



CHAMBER OF MINES  
of South Africa

# CHAMBER OF MINES PRESENTATION ON THE DRAFT CARBON TAX BILL



Presentation on the draft Carbon Tax Bill  
to the Standing Committee on Finance  
Parliament, Cape Town  
14 March 2018



# Presentation outline

- Introduction to Chamber of Mines
- The mining industry at glance
- Preliminary observations
- Economic impact of the draft Carbon Tax Bill
- Conclusions and way forward

# Introduction to Chamber of Mines

- Voluntary employer lobbying and advocacy organisation that supports and promotes the SA mining industry – through providing strategic support and advisory input.
- Facilitate interaction among mining employers to examine policy issues and other matters of mutual concern to crystallise and define desirable industry position.
- Members comprise:
  - 38 major mining companies
  - 32 junior mining companies
- 4 associations -Aggregates, Sands Producers Association of Southern Africa (ASPASA), South African Diamond Producers Organisation (SADPO), Association of Shaft Sinkers and SA Mining Contractors, Clay Brick Association of South Africa (CASA)
- Chamber member companies:
  - represent more than 90% of SA's mineral production by value
  - contribute around R11.3 billion in taxes per annum
  - employ around 450,000 people directly
- Advocacy and lobbying - no executive authority over its member companies
- All Chamber members are required to sign and adhere to a Membership Compact, a mandatory code of ethical business conduct to which members of the Chamber subscribe, our members are obliged to conduct their business according to the agreed Chamber values which dictate the minimum standards of conduct required of them

# Mining sector at a glance

- Contributed R312 billion to GDP, which is 6.8% of the total GDP
- Employed 464 667 employees, which is 6.1% of private non-agricultural employment
- Contributed R93 billion to fixed investment, making up 18.2% of private sector fixed investment
- Exported R307 billion worth of output, which is 27% of the South Africa's export book
- Paid R5.8 billion in royalties
- Paid R16 billion in taxes



- The Chamber of Mines (CoM) is committed to support SA international commitment to lowering its GHG emissions, and the Nationally Determined Contributions commitments.
- CoM and its members remain committed to sustainable growth of the South African economy and to responsible corporate citizenship. As such, it is supportive of the government's intent to facilitate a transition to low carbon economy, with responsible investment and growth in various sectors including the mining industry
- The CoM has been part and parcel of drafting of BUSA submission and therefore supports the views expressed by BUSA and its member companies including the views expressed by other organisation such as ITTCC.
- Amongst other issues, the CoM has identified the following concerns and risks with Carbon Tax Bill, These are clearly articulated in BUSA and ITTCC submission:
  - National Emissions Trajectory - PPD (emissions already lower than the national benchmark trajectory due to the low economic growth therefore, imposition of a carbon tax is unnecessary).
  - Lack of Alignment with Carbon Budget and the mitigations system currently developed by the Department of Environmental Affairs.

- Amongst other issues, the CoM has identified the following concerns and risks with Carbon Tax Bill, These are clearly articulated in BUSA and ITTCC submission:
  - Contradiction between the definition of the Tax Payer and the Mandatory GHG reporting regulations
  - Outstanding development and finalisation of the Regulations that will enable effective implementation of the Tax i.e Offset Regulations, Z Factor, Trade Exposure etc
  - Rebates for renewable energy premium and environmental levy need to be clearly set out in legislation
  - Administration of Carbon Tax through the Custom and Excise Act
  - Challenges pertaining to developing benchmarks/Z factor in the mining industry
- Our Submission primarily focuses on the economic impacts of the introduction of Carbon Tax to the Mining Industry

