Constellations, technicality, iconisation and Eskom: A case from South Africa's *Business Day*

Ian Siebörger & Ralph D. Adendorff

Published online: 06 May 2022.

Submit your article to this journal ⤤

View related articles ⤤

View Crossmark data ⤤

Constellations, technicality, iconisation and Eskom: A case from South Africa's *Business Day*

Ian Siebörger and Ralph D. Adendorff

*Department of Linguistics and Applied Language Studies, Rhodes University, Makhanda
(Grahamstown), South Africa
Correspondence: Ian.sieborger@ru.ac.za*

Abstract: This article uses Legitimation Code Theory (LCT) and systemic functional linguistics (SFL) to explore interactions between various resources for building economic and political knowledge in a 2015 article from *Business Day*, a South African newspaper, concerning the country's energy crisis. We use LCT to observe how three constellations are built in the article: a 'developmental state' constellation; a 'neo-liberal' constellation; and another underarticulated constellation that selectively draws ideas from both the preceding constellations. These constellations are built through the unfolding of the text using various linguistic resources, which we describe using SFL, including technicality and iconisation. We identify instances where words are charged with both ideational and axiological meaning concurrently, challenging existing understandings of the process of iconisation.

Introduction

Language is constantly being used in knowledge-building, not only in formal education systems, but also in institutions such as the news media, from which many citizens derive much of their knowledge about their economic and political environment. In this article, we use Legitimation Code Theory (LCT) and systemic functional linguistics (SFL; Halliday and Matthiessen 2014) as two complementary frameworks to reveal how the language of a news article is used to build readers' knowledge of South Africa's energy crisis and the government's response to it. In particular, we are interested in how language is used to associate different actors and organisations together in groups known as *constellations* in LCT, and *charge* these constellations with different values. This constellating shapes the 'space of possibles' (Bourdieu 1991: 10) that this article presents as options for the future of South Africa's energy sector, and the charging presents one particular option, associated with neo-liberalism, as being preferable to others.

This constellating and charging is accomplished through use of language, and so we use SFL to concentrate on the interplay between two sets of linguistic resources which are used to build readers' knowledge. The first is *technicality*, the specialised vocabulary which is used in different fields of knowledge 'to enable the ordering and classification of the experiential world' (Wignell et al. 1989: 367).

The second set of linguistic resources we investigate is evaluative language, which we describe using the Attitude subsystem from SFL's Appraisal framework (Martin and White 2005). Research over the past decade has described the role of Appraisal in *iconisation*, the process by which ideas are charged with values (Martin 2010; 2020; Martin et al. 2010; Doran 2020). We show that while technicality and iconisation have an inverse relationship in certain contexts, in other areas technicality supports iconisation, allowing for complex political and economic decisions to be charged with value. We argue that this builds on and challenges existing understandings of iconisation in SFL.

The news article we describe in this journal article, 'ANC opts to keep Eskom in one piece' (reprinted in Appendix A), appeared in *Business Day*, an influential South African daily newspaper. It was written in the context of a protracted energy crisis. South Africa's state-owned electricity utility, Eskom, has barely enough generating capacity to meet the country's demand for electricity, and has to resort to rolling blackouts referred to as 'load shedding' (Jaglin and Dubresson 2016). At the same time, Eskom carries a debt of more than ZAR529.4 billion (US$35.8 billion) as of June 2019 (Gedye

2019). As a result of this, Eskom is commonly held to pose one of the largest threats to the South African economy (Gedye 2019).

In the following section, we give a more detailed introduction to the analytic concepts from LCT and SFL used in this study. This leads into a detailed report on a fine-grained LCT and SFL analysis of this news article. In the discussion and conclusion, we show how the possibilities proposed in this article for the future of South Africa's energy sector are constrained, resulting in something of a stalemate between two existing approaches to resolving the energy crisis: a 'developmental state' solution and a 'neo-liberal' solution. We also show how this news article contributes evidence that technicality and iconisation can couple with each other to build strong, value-laden knowledge claims.

Analytic tools: Legitimation Code Theory and systemic functional linguistics
In this section, we introduce the key concepts from LCT and SFL used in the analysis reported on in this journal article. Throughout this section, we use examples from the news article in Appendix A to illustrate the use of tools from these two frameworks.

LCT: semantic density and constellations
This research draws on one dimension of LCT, named Semantics, which analyses the ways in which knowledge is packaged. The following explanation of aspects of LCT draws on Maton (2014). A key analytic concept in our study is *semantic density*, which is 'the degree of condensation of meaning within socio-cultural practices (symbols, terms, concepts, phrases, expressions, gestures, actions, clothing, etc.)' (Maton 2014: 129).

Two variants of semantic density are relevant to this study. The first is *epistemic-semantic density*, the density of empirical knowledge and experience (Maton 2014). For example, the word 'electricity' has relatively strong epistemic-semantic density, particularly for a physicist: the word denotes the result of a variety of complex physical processes and forces. A second variant is *axiological-semantic density*, the density of meanings relating to emotions, values and political stances. The word 'democratic' is relatively strong in this variant of semantic density, because it not only refers to a particular political system, but also is associated with strongly positive moral values and emotions for many readers, and strongly negative moral values and emotions for others. Below, we show how fluctuations in epistemic-semantic density and axiological-semantic density interrelate in complex ways to produce meanings in the news article reprinted in Appendix A.

The process of strengthening epistemic-semantic density is known as *epistemological condensation*, while the process of strengthening axiological-semantic density is *axiological condensation* (Maton 2014). Both of these types of condensation can assist in grouping knowledge together into clusters of ideas known as *constellations*. These ideas tend to cluster around one main idea or concept, named a *central signifier*. Such constellations may be *charged* with positive, negative or neutral values. In the analysis below, we show how different sources cited in the news article create different constellations regarding South Africa's energy crisis. This enables one to understand how they construe and evaluate the possible options open to the country to resolve this crisis. Figure 1 is a simplified diagrammatic representation showing how epistemological and axiological condensation can aid in the process of constellating and charging ideas.

