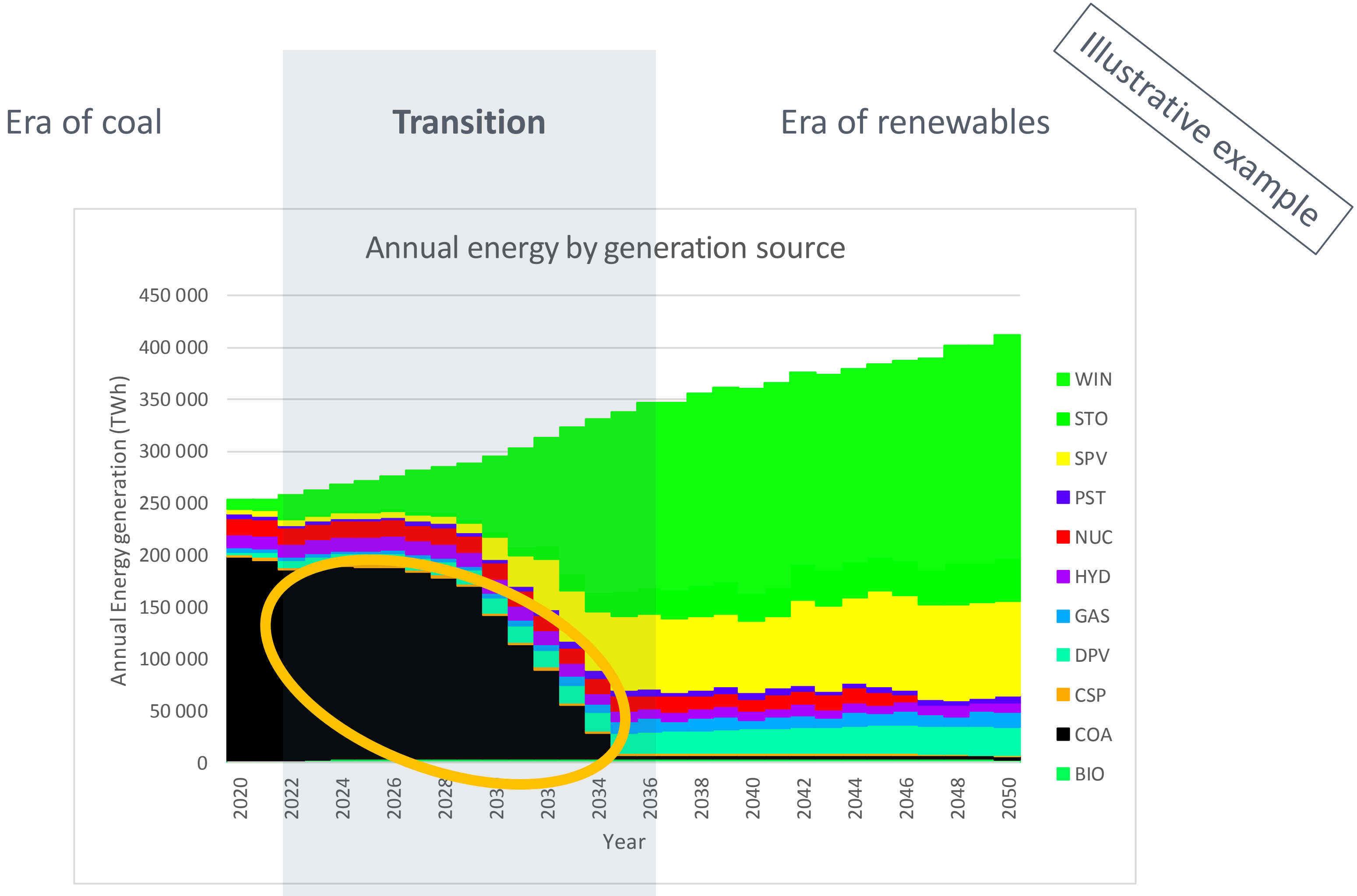
1: Based on modelling undertaken by the SA CSIR for the Climate Ambitions project funded by Agora (forthcoming). This scenario emits ~2GT less CO_2 than the current IRP plan

CONTEXTUALISING THE RE BUILD IN THIS SA TRANSITION EXAMPLE



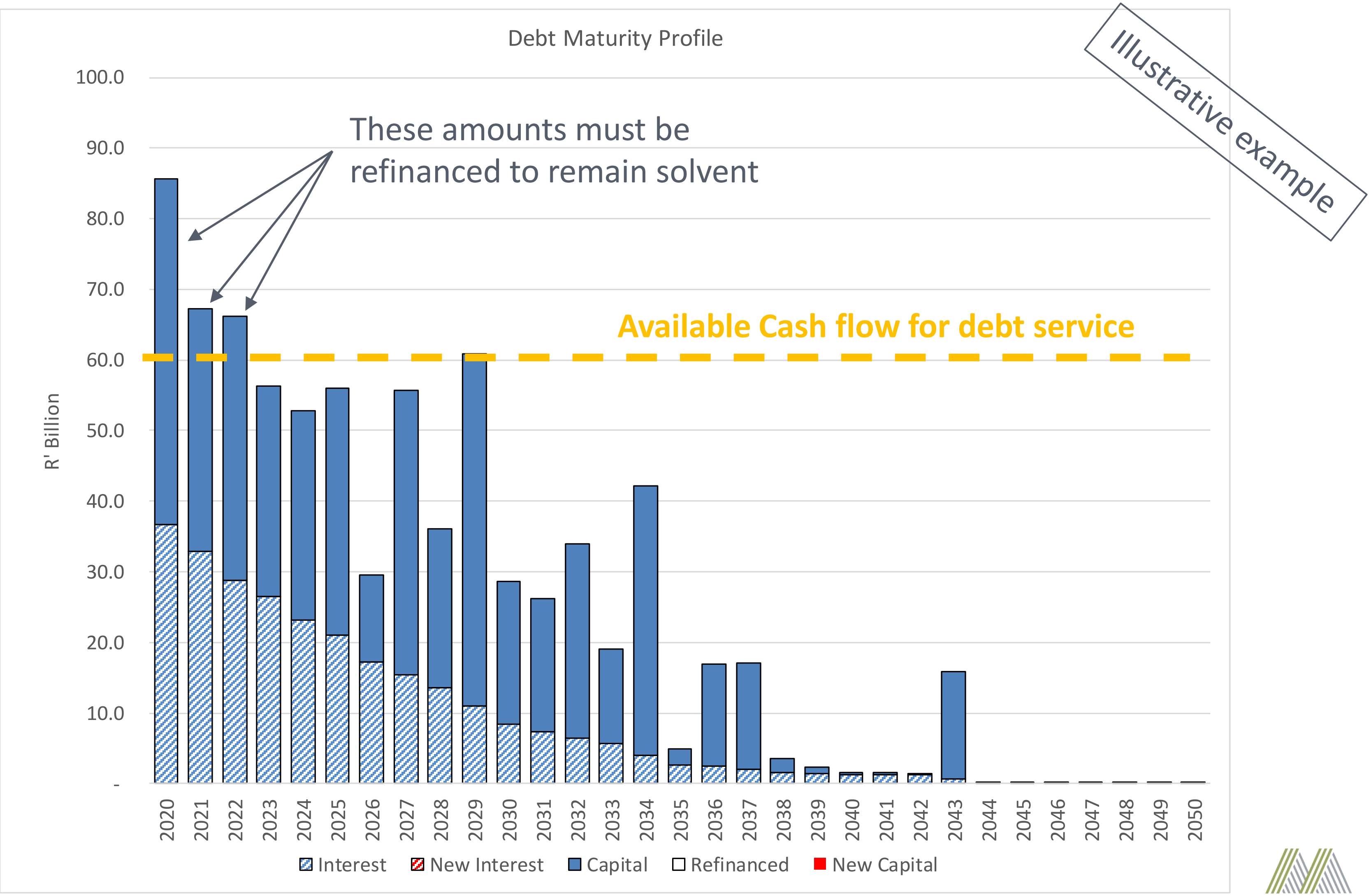
Source: BP Statistical Review of World Energy; CSIR