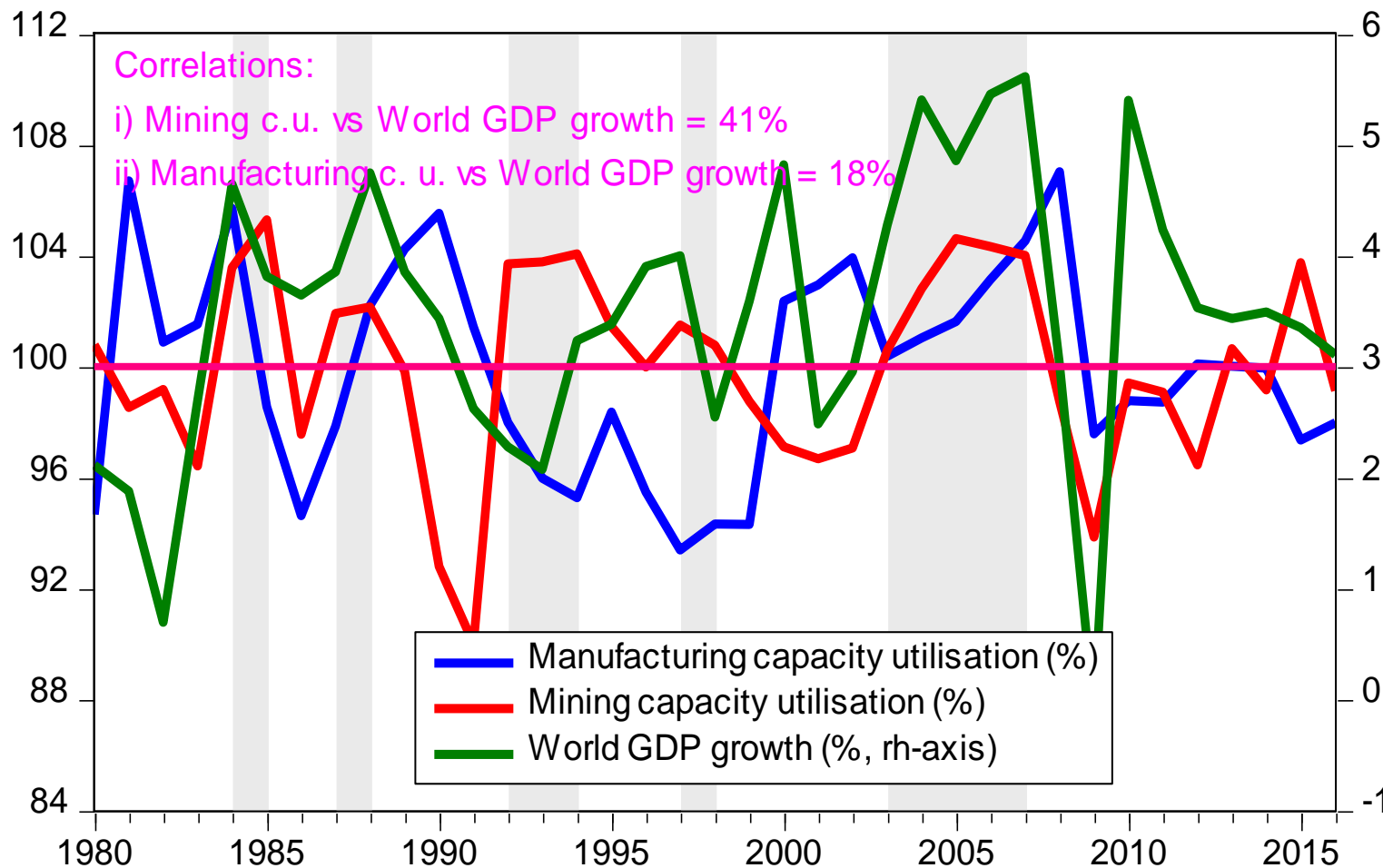
# Economic analysis - impact of Carbon Tax on the mining industry

## Basic arguments

- 1. Mining in SA is marginal business:** A slight increase input cost results in the closure of some operations
- 2. Price taker:** unlike other productive sectors (e.g. retail, manufacturing, finance etc.) Mineral commodity prices are determined at the global market. We cannot transfer increase in costs to the final price of the product