SFL: technicality and iconisation
In this article, as explained above, we describe two sets of linguistic resources from SFL. These sets of resources are mentioned by Martin (2020), who describes them as types of *mass*, a concept he proposes as an SFL analogue of semantic density. Martin shows that mass is not limited to one area of SFL, the register variable of Field which is associated with the ideational metafunction, but instead is a group of resources that work together across metafunctions: *technicality* in the ideational metafunction, *iconisation* in the interpersonal metafunction and *aggregation* in the textual metafunction. These are illustrated in Table 1. In this article, we restrict our focus to technicality and iconisation for the sake of simplicity.
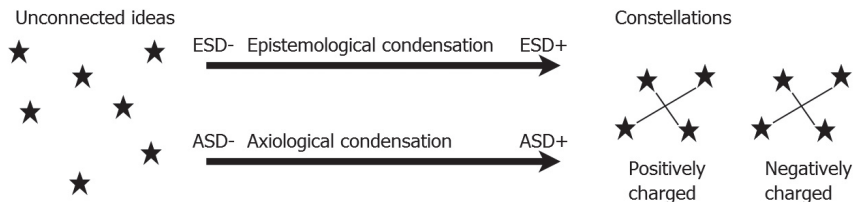
Figure 1: The role of epistemological and axiological condensation in forming constellations

Table 1: Types of mass. Adapted from Martin (2020).

Metafunction	Type of mass
ideational	technicality
interpersonal	iconisation
textual	aggregation

The first set of resources we examine, *grammatical metaphor* and *technicality*, derives from SFL's ideational metafunction (see Halliday and Matthiessen 2014). Grammatical metaphor occurs where 'a semantic category such as a process is realized by an atypical grammatical class such as a noun, instead of a verb' (Martin and Rose 2007: 106). For example, in *experiential grammatical metaphor*, the process 'to transform' can be realised by the noun 'transformation'. This allows the process to be modified with adjectives and placed into long nominal groups such as 'the party's economic transformation committee', where complex meanings are condensed into relatively short stretches of text. Experiential grammatical metaphor can therefore assist in strengthening semantic density and hence in building constellations by linking ideas together.

A second type of grammatical metaphor, named *logical metaphor*, occurs where words other than conjunctions are used to convey logical relations between processes. For example, the clause 'the ANC's rejection of the bill was a clear indication that the party lacked the political will to drive through a restructuring of the electricity industry' could more congruently be reflected as follows: 'The ANC rejected the bill, and in so doing indicated clearly that the party lacked the political will to drive through a restructuring of the electricity industry'. In the former clause, the process 'was' replaces the logical connectors 'and in so doing', creating a logical metaphor. Logical metaphors are often used to link together experiential grammatical metaphors, forming clauses with ever-denser concentrations of ideational meaning. These link ideas together further, strengthening processes of constellation-building in texts.

Grammatical metaphor plays an instrumental role in construing uncommon sense discourse, such as scientific discourse; at the same time that it condenses meanings, it raises barriers to accessing texts by making them more difficult to read for those without a command of specialist literacies normally acquired in secondary education (Martin 1993).

Technicality refers simply to the use of technical terms in a given field (Wignell et al. 1989), such as 'independent system and market operator' in the economics of the energy sector. Technicality, like grammatical metaphor, condenses ideational meanings; in fact, 'one important function of technicality is to kill off grammatical metaphor, distilling metaphorical discourse as compact entities for purposes of theory building' (Martin 2011: 49). Technicality is named by Martin (2020) as the type of mass deriving from the ideational metafunction. However, because grammatical metaphor is used widely to condense ideational meanings and there is such a close relationship between grammatical metaphor and technicality, we consider both of these resources in our analysis of ideational meaning in this article.

Iconisation, the second set of linguistic resources used in our analysis, derives from SFL's interpersonal metafunction. Martin (2020: 130) explains iconisation as 'a process whereby the conceptual meaning of an event or entity is backgrounded and its value to the members of a group is foregrounded – a process whereby ideational meaning is discharged and axiological meaning

charged'. For example, a cross was once a Roman instrument of execution, but now this meaning of the symbol has been backgrounded, giving way to its use as a symbol of the Christian religion and its adherents. However, the research presented in this article illustrates that ideational meaning is not always backgrounded when axiological meaning is charged, leading us to challenge this definition of iconisation; instead, we consider every instance where an idea is charged with axiological meaning to be an instance of iconisation.

We use the Attitude sub-system of Appraisal to describe how language is used to charge an idea with values. The following brief explanation of Attitude draws on Martin and White (2005) and uses examples from the news article reprinted in Appendix A to illustrate these where possible.

Firstly, affect refers to expressions of emotion. These are further distinguished into three categories:

- Happiness refers to a general state of emotional well-being, e.g. 'elated' (+happiness), 'depressed' (-happiness).
- Security refers to feelings of safety, e.g. 'secured a commitment' (+security), 'threatened' (-security).
- Satisfaction refers to feelings of accomplishment and completion, e.g. 'ameliorate' (+satisfaction), 'shortfall' (-satisfaction).

Secondly, judgement refers to evaluations of human behaviour. This is divided into five categories. The first three concern social esteem, i.e. the respect that members of society might have for the target of the judgement, and the last two concern social sanction, i.e. behaviour that members of society view as morally right or wrong.

Social esteem:

- Normality refers to how ordinary or different from the norm someone is, e.g. 'following the example that was applied in many other countries' (+normality), 'unusual' (-normality).
- Capacity refers to a person or institution's ability or lack thereof, e.g. 'independent' (+capacity), 'is no longer [self-financing]' (-capacity).
- Tenacity refers to someone's endurance or courage: 'encouraged' (+tenacity), 'reluctant' (-tenacity).

Social sanction:

- Propriety refers to whether or not someone is behaving morally, e.g. 'she did the right thing' (+propriety), 'refusing to implement the institutional reforms required' (-propriety).
- Veracity refers to whether or not someone is being truthful, e.g. 'genuine' (+veracity), 'bogus' (-veracity).

Lastly, appreciation refers to evaluations of non-human objects:

- Reaction refers to whether or not a phenomenon as a whole is impressive or captures one's attention, e.g. 'far-reaching' (+reaction), 'not desirable' (-reaction).
- Composition refers to whether an object is put together in a pleasing way or not, e.g. 'in one piece' (+composition), 'too big and complex' (-composition).
- Valuation refers to whether an object is ascribed worth or not, e.g. 'lucrative' (+valuation), 'ageing' (-valuation).

Instantiations of Attitude also differ in their degree of explicitness. They can be *inscribed*, that is, overtly stated, as in most of the examples above. Alternatively, they can be *invoked* in a number of ways through the use of ideational meanings that imply or connote a particular Attitude (Martin and White 2005). For example, the news article in Appendix A refers to the ANC's 'economic transformation committee'. In a South African context, 'transformation' is frequently used to refer to the kind of societal change that is necessary to correct the past injustices of apartheid, and so for many South African readers, the word 'transformation' invokes a judgement of positive propriety. This example illustrates that particular instantiations of invoked Appraisal will not necessarily be recognised by all readers of a text, but only by those who share some insider information or evaluative stances with the authors of the article (Doran 2020).