DESPITE A GLOBALLY SIGNIFICANT RE BUILD OUT, COAL GENERATION IS UNAVOIDABLE IN SA FOR A TRANSITION PERIOD

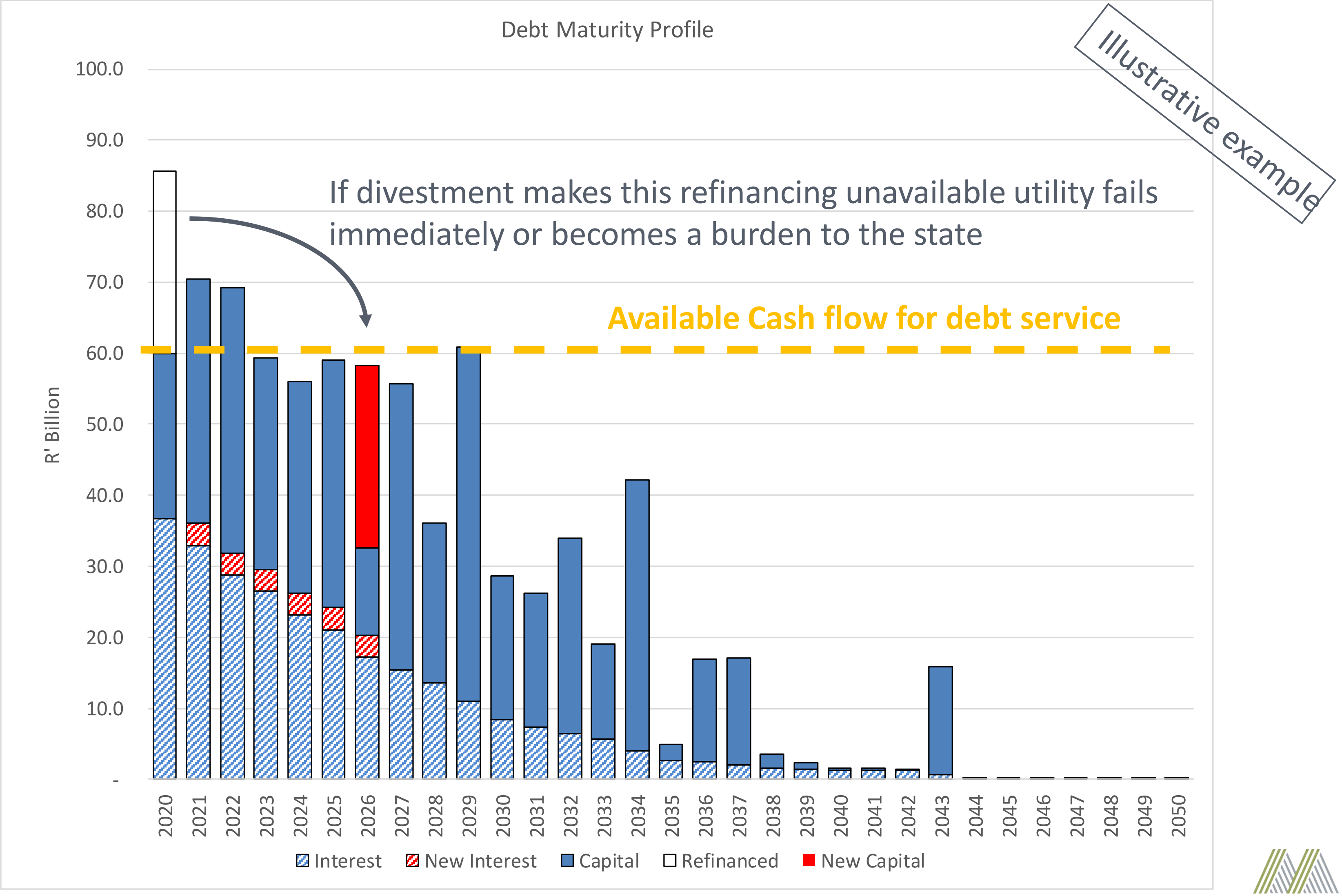


Generation of this energy requires ongoing financing

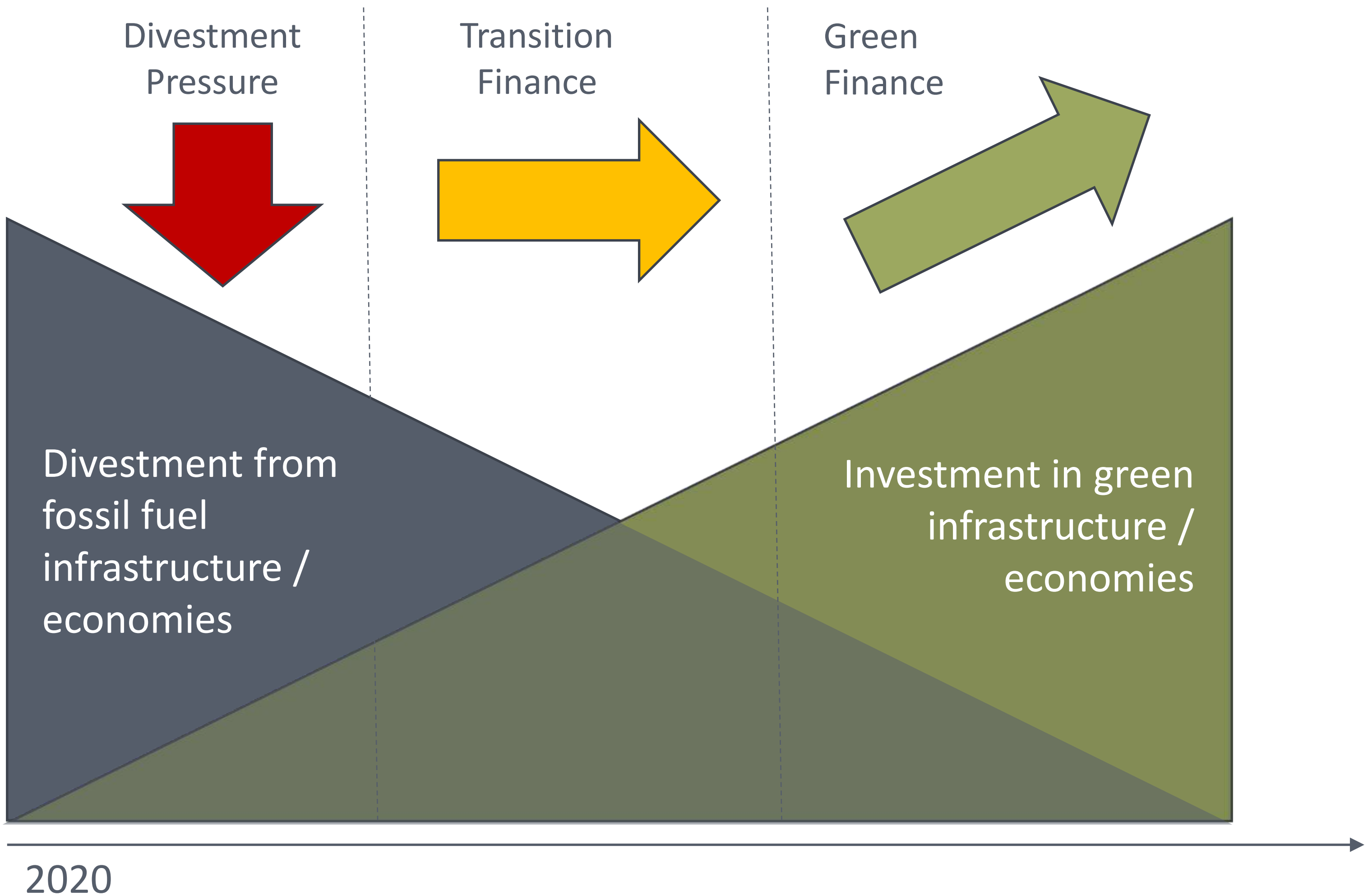
ONGOING FINANCING OF LEGACY ASSETS IS THEREFORE AN OPERATIONAL REQUIREMENT IN AN ACCELERATED TRANSITION