# Mining, manufacturing capacity utilization and global growth

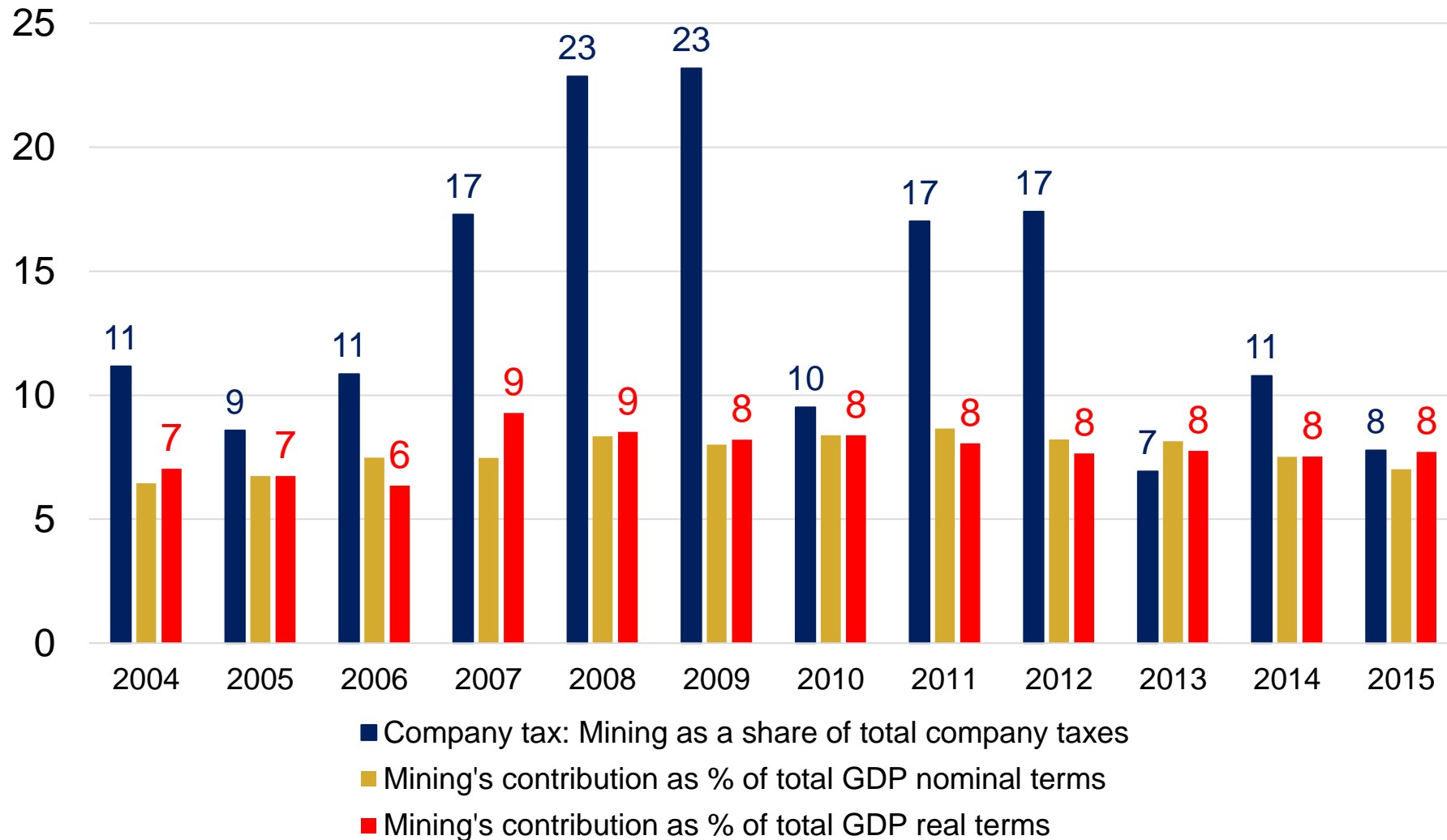
Capacity utilisation in the mining sector closely patterns the performance of the world economy