In analysis of axiological charging and Appraisal resources, we have coded words as far as possible from a compliant reading position, as opposed to a tactical or resistant reading position (Martin and White 2005). This has allowed us to be responsive to the meanings which a compliant reader might find in their interpretation of the text.

In the analysis presented in this journal article, we are particularly interested in investigating how *couplings* between different linguistic resources work to build knowledge by charging expressions with ideational and/or interpersonal meaning. A coupling is a combination of meanings from different systems of language or modes of communication (Martin 2000). For example, in the expression 'energy shortfall', the word 'energy' is an instantiation of technicality, which is then combined with 'shortfall', in which a grammatical metaphor (nominalising the process 'to fall short') is coupled with an instantiation of negative Attitude: Satisfaction. Couplings of different kinds combine into recurrent patterns known as *syndromes* (Zappavigna et al. 2008). Such patterns can be organised at various levels, but in this article we concentrate on how they develop on a *logogenetic* scale, that is, over the unfolding of a single text (Martin 2010). In particular, in a syndrome of couplings between grammatical metaphor or technicality and Attitude, ideational and interpersonal meanings support each other in the process of building knowledge about the options for resolving South Africa's energy crisis.

LCT analysis: constellations and charging
In most of the article, two opposing constellations are produced: one centred on the resolutions of the ruling ANC and the other on the Independent System **and** Market Operator Bill (ISMO)[1],which is favoured by the opposition Democratic Alliance (DA). The ANC's resolutions were made during a *lekgotla* (par. 1). This is a South African English word borrowed from Sesotho, referring to 'a strategy planning meeting, especially one convened by government or the executive committee of an organization' (Dictionary Unit for South African English 2002).

Thus we identified 'lekgotla resolutions' and 'ISMO Bill' as the central signifiers of these constellations, the most important ideas around which the other ideas are clustered in each constellation (Maton 2014). The article cites a source from both parties, Enoch Godongwana from the ANC and Lance Greyling from the DA, each associated with one of the constellations. Table 2 lists the signifiers in each constellation. In this and subsequent tables, negative charging is shown with underlining and positive charging in *italics*. It is clear from this that while there is some mixing, primarily positive charging is attached to the 'ISMO Bill' constellation and the DA, and negative charging with the ANC lekgotla.

The ANC's lekgotla resolutions could be characterised as being consistent with the logic of a capitalist developmental state, in which the government intervenes extensively in attempts to ensure economic development (Johnson 1999). The most frequently cited model for such developmental states is East Asian states such as Japan, South Korea and Taiwan, which engineered spectacular levels of economic growth from the 1970s onwards (Johnson 1999; Edigheji 2005). In some developmental states, such as Taiwan, Singapore and France, state-owned enterprises played key roles as drivers of growth (Chang 2010). The ANC's intention, as reflected in the article in Appendix A, seemed to be to strengthen Eskom for a role 'at the centre of industry' (par. 9), as such a driver of economic growth.

Meanwhile, the 'ISMO Bill' constellation and the DA's position could easily be associated with neo-liberalism, which holds that 'markets are understood to be a better way of organizing economic activity [than state control] because they are associated with competition, economic efficiency and choice' (Larner 2000: 5). The ISMO Bill would introduce 'genuine competition between state and private producers' (par. 5). The dominance of positive charging in the 'ISMO Bill' constellation suggests that the article's author and *Business Day* more generally favour a neo-liberal solution to South Africa's energy crisis over the ANC's developmental state approach.

However, there is one source in the article who rearranges these constellations somewhat: Mark Pickering, the managing director of a business called Globeleq SA. He is quoted in the last part of the article, par. 14–17. The article does not explain what Globeleq SA is, but its website reveals that it is an independent power producer (Globeleq 2017). Pickering 'agreed that an independent operator was not the best route for SA' (par. 14), although no reasons for this view are given in the article. On the other hand, he states that 'the government urgently needed to allow a discussion on the sector's future' (par. 14). Thus he occupies a middle position as one who is in favour of breaking Eskom up, but not in favour of the ISMO Bill. In effect, Pickering takes one idea from the 'lekgotla resolutions'

Table 2: Dominant constellations in 'ANC opts to keep Eskom in one piece'

Lekgotla resolutions	*Independent* System Market Operator Bill
ANC	DA
economic transformation committee	
Enoch Godongwana	energy spokesman Lance Greyling
keep Eskom in one piece	
<u>sink</u>	restructuring of the electricity sector
<u>conflicting signals</u>	
more *independent* power producers must be brought into the industry over the next 18 to 30 months	establishing a state company to act as the buyer of electricity from private and public producers and to sell it to distributors and buyers at wholesale prices
natural gas from Mozambique be procured to *ameliorate* the power supply crisis	
private investors be *encouraged* to invest alongside Eskom in <u>ageing</u> power stations	*genuine competition* between state and private producers
	widely viewed since the 1998 white paper on energy as the *best way forward*
<u>reluctant</u> to break up Eskom	<u>break up</u> Eskom
	<u>negatively affect</u> [Eskom's] balance sheet
	Eskom's large borrowing programme could be <u>threatened</u>
	<u>not desirable or viable</u>
Historically where this is done, the state is generally not the dominant power producer	Establish an *independent* system market operator and a *liberalised* market
Eskom to remain at the *centre* of industry	<u>weaken</u> Eskom
makes <u>no mention of an independent operator</u>	
decision a year ago to <u>withdraw</u> [the ISMO Bill] from Parliament	
<u>No explanation was given</u> at the time	
<u>lacked the political will</u> to drive through a restructuring of the electricity industry that was urgently required	urgently *required*
the government	
currently calling on the private sector to help it *alleviate* our energy crisis	
<u>refusing to implement</u> the institutional reforms required for [the private sector] to play a meaningful role in ensuring another crisis does not repeat itself	*the institutional reforms required* for [the private sector] to play a meaningful role in *ensuring another crisis does not repeat itself*

constellation and combines it with other ideas from the 'ISMO Bill' constellation to create a new set of constellations, which are shown in Table 3.

We found it impossible to assign central signifiers to either of Pickering's constellations. His positively charged constellation is centred on the idea that Eskom 'needs to be broken into parts', but for the negatively charged constellation, it is difficult to identify a common central signifier that holds the rejection of an independent operator together with Pickering's negative evaluation of Eskom as 'too big and complex'.