INDISCRIMINATE DIVESTMENT OF SYSTEMICALLY CRITICAL LEGACY ASSETS IN TRANSITION COULD CAUSE LARGE ECONOMIC DAMAGE



TRANSITION FINANCE IS NEEDED IN SECTORS HEAVILY RELIANT ON CARBON INTENSIVE LEGACY ASSETS



SUPPORT FOR THE TRANSITION PATHWAYS OF LEGACY CARBON INTENSIVE SECTORS IS IN LINE WITH THE PARIS AGREEMENT'S PROVISIONS ON CLIMATE FINANCE

- Article 2: 'This Agreement, in enhancing the implementation of the Convention, including its objective aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:

  c) **making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development**'.

- Article 9: Stipulates developed countries are to:
  - **'provide financial assistance**, and
  - **lead the mobilisation of finance from a wide variety of sources to support developing countries to mitigate** and adapt to climate change'

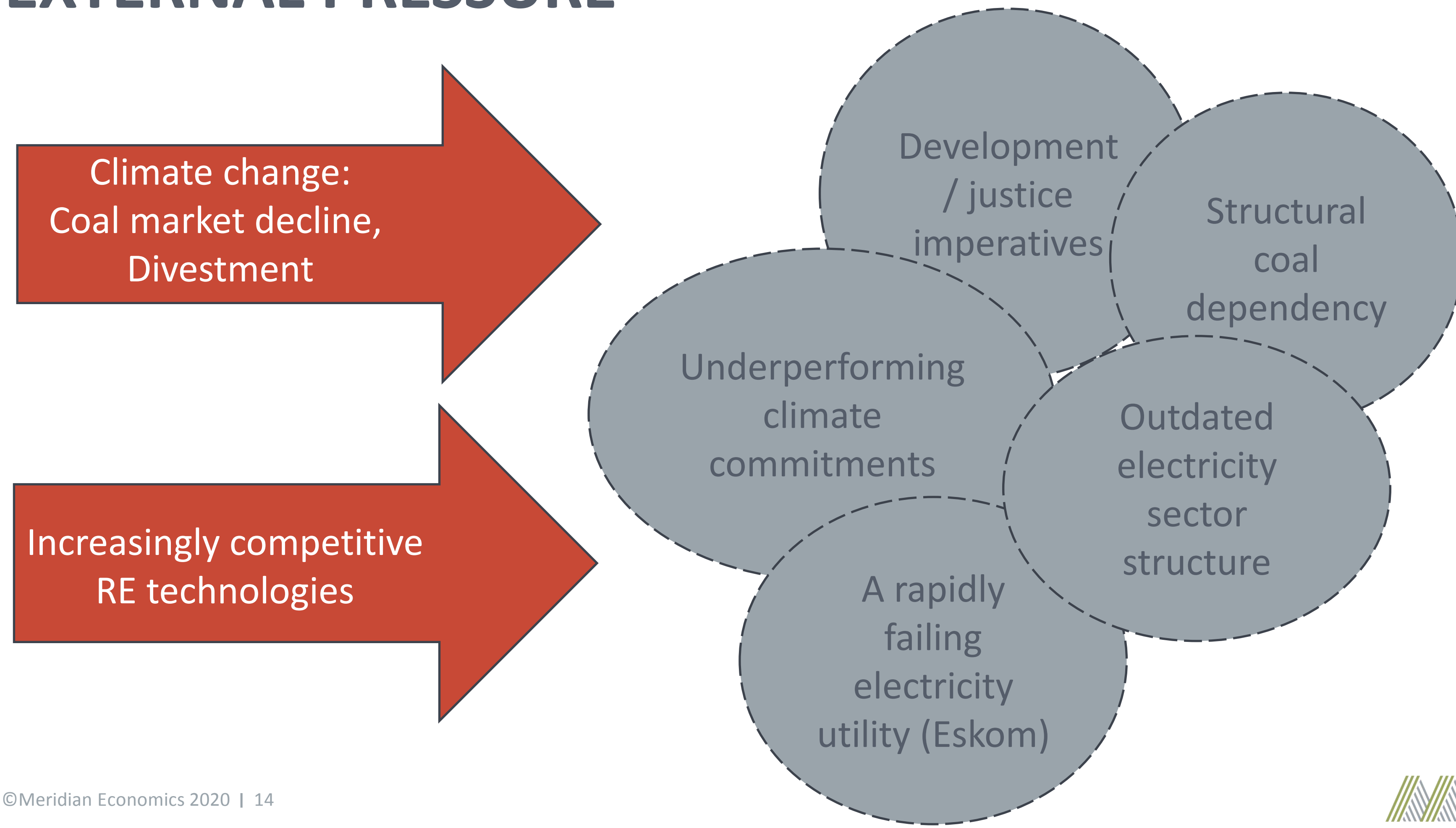
A TRANSITION FINANCE MODEL FOR THE SOUTH AFRICAN POWER SECTOR:

THE JUST TRANSITION TRANSACTION

SOUTH AFRICA'S ECONOMY IS DOMINATED BY CARBON INTENSIVE LEGACY ASSETS COUPLED WITH HIGH LEVELS OF UNEMPLOYMENT AND INEQUALITY

- Structural energy-economic coal path dependency developed over 100 years, the 'Mineral-Energy-Complex'
- 77% of SA's greenhouse gas emissions are from energy; ~40-45% from electricity
- 86% of electricity is from coal fired power stations
- Eskom generates 95% of SA's electricity – a regulated state owned monopoly
- Coal is SA's second highest export earner
- Sasol generates 1/3 of SA's liquid fuel requirements from coal
- SA has one of the highest inequality levels in the world (Gini 0.67)
- 29% official unemployment
- 50% of SA's citizens are classified poor