1. Correlation of 41% compared to 18% for manufacturing. This brings to the fore the heavy reliance of the mining sector to international developments. More precisely, it is an indication of the extent to which mining is 'more' of a price-taker than the manufacturing sector;
2. Post the 2008 financial crisis the mining sector's output has been more volatile highlighting tenuous global growth



# Mining industry shares: company tax and GDP (%)



# Assumptions for the time-series econometric analysis:

## Assumptions:

The following assumptions were made in order to run the time-series econometric analysis:

1. Since there is currently no time-series data for the carbon tax, we used electricity tariffs as a proxy. This is because about 80% of SA's emissions are from the energy sector, mainly power generation. While in Phase I of the CO2 tax will be electricity neutral in Phase II that will change
2. We model Phase II which kicks off in 2022, five year from now, and assume that electricity prices will soar by 5%
3. The price of diesel (or liquid fuels) will also directly include the carbon tax. However, this was not considered in the current analysis because
  - To improve the competitiveness of the primary sectors mining qualifies for a rebate under the Diesel Fuel Refund System
  - The National Treasury has begun a review process on the Diesel Fuel Refund System in order to clamp down on 'beneficiaries' who abuse the facility. The Chamber has made submission that the review should focus on the abusers instead of targeting the entire sector
  - As a result of this uncertainty in the direction the Refund System will take we decided not to include it in the modelling
4. Having performed the baseline estimations we then assumed that the 5% increase in the electricity price took effect in the year 2000. From there we calculated the impact that would have had on output/production, investment, employment, and gross operating surplus

# Time-series analysis

LONG-RUN COEFFICIENTS/ELASTICITIES FOR THE PRICE OF ELECTRICITY IN THE MINING SECTOR				
Sector/industry	The impact of a 10% increase in the electricity price on the mining sector			
	Output/production	Investment	Gross operating surplus/profitability	Employment
Total mining sector	-0.01%	-3.3%	-0.03%	-0.5%
Gold	-4.2%	-5.5%	n/a	-2.9%
Coal	-0.6%	-4%	n/a	-0.1%

NB: How to read elasticities - For example, a 10% increase in the price of electricity (specific to the mining sector) results in a 0.01% decrease in total mining sector output; 3.3% decline in investment (real gross fixed capital formation); 0.03% decline in gross operating surplus; and 0.5% reduction in total employment.

# Impact of the CO2 tax on output and investment in the mining sector

## Transmission mechanism: 5% increase in the price of electricity in Phase II

REDUCTION IN OUTPUT RESULTING FROM CO2 TAX (R bn)					REDUCTION IN INVESTMENT DUE TO CO2 TAX (R mn)				
	Gold**	Coal	Other*	Total Mining		Gold	Coal	Other*	Total mining
2000	0,5	1,1	2,4	3,9	2000	706	358	2 405	3 469
2001	0,5	1,1	2,3	3,9	2001	744	386	2 600	3 730
2002	0,7	1,1	2,2	4,0	2002	824	439	2 960	4 223
2003	0,6	1,1	2,4	4,1	2003	845	460	3 116	4 420
2004	0,5	1,2	2,6	4,3	2004	667	372	2 529	3 569
2005	0,5	1,2	2,7	4,3	2005	581	332	2 263	3 176
2006	0,6	1,2	2,5	4,3	2006	844	493	3 376	4 713
2007	0,7	1,2	2,4	4,3	2007	1 056	632	4 344	6 032
2008	0,9	1,2	2,0	4,1	2008	1 297	794	5 485	7 575
2009	0,9	1,2	1,7	3,8	2009	1 341	841	5 833	8 015
2010	1,0	1,2	1,9	4,0	2010	1 263	811	5 648	7 722
2011	1,2	1,2	1,6	4,0	2011	1 281	842	5 891	8 013
2012	1,2	1,2	1,4	3,9	2012	1 241	835	5 874	7 951
2013	1,2	1,2	1,6	4,1	2013	1 221	841	5 942	8 003
2014	1,2	1,3	1,5	4,0	2014	1 210	853	6 063	8 126
2015	1,2	1,2	1,7	4,2	2015	1 170	845	6 032	8 046
2016	1,5	1,2	1,3	4,0	2016	1 099	812	5 833	7 744