The fact that Pickering is included in this article as a source who agrees with one idea from the 'lekgotla resolutions' constellation and other ideas from the 'ISMO Bill' constellation opens up space for other readers to engage with the ideas presented in the article and pick and choose the stances they are convinced by from either side of the debate. However, because no reasons are given for the one respect in which he differs from the existing constellations in the article, the effect of opening up space for dialogue is somewhat limited.

SFL analysis: the interplay between technicality and iconisation
Some paragraphs of this article are characterised by a high concentration of technical terms and grammatical metaphors, while others have a strong prevalence of Attitude instantiations. Most

Table 3: Pickering's constellations

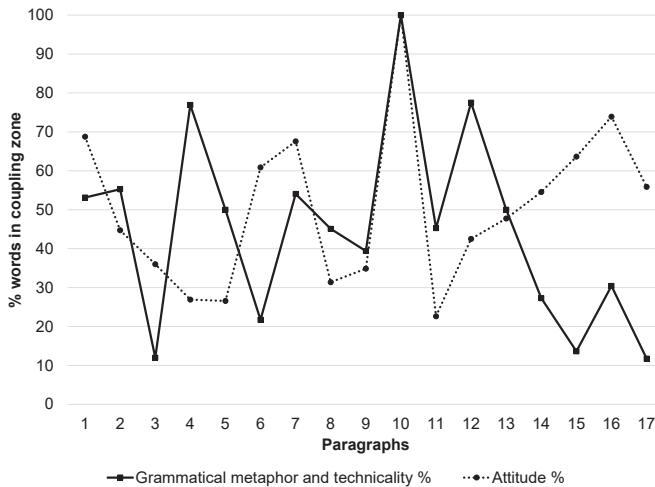| Negative	Positive
An independent operator	a discussion on the sector's future
<u>not the best route</u> for SA	*urgently needed*
	something needs to be done
the [electricity] sector	
<u>something needs to be done to fix</u>	*the solution*
	separating Eskom's generation and transmission businesses
	following the example that was applied in many other countries
Eskom	
<u>too big and complex and needs to be broken into parts</u>	
SA	*The norm*
<u>unusual</u> in not having taken that step [to vertically disaggregate the industry]	vertically disaggregate the industry

Figure 2: Prevalence of grammatical metaphor, technicality and attitude in 'ANC opts to keep Eskom in one piece'

significantly, there are multiple places in which attitude instantiations couple with technicality and grammatical metaphor, creating expressions that are strongly charged with both ideational and interpersonal meaning. This is demonstrated below, where we present a logogenetic perspective on the article as a whole. Following this, we present close descriptions of six passages in the text, which have been selected as representing the chief peaks and troughs in technicality, grammatical metaphor and attitude in the news article. These descriptions describe how individual couplings and syndromes set up the pattern shown below. They show how these syndromes interact to build both experiential knowledge of the ANC's decisions on the energy crisis and systems of values which favour certain proposed solutions to South Africa's energy crisis over others.

A logogenetic perspective
Figure 2 illustrates the fluctuations in grammatical metaphor, technicality and Attitude over the unfolding of the news article. These are represented as a percentage of the words in each paragraph where meanings may couple with these resources. For want of a better term, we label this as the *coupling zone* of these resources. For grammatical metaphor and technicality, we counted each instance of these resources as well as the nominal groups in which they occur as being part of the coupling zone of these resources. For example, par. 1 is reproduced below with experiential

grammatical metaphors and technical terms in italics, and the coupling zones around them demarcated with square brackets.

> The African National Congress (ANC) decided at its annual lekgotla last week to sink [the *Independent System Market Operator* Bill that would have led to the *restructuring* of the *electricity sector*].[2]

This paragraph contains the technical terms 'Independent System Market Operator' and 'electricity sector', as well as the experiential grammatical metaphor 'restructuring'. All of these are embedded within the larger nominal group 'the Independent System Market Operator Bill that would have led to the restructuring of the electricity sector', and so this is considered as the coupling zone of these resources. This coupling zone is 17 words long out of the 32 words in the paragraph as a whole, so it comprises 53% of the paragraph.

The coupling zone of logical metaphor was considered to be the entire clause in which the logical metaphor occurs. For example, par. 10 is one clause long and contains a logical metaphor (italicised below), and so the entire paragraph falls within the coupling zone of this logical metaphor:

> [The final resolution agreed to by the lekgotla *makes* no mention of an independent operator.]

For Attitude, we counted each instantiation and the targets of that instantiation as constituting the coupling zone of these resources. This is demonstrated in relation to par. 1 below, with Attitude instantiations italicised and labelled and square brackets indicating the coupling zone of each instantiation:

> The [African National Congress (ANC)] decided at its annual lekgotla last week to [*sink* (-security, -propriety) the *Independent* (+capacity) System Market Operator Bill] that would have led to the restructuring of the electricity sector.

Here 'African National Congress (ANC)' is the target of a negative propriety judgement invoked by the word 'sink'. This word also inscribes negative security relating to the ISMO Bill, and so the name of this bill also appears in the coupling zone of 'sink'. Finally, 'would have led to the restructuring of the electricity sector' is also an invoked positive valuation of the ISMO Bill in this context. Thus 22 of the paragraph's 32 words are in the coupling zone of Attitude, amounting to 69% of the paragraph.

Even though these coupling zones form a rough measure of the influence of both sets of resources, the result reveals an intricate interplay between them. There are places where technicality and grammatical metaphor seem to be in an inverse relationship with Attitude, notably at the beginning (par. 1–6) and end (par. 12–15) of the graph. This is as one might expect from the extant theory on technicality and iconisation: interpersonal meaning is charged when ideational meaning is not, and vice versa. The article begins with plenty of evaluative language which may be intended to convince the reader of the far-reaching nature of the ANC's decision, including notably the word 'sink' (par. 1). This is followed by peaks of grammatical metaphor and technicality in par. 2 and 4 where relatively dense ideational meanings, such as 'the electricity industry' (par. 2) and 'the party's economic transformation committee' (par. 4) are used to describe the details of this decision.

Conversely, at the end of the article, the rise in prevalence of Attitude and sharp fall in grammatical metaphor and technicality corresponds with the quotations from first Greyling (from the DA) and Pickering (from an independent power producer).