INTERSECTING DOMESTIC PROBLEM COMPLEXES COME UNDER FURTHER TRANSITION-RELATED EXTERNAL PRESSURE

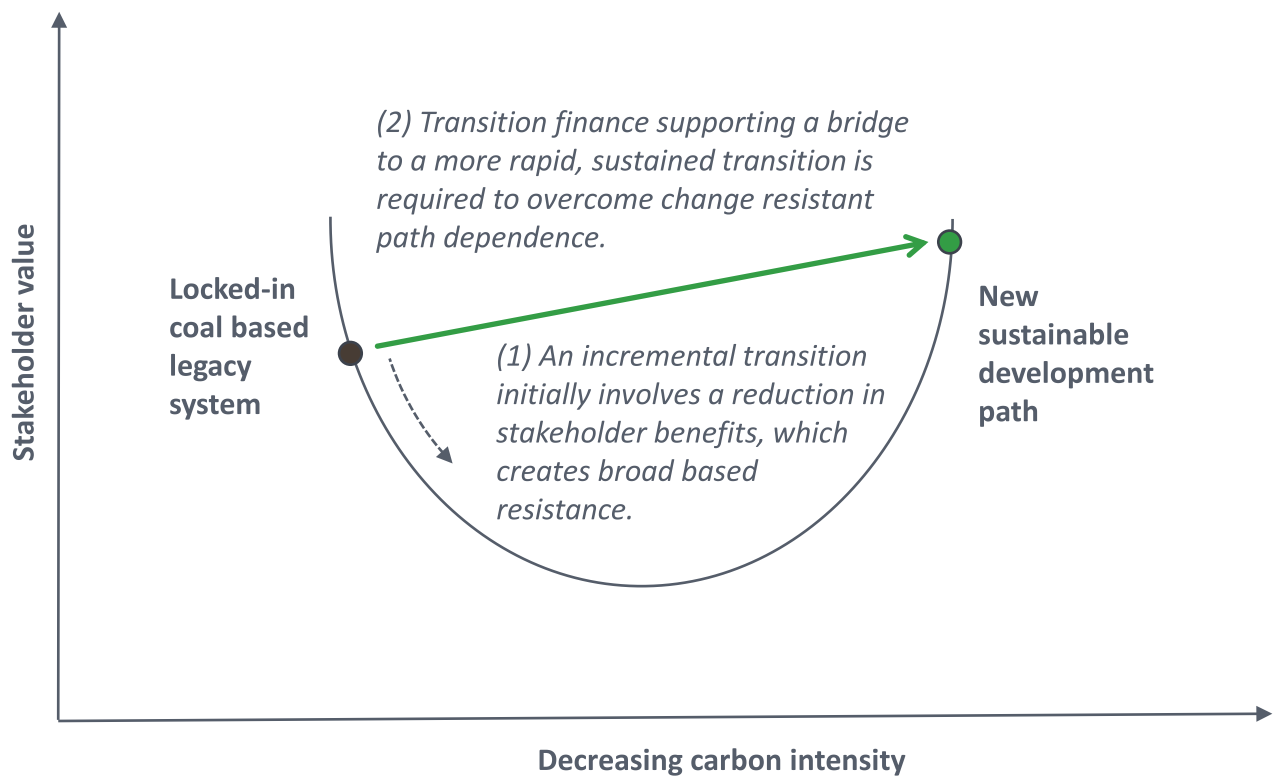


LEAVING SA WORST PREPARED GLOBALLY FOR THE ENERGY TRANSITION

Rank	Country name	2019 ETI Score[2]	System Performance	Transition Readiness
1	Sweden	75%	81%	69%
2	Switzerland	74%	78%	71%
3	Norway	73%	82%	65%
4	Finland	73%	72%	74%
5	Denmark	72%	72%	73%
6	Austria	71%	71%	71%
7	United Kingdom	70%	74%	66%
8	France	69%	77%	60%
9	Netherlands	69%	71%	66%
10	Iceland	69%	75%	62%
11	Uruguay	67%	75%	60%
12	Ireland	67%	71%	63%
13	Singapore	67%	68%	65%
14	New Zealand	66%	73%	58%
15	Luxembourg	66%	64%	67%
16	Portugal	65%	71%	59%
17	Germany	65%	66%	64%
18	Japan	65%	67%	63%
19	Lithuania	65%	72%	57%
20	Estonia	64%	64%	64%
21	Costa Rica	64%	75%	54%
22	Belgium	64%	67%	61%
23	Latvia	64	69%	58%
24	Slovenia	64%	69%	58%
25	Spain	64%	71%	56%
26	Chile	63%	67%	59%
27	United States	63%	66%	59%
28	Malta	62%	70%	54%
29	Italy	62%	70%	54%
30	Israel	62%	67%	56%
31	Malaysia	61%	68%	55%
32	Georgia	61%	64%	58%
33	Slovak Republic	61%	68%	54%
34	Colombia	61%	71%	51%
35	Canada	61%	66%	56%
36	Panama	60%	69%	51%
37	Mexico	60%	69%	50%
38	Albania	60%	67%	52%
[illegible]	Brunei Darussalam	59%	67%	52%
[illegible]	[illegible]ania	59%	68%	50%
[illegible]	[illegible]	59%	66%	52%
42	Cr[illegible]	59%	66%	52%
43	Australi[illegible]	59%	64%	54%
44	Peru	59%	68%	49%
45	Cyprus	59%	66%	51%
46	Brazil	[illegible]	70%	45%
47	Morocco	[illegible]	67%	48%
48	Korea, Rep.	58[illegible]	60%	55%
49	Czech Republic	57%	[illegible]	53%
50	Armenia	57%	[illegible]	49%
51	Thailand	57%	[illegible]	51%
52	Ecuador	57%	70%	43%
53	Paraguay	57%	64%	[illegible]
54	Greece	56%	67%	[illegible]
55	Montenegro	56%	56%	55[illegible]
56	Vietnam	55%	62%	49%
57	Azerbaijan	55%	63%	48%
58	Jamaica	55%	57%	53%
59	Philippines	55%	62%	49%
60	Sri Lanka	55%	65%	45%
61	Argentina	55%	67%	43%
62	Namibia	55%	58%	51%
63	Indonesia	55%	64%	46%
64	Turkey	55%	60%	49%
65	Qatar	54%	56%	52%
66	Jordan	53%	56%	50%
67	United Arab Emirates	53%	55%	50%
68	Oman	53%	55%	50%
69	Republic of Moldova	52%	61%	43%
70	Guatemala	52%	59%	45%
71	Kenya	52%	53%	51%
72	Tunisia	52%	59%	45%
73	Ghana	52%	54%	49%
74	El Salvador	51%	55%	48%
75	Poland	51%	57%	46%
76	India	51%	53%	49%
77	Bulgaria	51%	54%	48%
78	Dominican Republic	50%	56%	45%
79	Russian Federation	50%	61%	39%
80	Trinidad and Tobago	50%	54%	47%
81	Bolivia	50%	60%	41%
82	China	50%	48%	51%
83	Kazakhstan	50%	61%	38%
84	Tanzania	49%	51%	47%
85	Honduras	49%	50%	48%
86	Egypt, Arab Rep.	49%	55%	43%
87	Kuwait	49%	55%	43%
88	Tajikistan	49%	48%	49%
89	Algeria	48%	61%	36%
90	Bangladesh	48%	52%	43%
91	Senegal	47%	48%	47%
92	Bahrain	47%	44%	51%
93	Nepal	47%	47%	47%
94	Botswana	47%	49%	44%
95	Ethiopia	46%	46%	47%
96	Nicaragua	46%	50%	42%
97	Pakistan	46%	47%	46%
98	Saudi Arabia	46.2%	51%	41%
99	Serbia	46%	53%	39%
100	Cambodia	45%	46%	44%
101	Iran, Islamic Rep.	44%	54%	33%
102	Zambia	44%	41%	46%
103	Cameroon	43%	43%	43%
104	Bosnia and Herzegovina	43%	46%	40%
105	Benin	42%	42%	42%
106	Lebanon	42%	42%	41%
107	Ukraine	42%	48%	35%
108	Mongolia	41%	45%	38%
109	Nigeria	41%	46%	35%
110	Kyrgyz Republic	40%	37%	43%
111	Mozambique	40%	43%	37%
112	Venezuela	39%	50%	27%
113	Zimbabwe	39%	37%	40%
114	South Africa	37%	36%	37%
115	Haiti	36%	35%	37%

According to World Economic Forum Energy Transition index 2019 results

TRANSITION FINANCE IS REQUIRED TO UNLOCK AN ACCELERATED TRANSITION BY OVERCOMING ECONOMIC, SOCIAL AND POLITICAL PATH DEPENDENCE.