# Impact of the CO2 tax on jobs

## Transmission mechanism: 5% increase in the price of electricity in Phase II

JOB LOSSES RESULTING FROM CO2 TAX				
	Gold	Coal	Other*	Total mining
2000	2 374	238	2 165	4 777
2001	2 212	235	2 216	4 664
2002	2 143	220	2 357	4 719
2003	2 117	219	2 594	4 930
2004	2 019	233	2 947	5 199
2005	1 797	264	3 079	5 139
2006	1 787	267	3 226	5 280
2007	1 858	280	3 592	5 730
2008	1 862	303	3 838	6 002
2009	1 789	328	3 574	5 691
2010	1 756	343	3 674	5 773
2011	1 620	364	3 951	5 935
2012	1 591	385	4 098	6 073
2013	1 474	407	4 019	5 900
2014	1 331	399	3 974	5 704
2015	1 287	360	3 925	5 572
2016	1 303	359	3 630	5 292

Correlation: Gold vol. vs Selected cost variables			
	Gold prod. vol	R/\$	Real price of electricity (c/kWh)
Gold prod. vol	1,00	-0,91	-0,69
R/\$	-0,91	1,00	0,65
Real price of electricity (c/kWh)	-0,69	0,65	1,00

Negative correlation is a relationship between two variables in which one variable increases as the other decreases, and vice versa. In statistics, a perfect negative correlation is represented by the value -1.00, while a 0.00 indicates no correlation and a +1.00 indicates a perfect positive correlation.

- Profitability, or the prospect of relatively healthy profits on a risk adjusted basis is an important variable in the decision matrix when companies are considering new or expansion investment.
- An environment conducive to healthy profits will attract capital, which will in turn result in further expansion of the mining sector and create additional jobs.
- The converse also holds, wherein, regulatory uncertainty and excessive costs erode the prospect of profitability, therefore decreasing the size of sector, jobs, export earnings and by extension contraction in those sectors which feed into the mining sector.
- While the Chamber embraces the notion of long term carbon pricing and various mechanisms to facilitate transition to a low carbon economy, **we are of the view that the carbon tax has the potential to erode profitability through increasing costs and hence deliver the outcome of a shrinking sector**
- The result of which would be further job losses therefore exacerbating South Africa's structurally high unemployment rate.

# Cost curve analysis

- The central narrative of this analysis is to stress the fact that additional costs, adversely affect profitability (a key variable in the decision matrix when companies are considering new or expansion capital).

To this end, the points we would like to stress include;

- The price taking nature of the industry, and
- The need to contain costs (production costs and inflation)

- Sustainability of the mining sector is a function of producing output at an input cost that is below commodity selling prices.
- Due to generally depressed commodity prices and structurally high input costs associated with South African mining, the sustainability of pockets of the sector are in dire straits
- To illustrate this fact we have selected two industries within the mining sector, namely; the gold and PGM industries.
- These 2 sectors, collectively;
  - Employ 287 970 direct employees (62% of total mining sector)
  - 79% of total mining exports
  - 29% of total mining royalty payments