However, in the middle of the article (par. 6–12), the waves of Attitude seem to be in phase with the waves of grammatical metaphor and technicality. Here, it appears that something more complex is happening: grammatical metaphor and technicality couple with Attitude with increased frequency, so that ideational and interpersonal meaning are being charged simultaneously, contrary to what is predicted in the theory relating to iconisation (Martin 2020). This process reaches its zenith in par. 10, in which 100% of the words are within the coupling zone of both Attitude and grammatical metaphor and technicality. Here, the author couples grammatical metaphor and technicality with an

invoked negative normality judgement (in the statement that the lekgotla's final resolution 'makes no mention' of an ISMO Bill) to strengthen a negative view of the ANC's decision. This demonstrates how grammatical metaphor and technicality can be used to support iconisation, in this case, the iconisation of the ANC as a perpetuator of South Africa's energy crisis. The ways in which this is done are described in further detail in the reports on the fine-grained analysis of selected paragraphs that follow.

Paragraph 1
1   The African National Congress (ANC) decided at its annual lekgotla last week to sink the Independent System Market Operator Bill that would have led to the restructuring of the electricity sector.

Paragraph 1 contains more Attitude than grammatical metaphor and technicality, as shown in Figure 2. The ISMO Bill is coupled with invoked positive valuation in the relative clause 'that would have led to the restructuring of the energy sector', for those who accept that such a restructuring is necessary. A large amount of ideational meaning is concentrated in this relative clause through use of the technical term 'energy sector', which qualifies the grammatical metaphor 'restructuring'. This ideational meaning illustrates the far-reaching intent of the ISMO Bill, strengthening the positive valuation that is invoked.

   Here a syndrome is established which couples the 'lekgotla', the ISMO Bill and the word 'sink', which can be said to invoke both negative affect: security and negative judgement: propriety towards the ANC and the lekgotla. This three-way coupling is repeated in the subheading and again in par. 1. 'Sink' is again coupled with the ISMO Bill in par. 11. On the other hand, in the headline, the ANC appears to be coupled with invoked positive judgement: tenacity for 'keep[ing] Eskom in one piece', for readers who believe that this would be desirable. This coupling is contested and reversed from par. 6 onwards, where a syndrome emerges in which the ANC and other entities associated with it are coupled with negative tenacity. This means that par. 1 plays a crucial role in introducing readers to the main syndromes that are repeated throughout the article.

Paragraph 4
4   But the most far-reaching decision, contained in a resolution drafted by the party's economic transformation committee, was on the future shape of the electricity industry.

Here two experiential grammatical metaphors, 'decision' and 'resolution' are linked, condensing ideational meanings together and making this paragraph a peak in the prevalence of grammatical metaphor and technicality, as shown in Figure 2. The first grammatical metaphor, 'decision', is coupled with positive appreciation: reaction in 'far-reaching'. Although the 'decision' itself is not mentioned here, ideational (grammatical metaphor) and interpersonal (positive reaction) resources couple to signpost that information of great import is about to be imparted. Additionally, the word 'transformation' is also a coupling of grammatical metaphor with a positive judgement: propriety, particularly in a South African context where this word is frequently used to refer to the ways in which the country is changing from its apartheid past to a more equitable future, as explained above. Despite these grammatical metaphor and Attitude couplings, this paragraph is relatively sparse in Attitude instantiations compared with subsequent paragraphs, as Figure 2 illustrates.

Paragraphs 7 to 9
7   ANC economic transformation committee chairman Enoch Godongwana said on Friday that the debate on the future of the industry had moved forward substantially, with agreement that it was not desirable or viable to split up Eskom.

8   'There has been an ongoing debate over the structure of the industry. One view has been to establish an independent system market operator and a liberalised market. Another school of thought has argued that historically where this is done, the state is generally not the dominant power producer,' he said.

9   'It also makes no sense to weaken Eskom now. This view wants Eskom to remain at the centre of industry.' Eskom's financial situation remains precarious. In October, it secured a commitment from the Treasury for a R20bn equity injection, with the possibility of the partial conversion of a R60bn government loan to equity. This will allow Eskom to borrow to close its R225bn revenue shortfall.

Grammatical metaphor, technicality and Attitude couple with greater frequency in par. 7. This paragraph is shown as a local peak in the prevalence of both these sets of resources in Figure 2. Godongwana begins by expressing a positive reaction towards 'debate' on the future of South Africa's energy industry, described using a grammatical metaphor, as having 'moved forward'. He also expresses invoked positive affect: satisfaction through use of another grammatical metaphor, 'agreement'. This sets the tone for more positive evaluations of the lekgotla's decisions and negative evaluations of the ISMO Bill and the proposal to break up Eskom. In par. 9, 'makes no sense' invokes a negative judgement: capacity against those advocating the breakup of Eskom, while 'weaken', in addition to inscribing a negative valuation of the possible future of Eskom, also invokes a negative propriety judgement against those wanting it to be broken up. By contrast, he shows support for the other side of the debate by invoking a positive judgement: normality on it, saying that it 'wants Eskom to remain at the centre of industry'. This normality judgement is later reversed by Pickering in par. 17, who casts those resisting the breakup of Eskom as going against international best practice.

Paragraph 10
10   The final resolution agreed to by the lekgotla makes no mention of an independent operator.

Paragraph 10 consists of a single clause which lies 100% within the coupling zone of Attitude as well as grammatical metaphor and technicality, as shown in Figure 2. The use of negation implies that someone, possibly the author, may have expected that 'an independent operator' may have been mentioned in the lekgotla's resolutions but was not. This could be said to ivoke a negative normality judgement against the ANC members who framed the lekgotla's resolutions. This negative normality judgement is the first instance of a syndrome of couplings between negative normality and South African decision-makers which is continued by Pickering in par. 17. Here, though, the negative judgement is coupled with two experiential grammatical metaphors, 'resolution' and 'mention', brought together by logical metaphor through the semantically empty process 'makes'. This gives this negative judgement a long reach, allowing it to refer to the entire resolution made at the lekgotla, and hence to the ANC members involved in this meeting. Thus this paragraph is a clear example of how grammatical metaphor can support iconisation.

Paragraphs 12 and 13
12   Democratic Alliance energy spokesman Lance Greyling said yesterday that the ANC's rejection of the bill was a clear indication that the party lacked the political will to drive through a restructuring of the electricity industry that was urgently required.

13   'While the government is currently calling on the private sector to help it alleviate our energy crisis, it is refusing to implement the institutional reforms required for them to play a meaningful role in ensuring another crisis does not repeat itself,' he said.

As has already been noted above, Lance Greyling aligns himself straightforwardly against the ANC's decisions. The first part of Greyling's viewpoint, given in reported speech in par. 12, contains a high prevalence of grammatical metaphor and relatively little Attitude, while in par. 13 there are equal proportions of both, as shown in Figure 2. One experiential grammatical metaphor, 'rejection', is linked with another, 'indication', using logical metaphor through the verb 'was'. The second of these

grammatical metaphors heads a long nominal group, 'a clear indication that the party lacked the political will to drive through a restructuring of the electricity industry that was urgently required'. In this nominal group, other experiential grammatical metaphors are embedded, headed by 'will' and 'restructuring'. Thus the reported speech from Greyling contains multiple embedding of grammatical metaphor.