Transition finance is required to unlock an accelerated transition by: (a) supporting substantial measures to overcome economic, social and political path dependence ; (b) while protecting system integrity during the intervening period.

WHAT CREATES THE TRANSITION FINANCE OPPORTUNITY FOR THE SA POWER SECTOR?

- The global commitment to climate finance under the UNFCCC sets a collective goal of **USD$100bn in climate finance assistance** per year by 2020 (to be revised upwards in 2025)
- This is largely **concessionary finance, whose efficacy is assessed according to $/tCO2e mitigated**
- The SA power sector is able to offer **additional CO2e savings at low cost**
- Real **political and institutional barriers** are preventing power sector decarbonisation
- Transition financing is **conditional upon a clear political commitment to sector decarbonisation including market reform**, and creates the space for a massive RE ramp-up and green industrialisation programme

What are the specific SA Power sector problems that transition finance could respond to?	How could a transition finance model solve these problems?
As a **coal-based utility**, Eskom will increasingly be **unable to raise finance** from DFIs, the bond market and (ultimately) banks.	
Government's capacity to provide **sovereign guarantees** is highly constrained	
Eskom's **coal costs** have soared in recent years.	
Eskom faces large **capex requirements** to repair its 2 newest coal plants, refurbish older stations and implement environmental retrofits.	
SA coal workers and communities will be severely affected by the transition and only limited financing is available to provide a **Just Transition.**	
SA has committed to increase the ambition of its **NDC** in 2020, and power sector decarbonisation will need to play a central role in doing so.	

THE CONCEPT: A 'JUST TRANSITION' CLIMATE FINANCE TRANSACTION

- The foundation is an international government and DFI climate finance transaction that crowds in a larger amount of private sector finance in a blended structure.
- Creates a large (~$11Bn) long term (~20yr) debt facility to refinance the national utility Eskom, conditional on additional mitigation and social action, with credible remedies.
- This 'Just Transition Transaction' consists of three legs:

1) The South African Government and Eskom will commit to delivering additional, measurable CO_2 reductions over and above the current policy trajectory; In return:
2) Eskom's access to its traditional debt funding sources (DFIs, MDBs, capital markets, banks, etc.) will be restored; while
3) Affected labour and communities will benefit from a Just Transition programme backed by the net proceeds from the transaction, and the crowding in of new energy projects and other infrastructure in Mpumalanga and beyond.

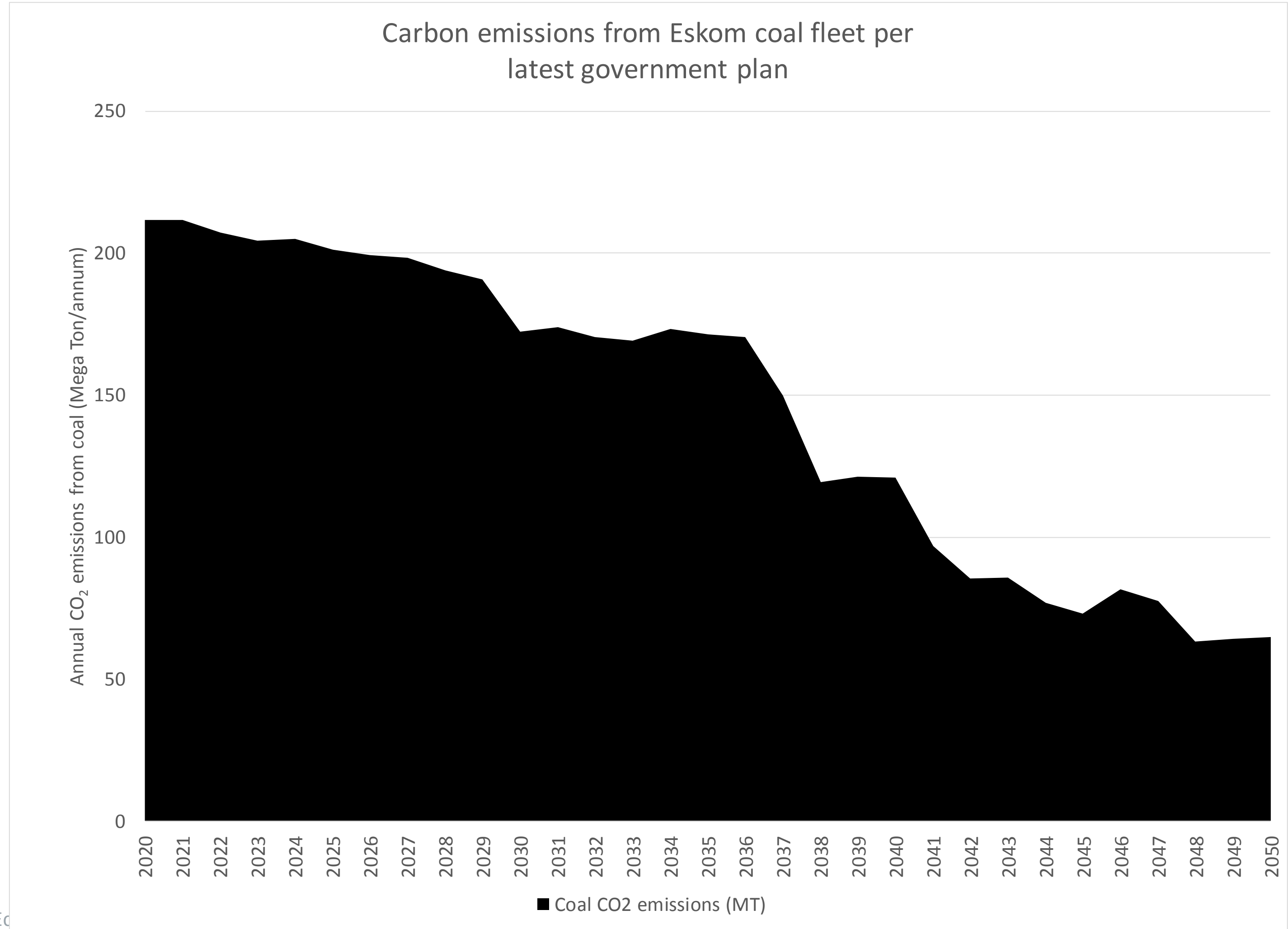
PROGRESS TO DATE

- Conceptualised by SA think tank, Meridian Economics in 2018
- Promoted by the Presidential Eskom Sustainability Task Team
- Announced by President in UN Climate Summit Statement, Sept 2019 http://www.dirco.gov.za/docs/speeches/2019/cram0923.htm
- Socialised broadly in SA (Government, Finance, Labour, Business, NGOs, etc.)
- Socialised internationally with serious interest by DFI community and key counterparty Govts