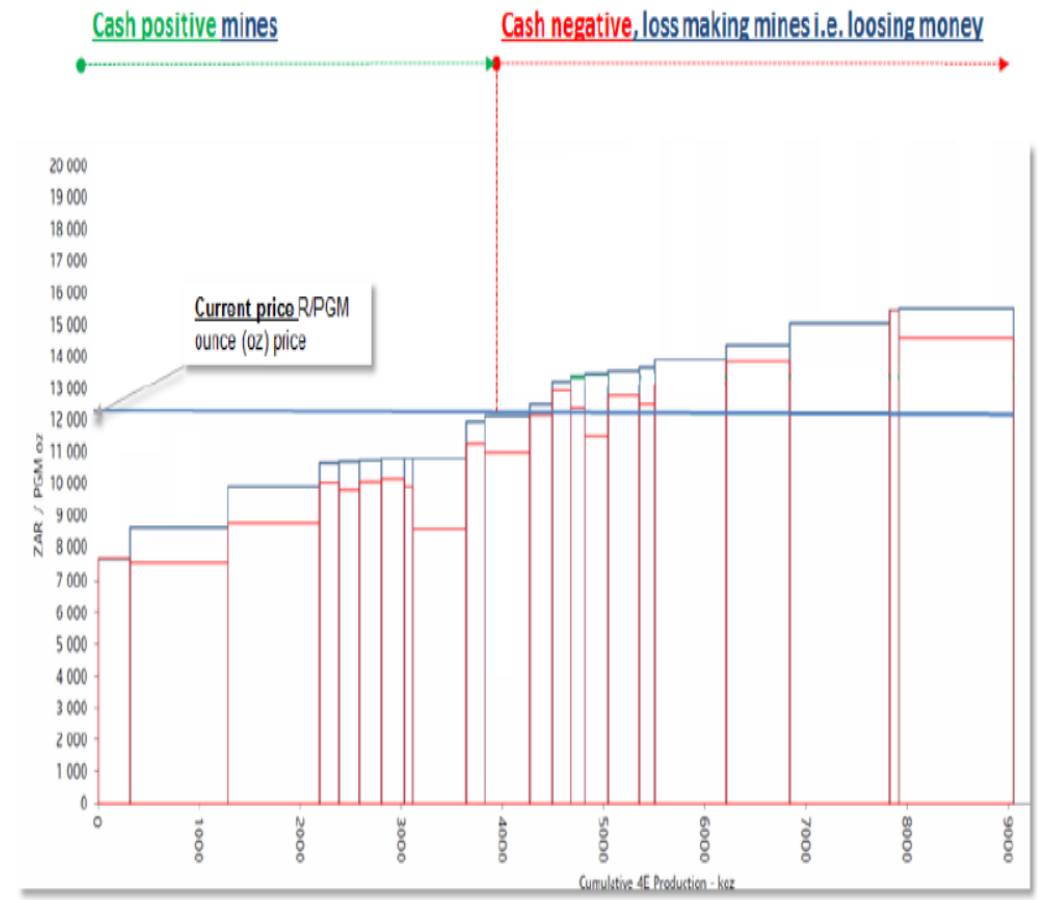
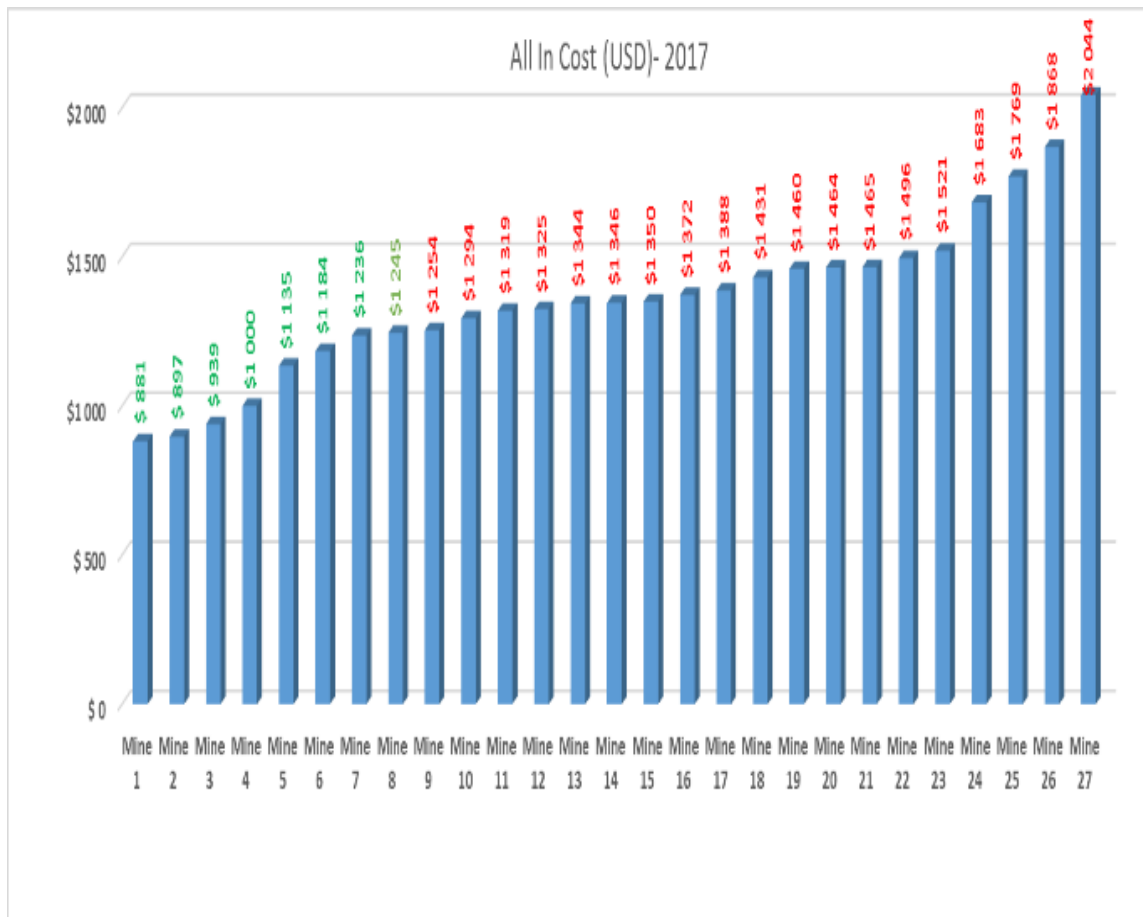
**When production costs are compared to selling prices, it is regrettable to note that; 69% of gold mining operations and 65% of PGM mining operations are producing unsustainably.**