Coupling Appraisal with experiential grammatical metaphor here assists in encoding Greyling's strongest evaluations as presuppositions, which cannot be contested without first unwrapping layers of metaphor. 'Rejection' inscribes the ANC's negative satisfaction with the ISMO Bill, covering the whole process of deliberation which occurred in the lekgotla, while 'lacked the political will' invokes a negative judgement: tenacity against the ANC as a whole. In both of these instances, Attitude couples with grammatical metaphor to concentrate not only interpersonal meaning, but ideational meaning as well. In 'refusing to implement the institutional reforms required' (par. 13), the Attitude instantiation, 'refusing' (invoked negative propriety) does not occur in the experiential grammatical metaphor, 'the institutional reforms required', but projects it.

Apart from the coupling of Appraisal with experiential grammatical metaphor, another syndrome that emerges in Greyling's comments is the coupling of reforms or restructuring with positive valuation, instantiated through the word 'required', and negative security, instantiated through the words 'urgently' and 'crisis'. This syndrome is depicted diagrammatically in Figure 3. In this diagram, Appraisal instantiations are indicated by black dots, and lines are used to symbolise the various meanings that are coupled repeatedly in the syndrome. A solid line represents the ideational meanings 'restructuring' or 'reform', while broken lines represent the various interpersonal meanings that form part of the syndrome.

The effect of this syndrome is to impress upon readers the idea that there will be disastrous consequences if the electricity industry is not restructured. This idea also plays a role in invoking judgement: a negative judgement of propriety is invoked upon government for 'refusing to implement the institutional forms required', and a positive judgement of capacity on the public sector for being able to '[ensure] another crisis does not repeat itself', should the necessary restructuring take place. This judgement occurs in the qualifier of the word 'reforms', and so continues the syndrome in which these reforms are coupled with Attitude. In sum, Greyling's comments add many negative evaluations of the ANC and the government to the article through a variety of devices, and these appear to build up to a crescendo through the syndrome that connects restructuring with negative security, positive valuation and invoked judgements.

Paragraphs 14 to 17

14 Globeleq SA MD Mark Pickering said he agreed that an independent operator was not the best route for SA, but the government urgently needed to allow a discussion on the sector's future.

15 'Eskom was self-financing since 1922 and is no longer. Clearly something needs to be done to fix the sector,' he said.

16 He believed the solution lay in separating Eskom's generation and transmission businesses, following the example that was applied in many other countries.

17 'Eskom is too big and complex and needs to be broken into parts. The norm is to vertically disaggregate the industry and SA is unusual in not having taken that step,' Mr Pickering said.

As discussed above, Pickering's comments reorientate evaluations in different directions from those taken in the rest of the article. The syndrome of negative security and positive valuation coupled with references to reforms is continued from Greyling's comments. This continuation is depicted in Figure 4. The word 'urgently', invoking negative security, recurs in par. 14. This is echoed in par. 15, where the word 'need' is used in 'Clearly something needs to be done to fix the sector'. It is used once again in par. 17, where Pickering says that Eskom 'needs to be broken into parts'. Here the relatively grammaticalised word 'need' becomes influential in stressing the urgency of action on Eskom, and by extension invoking negative security regarding Eskom's situation at the time at
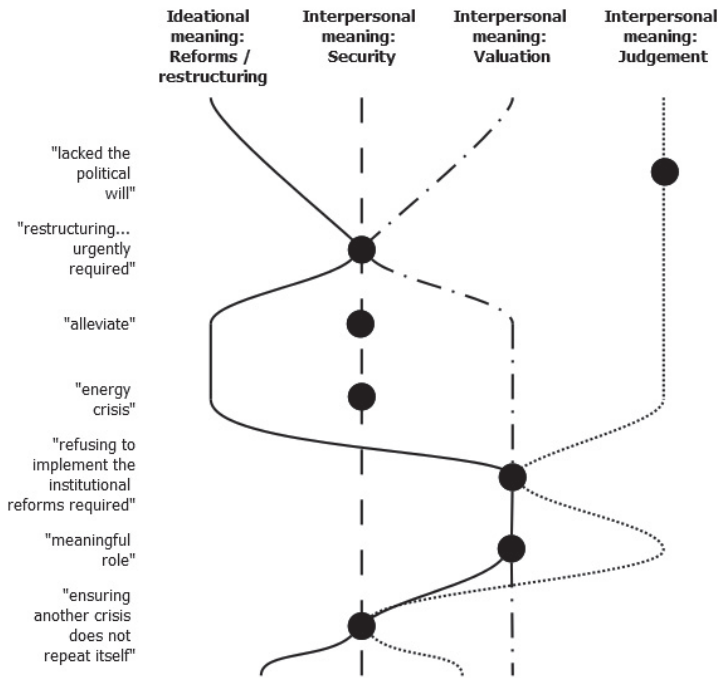
Figure 3: A diagrammatic representation of the syndrome connecting 'restructuring' with security, valuation and judgements (par. 12–13)

which the article was written. In addition, each time 'need' is used, it can be interpreted as carrying an invoked negative judgement against those who have not yet done what needs to be done. Thus the government is judged with negative tenacity for not having allowed a discussion on the electricity sector's future (par. 14), and for not having fixed the sector (par. 15) or broken Eskom into parts (par. 17).

Also crucial to Pickering's argument is a coupling between negative appreciation: composition and negative judgement: normality. These are used in par. 16 and 17. In par. 16, he is reported as saying that 'the solution' lies in 'separating Eskom's generation and transmission businesses' (an invoked negative appreciation of Eskom's composition), 'following the example that was applied in many other countries' (an invoked negative judgement of Eskom and South Africa's normality). In par. 17, this coupling is repeated more explicitly: 'Eskom is too big and complex' (inscribed negative composition) and 'needs to be broken into parts' (invoked negative composition). This is followed by a statement that 'SA is unusual' (inscribed negative normality) in not having disaggregated the electricity industry.