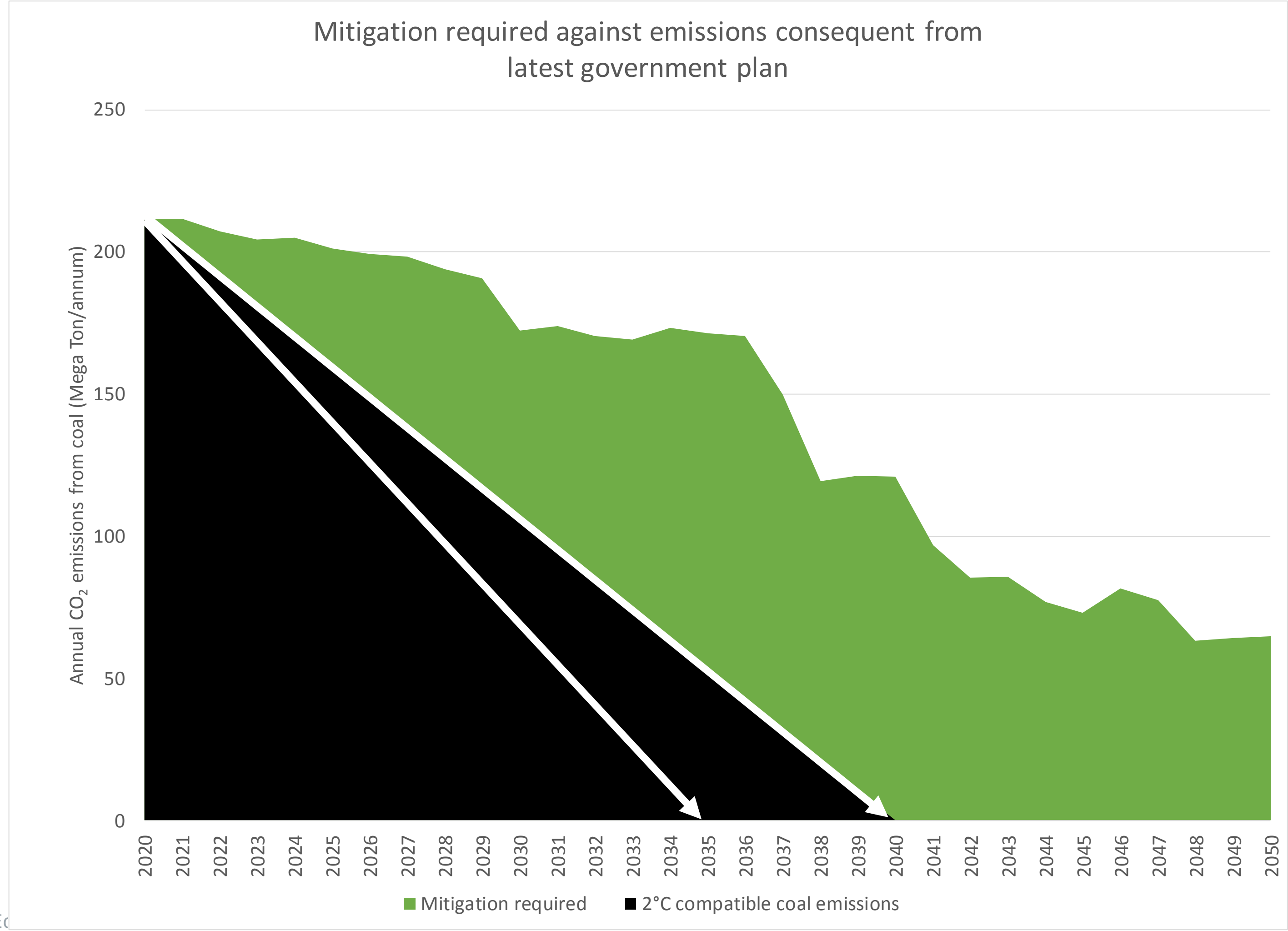
LEG 1: GREENHOUSE GAS MITIGATION

1) **The South African Government and Eskom will commit to delivering additional, measurable CO_2 reductions over and above the current policy trajectory;** In return:
2) Eskom's access to its traditional funding sources (DFIs, capital markets, banks, etc.) will be restored; while
3) Affected labour and communities will benefit from a Just Transition programme backed by the net proceeds from the transaction, and the crowding in of new energy projects and other infrastructure in Mpumalanga and beyond.