**Any increases to input costs through carbon tax adversely affect the sustainability of these sectors.**



# Cost curves (Gold and Platinum)

69% of Gold Mining is unsustainable, while 65% of the PGM industry is unsustainable



# Inflationary adjustment to the Carbon Tax rate and mining sector input cost inflation

- **Our base case remains that given the price taking nature and marginal state of the mining sector, the carbon tax is negative for the sector, for the fact that it increases input costs therefore reducing profitability.**
- **Additionally, we are of the firm view that the proposal for an inflationary adjustment to the carbon tax rate of CPI + 2 % (percentage points) on an annual basis until 2019 is inappropriate for a tax.**
- Our recommendation is for a zero percent adjustment to the carbon tax rate. We believe that the adjustment to the carbon tax rate should only be considered when there is a significant shift in the underlying dynamics that have resulted in the current carbon tax rate of R120.
- Moreover, in the event of the need to adjust the tax rate, this should be done with motivation for the proposed new carbon tax rate. We do not believe that an automatic annual adjustment to the rate is warranted.
- Our recommendation is motivated by the fact that input costs inflation in the mining sector are currently increasing at a pace faster than that of commodity selling prices, resulting in margin compression and adversely affecting the sustainability of the sector.

# Mining cost inflation

- In illustrating this point we analyse the input cost structure of the mining sector, with the intention of building a weighted average input cost index for mining.
- Ultimately we compare the trend in the input cost index to commodity prices.
- Ideally, a positive differential (selling price inflation less input cost inflation is indicative of a sustainable operating environment). With the converse also holding true