Compared to other parts of the article, Pickering's comments are relatively sparse in experiential grammatical metaphor, as shown in Figure 2: it is used in 'a discussion on the sector's future' (par. 14), in 'solution' and in the technical terms 'generation' and 'transmission' (par. 16). There is none of the multiple embedding of grammatical metaphors found in Greyling's comments in par. 12, for instance. Thus Pickering's comments appear to pack ideational meaning much less densely than Greyling's comments, even though he uses strong syndromes to concentrate interpersonal meaning. One conjecture about the reasons for this could be that in conveying Pickering's position, the author finds it necessary not only to reconfigure the targets of the evaluations made in the rest of the article, but also to unpack ideational meaning somewhat to enable this reconfiguring. In Greyling's comments, the author is able to pack ideational meaning into nominalisations because it can be
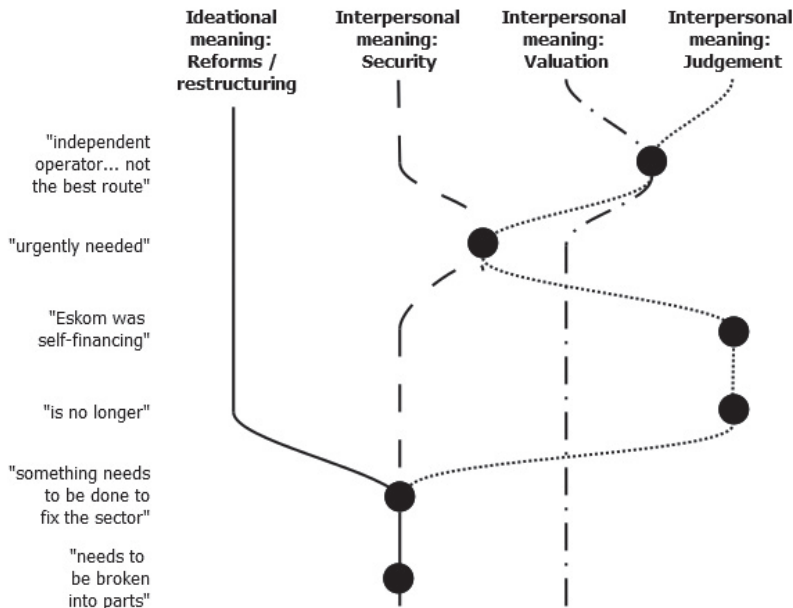
Figure 4: Continuation of the syndrome connecting 'restructuring' with security, valuation and judgement in Pickering's comments (par. 14–17).

presupposed; because Pickering introduces a reconfiguring of stances and new ideational content into the debate, this material cannot be presupposed and therefore nominalised to the same degree.

Discussion and conclusion

In terms of political positioning, this article contrasts a 'developmental state' constellation, which includes the ruling ANC and its resolutions to 'sink' the ISMO Bill and keep Eskom in one piece, with a 'neo-liberal' constellation including the opposition DA, which favours the ISMO Bill and breaking up Eskom. The article seems to favour the neo-liberal stance through the use of evaluative language, as shown by the Attitude analysis. Some dialogic space is opened for picking and choosing different options from the opposing constellations, particularly through the inclusion of Pickering's ideas: he favours one idea from the 'developmental state' constellation and one from the 'neo-liberal' constellation. However, as shown above, this effect is limited: his words contain plenty of Attitude, but not nearly as much grammatical metaphor and technicality, which could be used to build a more reasoned argument for his position. The news article appears to portray South Africa's energy crisis as something of a stalemate between the 'developmental state' and 'neo-liberal' options, with little reasoning given for Pickering's underarticulated third option.

   Linguistically, this analysis provides evidence to show that grammatical metaphor and technicality are not only used to strengthen epistemic-semantic density, they also couple with Attitude resources to strengthen axiological-semantic density. This provides evidence supporting Martin's (2020) general argument that analogues of semantic density are not restricted to one register variable (Field) or metafunction (ideational), but rather are to be found in cross-metafunctional syndromes of meanings. At the same time, it provides counter-evidence to the notion that the charging of ideas with values necessarily involves discharging of ideational meaning. Rather, ideas can be charged with axiological and ideational meaning concurrently. To go one step further, the charging of ideas with ideational meaning may even support axiological charging. For example, in par. 12 multiple experiential grammatical metaphors, including 'rejection', 'indication', 'will' and 'restructuring', work to condense ideational meaning, but also to extend the reach of the negative judgement of the ANC's tenacity

inherent in the phrase 'lacked the political will'. This is only one of several instances of a syndrome in which grammatical metaphor and technicality effectively extend the reach of Attitude instantiations by increasing the amount of ideational material available to couple with these instantiations.

That said, this article shows varied relationships between technicality, grammatical metaphor and Attitude. As Figure 2 shows that at some points there is an inverse relationship between them, with passages strongly charged with Attitude and weak in technicality and grammatical metaphor, or vice versa. At other points, however, waves of technicality and grammatical metaphor seem to fluctuate in step with waves of Attitude, as it were, to support the condensation of both ideational and axiological meaning. All of this suggests that the interplay between ideational and interpersonal meanings, epistemic- and axiological-semantic density is far more complex than might initially be assumed before engagement with data. This interplay warrants much further research to show how epistemology and axiology work together in knowledge-building at many levels, including not just academic discourse, but more popular forms of meaning-making, like the mass media, as well.

Acknowledgements

Endnotes
1   This is the official name of the bill (Department of Energy 2011). The 'and' is omitted in the *Business Day* article described in this journal article (see Appendix A.) In the remainder of this journal article, we follow this usage as we describe the contents of the *Business Day* article.
2   This and all subsequent quotations from data are from Paton (2015) (reprinted in Appendix A).

References
Bourdieu P. 1991. The peculiar history of scientific reason. *Sociological Forum* 6(1): 3–26. https://doi.org/10.1007/BF01112725

Chang H-J. 2010. How to 'do' a developmental state: political, organisational and human resource requirements for the developmental state. In: Edigheji O (ed.), *Constructing a Democratic Developmental State in South Africa: Potentials and Challenges*. Cape Town: HSRC Press. pp. 82–96.

Department of Energy. 2012. Independent System and Market Operator Bill. Pretoria: Government Gazette 290(34289).

Dictionary Unit for South African English. 2002. *South African Concise Oxford Dictionary*. Cape Town: Oxford University Press Southern Africa.

Doran YJ. 2020. Seeing values: Axiology and affording attitude in Australia's 'invasion'. In: Martin JR, Maton K, Doran YJ (eds), *Accessing Academic Discourse: Systemic Functional Linguistics and Legitimation Code Theory*. London: Routledge. pp. 151–176.

Edigheji O. 2005. *A Democratic Development State in Africa? A concept paper*. Johannesburg: Centre for Policy Studies.

Gedye L. 2019. 4½ threats to South Africa's economy. *Finweek* 20 June: 35–39.