CARBON TRAJECTORY WITHOUT TRANSACTION



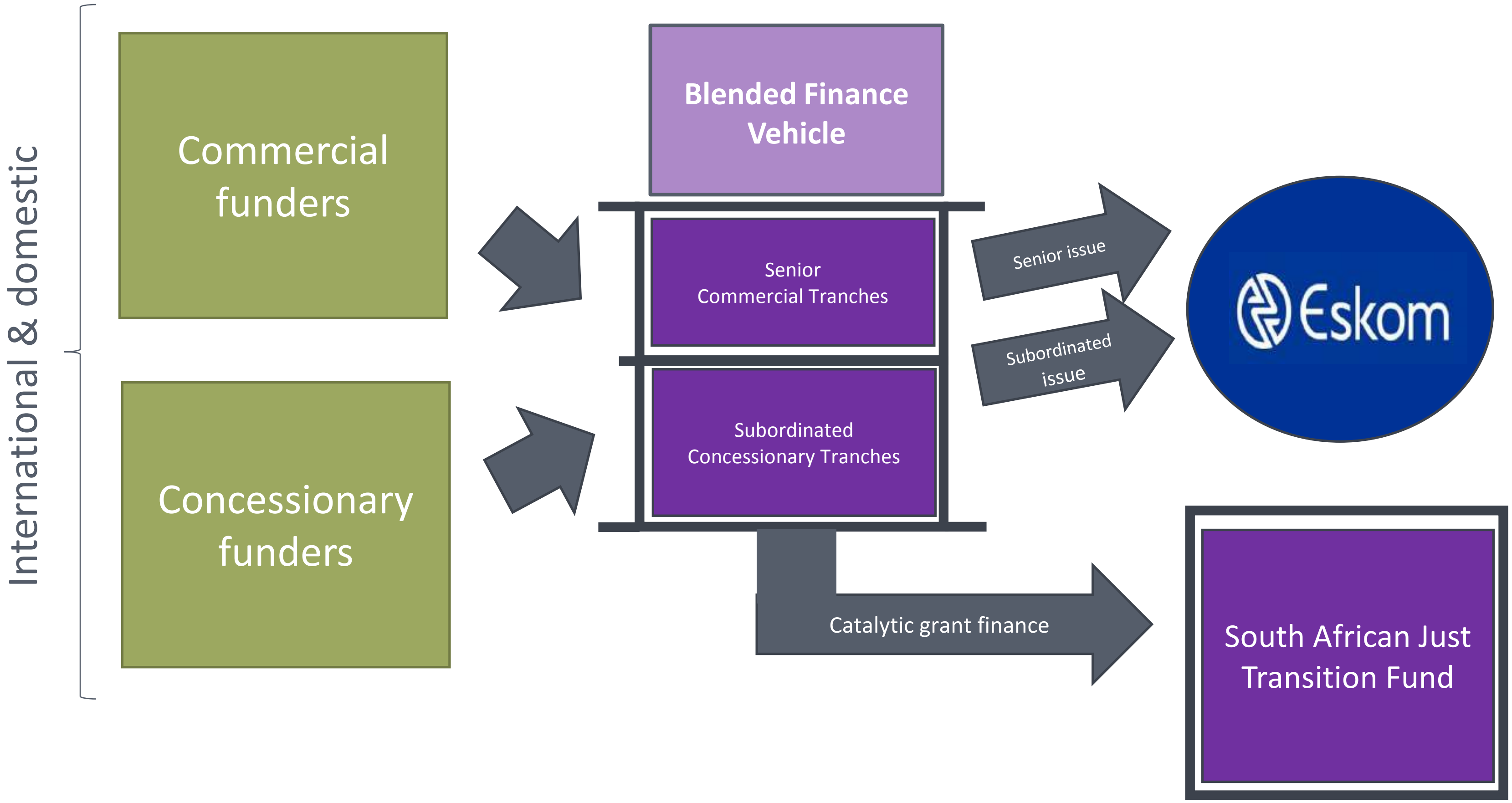
CARBON TRAJECTORY WITH TRANSACTION



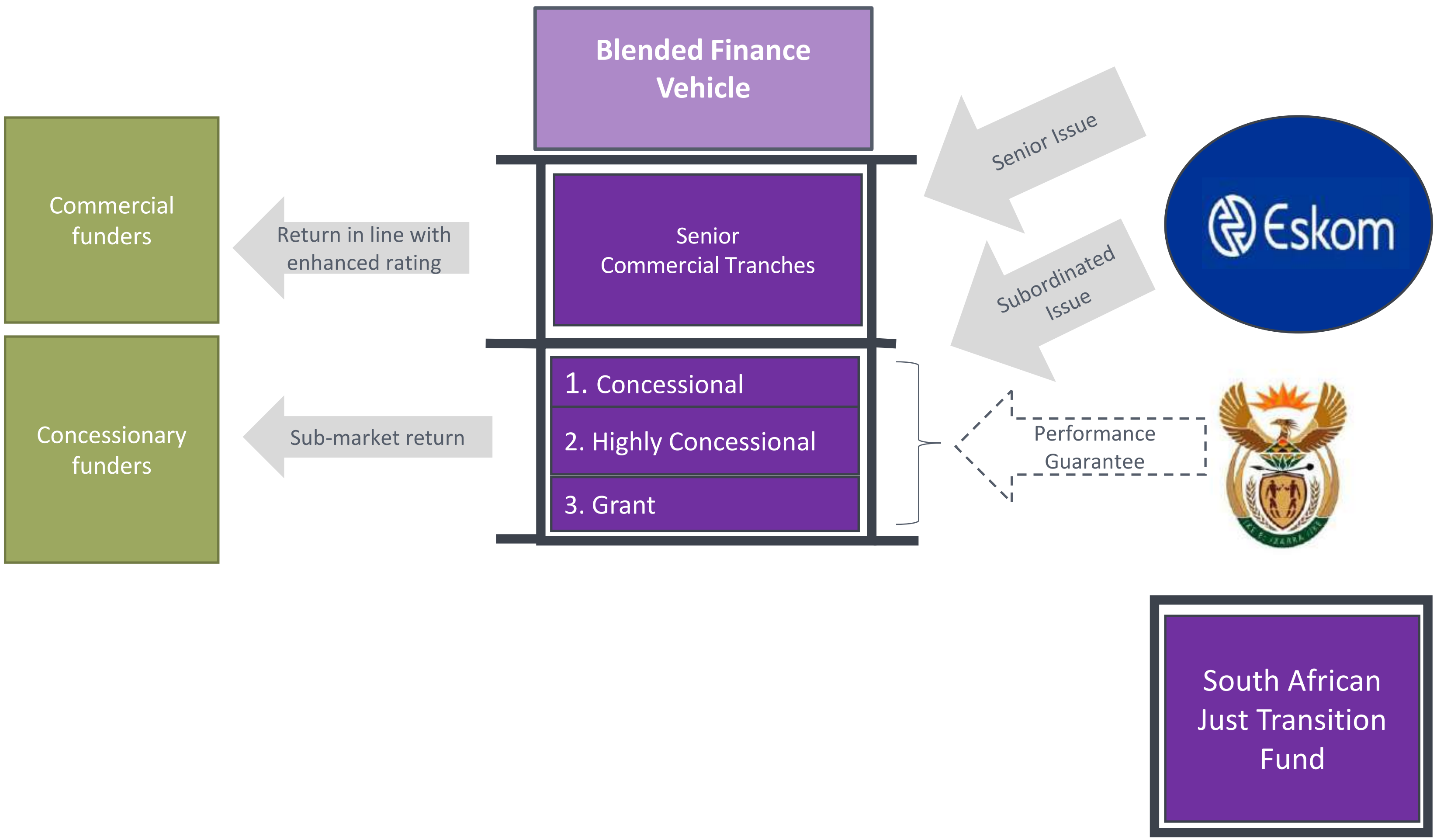
LEG 2: ESKOM CAN RETURN TO THE MARKETS

1) The South African Government and Eskom will commit to delivering additional, measurable CO_2 reductions over and above the current policy trajectory; In return:
2) **Eskom's access to its traditional funding sources (DFIs, capital markets, banks, etc.) will be restored**; while
3) Affected labour and communities will benefit from a Just Transition programme backed by the net proceeds from the transaction, and the crowding in of new energy projects and other infrastructure in Mpumalanga and beyond.