Cost Basket	Total Mining	Coal	Gold and Uranium Ore	Other Mining
<b>Intermediate Cost Basket</b>				
Mining & quarrying	1,22%	0,18%	0,39%	0,13%
Wood & wood products	1,52%	0,44%	8,37%	0,43%
Coke & refined petroleum	1,32%	1,54%	1,19%	1,28%
Basic chemicals	1,85%	1,03%	4,98%	1,45%
Other chemicals & man-made fibers	2,98%	3,20%	4,96%	2,52%
Rubber products	1,41%	2,46%	1,58%	1,08%
Metal products excluding machinery	1,85%	2,12%	3,92%	1,36%
Machinery & equipment	5,11%	5,86%	8,07%	4,30%
Electrical machinery & apparatus	0,93%	1,51%	1,59%	0,63%
Transport equipment	1,39%	1,47%	2,17%	1,20%
Electricity, gas & water	5,79%	3,00%	16,60%	4,37%
Wholesale & retail trade	4,93%	5,90%	7,38%	4,17%
Transport & storage	43,89%	43,04%	2,32%	52,49%
Finance, insurance, real estate & business services	4,69%	4,71%	10,14%	3,59%
Community, social & personal: Other producers	2,22%	2,22%	3,45%	1,97%
Residual	0,00%	0,00%	0,00%	0,00%
Imported Intermediate Inputs	18,92%	21%	22,66%	18,91%
<b>Total Intermediate Costs (Ex Labour)</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Intermediate Costs	65%	69%	47%	69,5%
Compensation of Employees	35%	31%	53%	30,5%
<b>Total Input Costs</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100,0%</b>

# Mining inflation vs selling price inflation

Annual Averages (Y o Y% Movement) - Total Input Cost (Intermediate + Labour)					Selling Prices		
	1	2	3	4	5	6	7
Year	Total Mining	Coal	Gold and Uranium	Other Mining	Total Mining	Coal (Rand)	Gold Price (Rand)
2013	10,5	10,5	11,3	10,4	5,4	5,8	-1,2
2014	10,4	10,2	12,0	10,0	4,1	3,5	1,3
2015	3,6	3,4	4,6	3,6	-4,1	-3,6	7,6
2016	8,7	8,4	10,5	8,3	11,4	5,6	24,1
2017 (YTD) Annualised	11,0	9,6	13,7	10,5	10,0	10,9	-8,5
Average (2013-2017)	8,9	8,4	10,4	8,6	5,4	4,4	4,7

- The negative differential in the inflation profiles between costs and selling prices, presents a situation of profit margin erosion and places in question the sustainability of the mining sector. By extension it also adversely affects the attractiveness of the sector for new or expansion capital.
- It is in the context of the above analysis that we contend with the inflationary adjustment proposed for the carbon tax rate
- Importantly, this would not be out of the norm for the South African context and by extension the mining sector. The Diesel Fuel Tax Refund System applicable to the mining sector, is not set to automatically escalate on an annual basis. We are of the view that the same can be applied to the carbon tax rate.

- The CoM acknowledges the fact that carbon tax could be one of many policy measures to address market distortions or to promote certain behavioural changes in order to achieve GHG emissions reduction. However, in light of the South Africa's socio economic implications of the tax, also the design and the principle set out in the draft Carbon Tax Bill, the Chamber does not support the implementation of the Bill at this stage.
- Significant technical, policy alignment issues, finalisation of certain regulations, means of implementation will have to be achieved prior to the promulgation of the Bill.
- It is evident that Carbon Tax is not necessary to meet international commitments under the current national circumstances.
- Over the last 5 years, the South African mining sector faced a flat to declining commodity price environment, with flat to declining production placing downward pressure on profitability and global competitiveness.
- The mining industry is a significant contributor to GDP and a major employer. Carbon Tax will render most of the mining operations marginal, add significant costs to mining operations, consequently undermining the capability of the sector to contribute to sustainable employment levels.

# Conclusions

- The mining operations are maintained on an extremely high base load capacity. Increases in input costs undermine the viability of marginal operations
- The Mining Industry is Trade Exposed, hence the introduction of Carbon Tax will impact on its competitiveness.
- The sector is a price taker and simply cannot pass the costs to the consumers of its products