Globeleq. 2017. Globeleq. https://www.globeleq.co.za/

Halliday MAK, Matthiessen CMIM. 2014. *Halliday's Introduction to Functional Grammar* (4th edn). Abingdon: Routledge. https://doi.org/10.4324/9780203783771

Jaglin S, Dubresson A. 2016. *Eskom: Electricity and technopolitics in South Africa*. Cape Town: UCT Press.

Johnson C. 1999. The developmental state: odyssey of a concept. In: Woo-Cumings M (ed.), *The Developmental State*. Ithaca: Cornell University Press. pp. 32–60.

Larner W. 2000. Neo-liberalism: Policy, ideology, governmentality. *Studies in Political Economy* 63(1): 5–25. https://doi.org/10.1080/19187033.2000.11675231

Martin JR. 1993. Technology, bureaucracy and schooling: discursive resources and control. *Cultural Dynamics* 6(1-2): 84–130. https://doi.org/10.1177/092137409300600104

Martin JR. 2000. Close reading: Functional linguistics as a tool for Critical Discourse Analysis. In: Unsworth L (ed.), *Researching Language in Schools and Communities: Functional Linguistic Perspectives*. London: Cassell. pp. 275–304.

Martin JR. 2010. Semantic variation – modelling realisation, instantiation and individuation in social semiosis. In: Bednarek M, Martin JR (eds), *New Discourse on Language: Functional Perspectives on Multimodality, Identity and Affiliation*. London: Continuum. pp. 1–34.

Martin JR. 2011. Bridging troubled waters: interdisciplinarity and what makes it stick. In: Christie F, Maton K (eds), *Disciplinarity: Functional Linguistic and Sociological Perspectives*. London: Continuum. pp. 35–61.

Martin JR. 2020. Revisiting field: Specialized knowledge in secondary school science and humanities discourse. In: Martin JR, Maton K, Doran YJ (eds), *Accessing Academic Discourse: Systemic Functional Linguistics and Legitimation Code Theory*. London: Routledge. pp. 114–147.

Martin JR, Maton K, Matruglio E. 2010. Historical cosmologies: Epistemology and axiology in Australian secondary school history discourse. *Revista Signos* 43(74): 433–463. https://doi.org/10.4067/S0718-09342010000500003

Martin JR, Rose D. 2007. *Working with Discourse: Meaning Beyond the Clause* (2nd edn). London: Continuum.

Martin JR, White PRR. 2005. *The Language of Evaluation: Appraisal in English*. Melbourne: Palgrave Macmillan. https://doi.org/10.1057/9780230511910

Maton K. 2014. *Knowledge and Knowers: Towards a Realist Sociology of Education*. London: Routledge.

Paton C. 2015. ANC opts to keep Eskom in one piece. *Business Day*, 2 February 2015.

Wignell P, Martin JR, Eggins S. 1989. The discourse of geography: Ordering and explaining the experiential world. *Linguistics and Education* 1(4): 359–391. https://doi.org/10.1016/S0898-5898(89)80007-5

Zappavigna M, Dwyer P, Martin JR. 2008. Syndromes of meaning: exploring patterned coupling in a NSW Youth Justice Conference. In: Mahboob A, Knight N (eds), *Questioning Linguistics*. Cambridge: Cambridge Scholars Publishing. pp. 164–184.

APPENDIX A

ANC opts to keep Eskom in one piece
Lekgotla sinks restructuring bill
Business Day, 2 February 2015
Carol Paton
Writer at Large

1. The African National Congress (ANC) decided at its annual lekgotla last week to sink the Independent System Market Operator Bill that would have led to the restructuring of the electricity sector.
2. SA's energy shortfall was a major focus of discussion at the four-day meeting of top leaders of the ruling party, which has been sending out conflicting signals for years on the future shape of the electricity industry.
3. The ANC also resolved that more independent power producers must be brought into the industry over the next 18 to 30 months, that natural gas from Mozambique be procured to ameliorate the power supply crisis and that private investors be encouraged to invest alongside Eskom in ageing power stations.
4. But the most far-reaching decision, contained in a resolution drafted by the party's economic transformation committee, was on the future shape of the electricity industry.
5. The Independent System Market Operator Bill is aimed at establishing a state company to act as the buyer of electricity from private and public producers and to sell it to distributors and buyers at wholesale prices. It would allow genuine competition between state and private producers and has been widely viewed since the 1998 white paper on energy as the best way forward.
6. But many in the ANC are reluctant to break up Eskom. Doing so now would negatively affect its balance sheet, particularly as the transmission side of the business is by far the most lucrative. Eskom's large borrowing programme could be threatened if revenue falls significantly.
7. ANC economic transformation committee chairman Enoch Godongwana said on Friday that the debate on the future of the industry had moved forward substantially, with agreement that it was not desirable or viable to split up Eskom.
8. "There has been an ongoing debate over the structure of the industry. One view has been to establish an independent system market operator and a liberalised market. Another school of thought has argued that historically where this is done, the state is generally not the dominant power producer," he said.
9. "It also makes no sense to weaken Eskom now. This view wants Eskom to remain at the centre of industry." Eskom's financial situation remains precarious. In October, it secured a commitment from the Treasury for a R20bn equity injection, with the possibility of the partial conversion of a R60bn government loan to equity. This will allow Eskom to borrow to close its R225bn revenue shortfall.
10. The final resolution agreed to by the lekgotla makes no mention of an independent operator.
11. The decision to sink the Independent System Market Operator Bill is in keeping with a decision a year ago to withdraw it from Parliament. No explanation was given at the time, but in his state of the nation speech last June, President Jacob Zuma said the bill would be reintroduced to Parliament.
12. Democratic Alliance energy spokesman Lance Greyling said yesterday that the ANC's rejection of the bill was a clear indication that the party lacked the political will to drive through a restructuring of the electricity industry that was urgently required.
13. "While the government is currently calling on the private sector to help it alleviate our energy crisis, it is refusing to implement the institutional reforms required for them to play a meaningful role in ensuring another crisis does not repeat itself," he said.

14. Globeleq SA MD Mark Pickering said he agreed that an independent operator was not the best route for SA, but the government urgently needed to allow a discussion on the sector's future.
15. "Eskom was self-financing since 1922 and is no longer. Clearly something needs to be done to fix the sector," he said.
16. He believed the solution lay in separating Eskom's generation and transmission businesses, following the example that was applied in many other countries.
17. "Eskom is too big and complex and needs to be broken into parts. The norm is to vertically disaggregate the industry and SA is unusual in not having taken that step," Mr Pickering said.