HIGH LEVEL FINANCIAL FLOWS



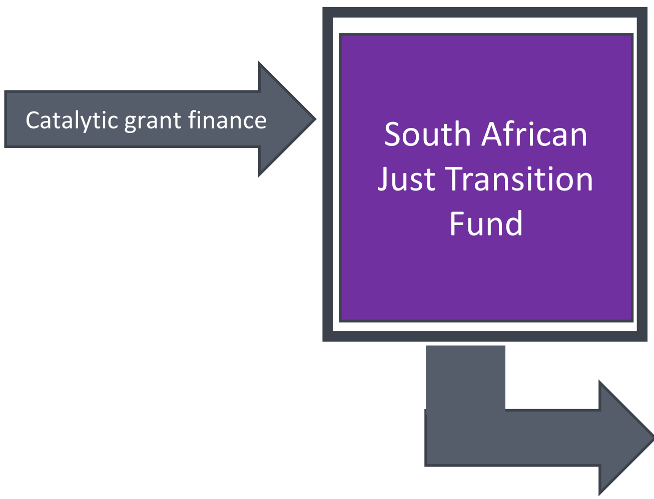
DEBT SERVICE FLOWS

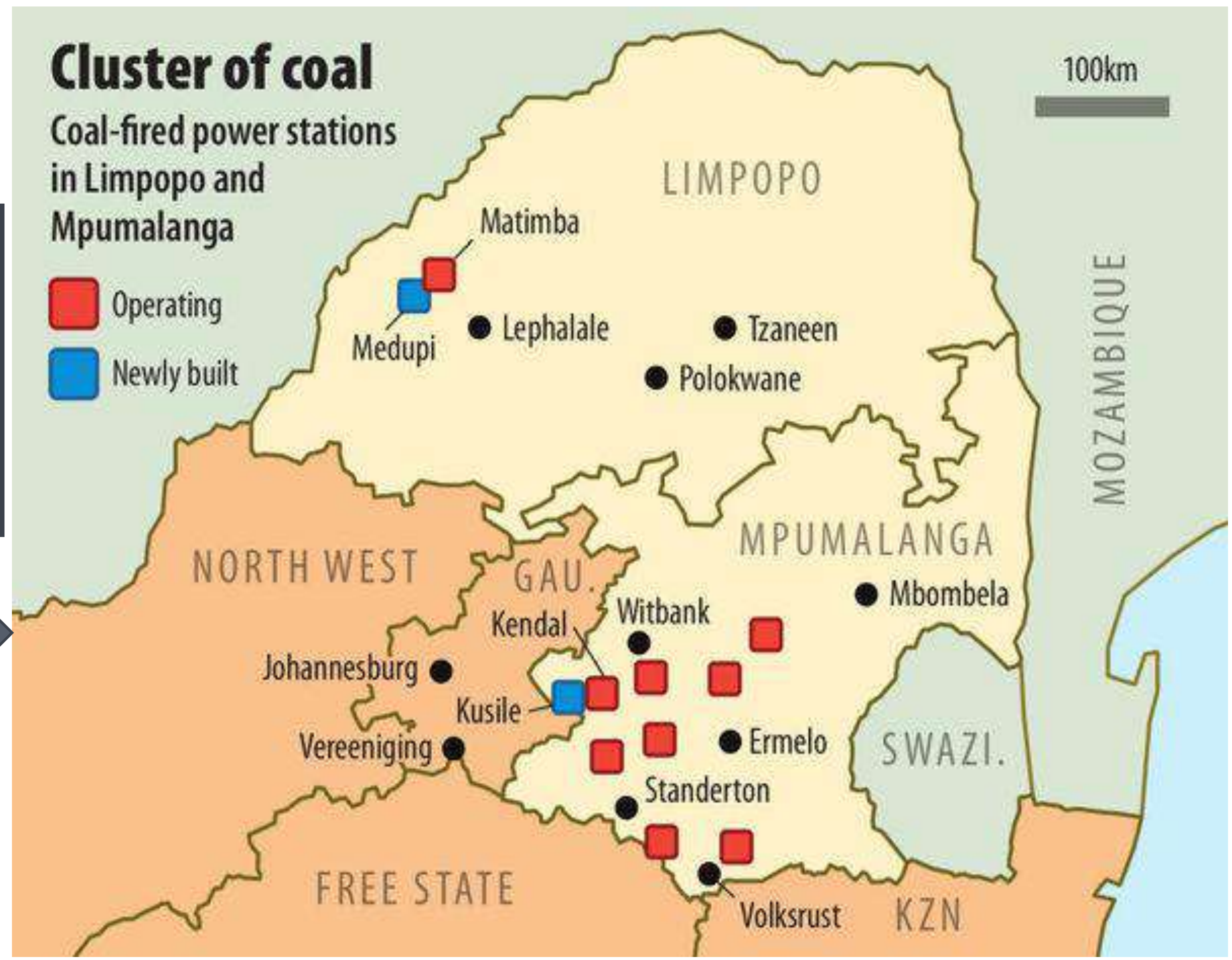


LEG 3: CATALYTIC FUNDING FOR A JT PROGRAMME

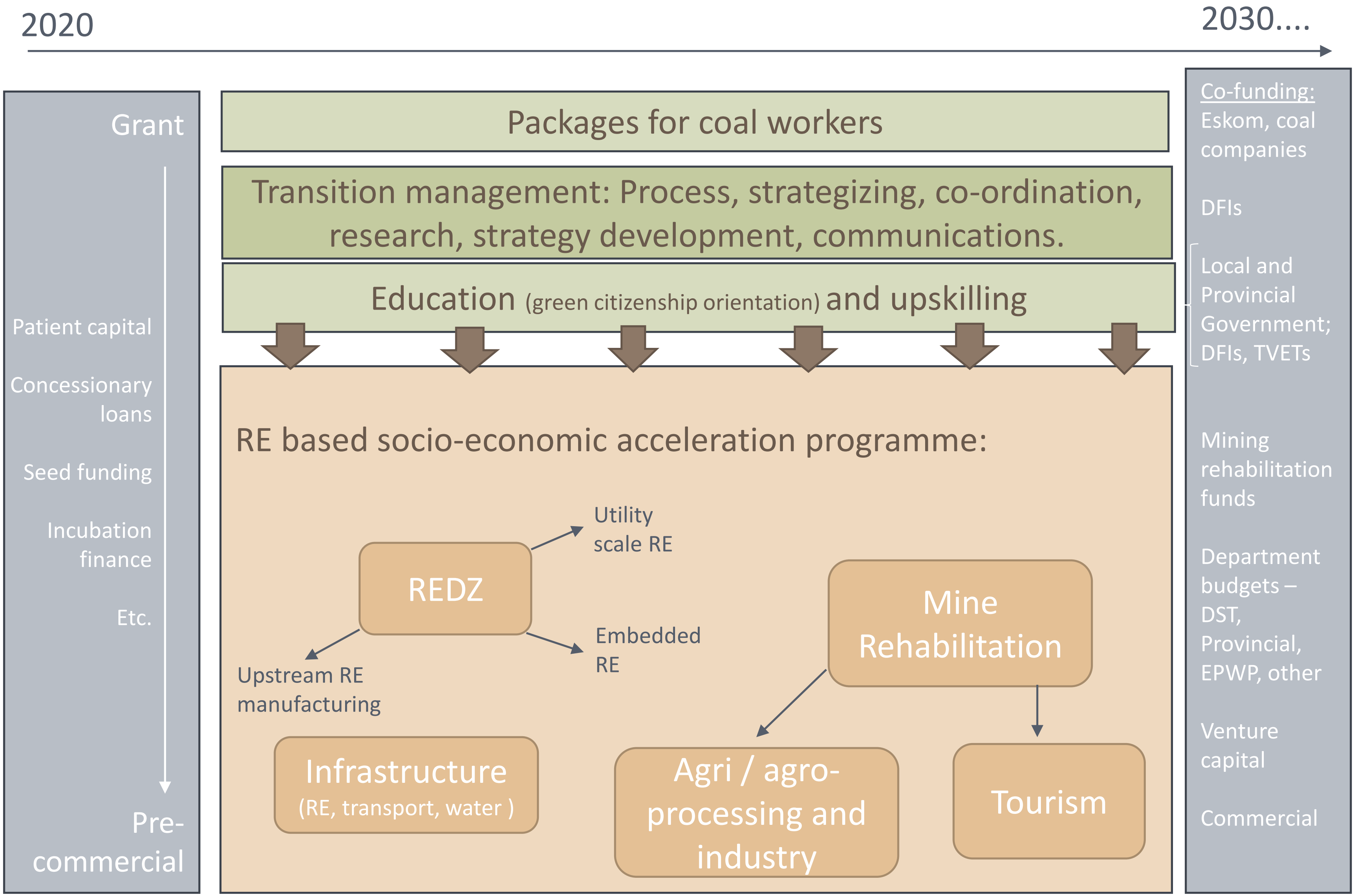
1) The South African Government and Eskom will commit to delivering additional, measurable CO_2 reductions over and above the current policy trajectory; In return:
2) Eskom's access to its traditional funding sources (DFIs, capital markets, banks, etc.) will be restored; while
3) **Affected labour and communities will benefit from a Just Transition programme backed by the net proceeds from the transaction, and the crowding in of new energy projects and other infrastructure in Mpumalanga and beyond.**

THE JT FUND CATALYSES FINANCING FOR MPUMALANGA FOCUSED JUST TRANSITION





The Just Transition Fund: Catalytic financing for the Mpumalanga Just Transition



What are the specific SA Power sector problems that transition finance could respond to?	How does Just Transition Transaction solve these problems?
As a **coal-based utility**, Eskom will increasingly be **unable to raise finance** from DFIs, the bond market and (ultimately) banks.	The Transaction situates Eskom as the **'transition pivot**' in a green framework committing SA to accelerated decarbonisation. Restores access to normal DFI, bond market, bank and other institutional finance.
Government's capacity to provide **sovereign guarantees** is highly constrained	Subordination of the concessionary finance in the **blended structure** provides the security required for senior commercial debt.
Eskom's **coal costs** have soared in recent years.	A **large least cost power investment programme** will displace the most expensive primary energy first.
Eskom faces large **capex requirements** to repair its 2 newest coal plants, refurbish older stations and implement environmental retrofits.	Much of **this expenditure can be avoided** with an accelerated IPP renewables programme.
SA coal workers and communities will be severely affected by the transition and only limited financing is available to provide a **Just Transition.**	A **SA Just Transition Fund** is capitalised with proceeds from the climate transaction. Other funding can then be crowded in.
SA has committed to increase the ambition of its **NDC** in 2020, and power sector decarbonisation will need to play a central role in doing so.	**Finance is conditional** upon the electricity sector meeting predetermined emissions constraints in line with a more ambitious SA NDC

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