



SANEA Energy Rendezvous

20 June 2017, Johannesburg

“Non-Technical Disruptors”

Credit rating movements, exchange rate volatility, political shuffles, legal challenges, foreign elections and local activists all add to the turbulence of the world in which we live and work. How is the energy sector impacted and how should it react? Perhaps, like a super-tanker, the sector has too much inertia to be affected by short-term squalls. What steps should energy leaders be taking to navigate through these non-technical disruptors?

Discussion Leaders

Coenraad Vrey	DRA Projects
Dudley Baylis	Bridge Capital Refco
Wendy Green	Fusion Energy

Moderators

Heloise Nel	Director, SANEA
-------------	-----------------

1. Defining Disruptors and Scope

- 1.1. There are different types of disruptors – technical and non-technical
- 1.2. Non-technical disruptors span widely to include political, economic, regulatory and consumer behaviour.
- 1.3. Disruptors can have positive and negative impacts on the energy industry.
- 1.4. Disruptors sometimes only become obvious in retrospect.
- 1.5. Timeframes of disruption in the energy sector are relative, and contrary to popular belief are not necessarily instantaneous. Disruption in the energy sector could be the events of the last 30 years, compared to the last 100 years.

2. Disruptors on the Horizon

- 2.1. Changing consumer behaviour, specifically more consumer awareness and social awareness. Changing consumer behaviour influences the cost of energy, as users might for example be willing to pay more for energy if they know where it comes from (e.g. renewables). Consumers also drive technologies, by self-generating and by creating a demand for distributed generation. In this way, consumers influence energy decisions and energy costs.
- 2.2. Funding and financing methods and models are also likely to change, and will likely occur along with a shift away from big energy projects. In the process the market becomes accessible to smaller investors, especially in places where banks don't see large returns. New funding methods can unlock technological advancements in areas where traditional funds are too cautious.
- 2.3. Increasing influence of political power in economic activities, which introduces hidden costs as commercial imperatives make way for political imperatives and political rent-seeking, all of which add to operating costs for utilities and businesses.
- 2.4. Forced disruption through unintended consequences is possible. By way of example, Eskom's very low power costs of the last 30 years could now force it into positions it would not otherwise have considered had electricity been priced differently.
- 2.5. Societal resistance and activism in response to international energy policies such as US President Donald Trump pulling US out of the Paris agreement. The move was met with resistance by several US states and by the private sector, which plan to continue on an energy path that responds to the threat of climate change.
- 2.6. Foreign ownership in local energy systems may become a problem if there is a significant change in the political or regulatory environment. This may lead to foreign investors withdrawing and leaving a void in resources. An example of where this might happen is the UK, which has extensive foreign ownership in the electricity sector that may be impacted by the outcome of the BREXIT negotiations.

3. Key Challenges

- 3.1. Finding a way to reduce political influence in the energy industry.
- 3.2. Optimally involving communities, and solving inequalities in access to power, especially in remote parts of the country.
- 3.3. Incorporating other modes of generation, such as distributed generation, without harming bigger utilities and essential infrastructure such as Eskom's transmission and distribution network. Distribution networks remain essential and could connect microgrids.
- 3.4. The lower "energy return on energy investment", i.e. more energy is needed to provide usable energy.
- 3.5. Faster moving technology processes, shorter project timeframes (e.g. renewable plant construction), and declining electricity demand, all call for more flexible systems.
- 3.6. The line between consumer awareness (making informed energy choices) and consumer hysteria (influencing energy decisions without deeper understanding of energy sector and long-term outcomes).
- 3.7. Damaged investor confidence and resulting trust deficit created by political choices that create policy uncertainty. The damage could be long-term, with the full effect only realised decades from now.

4. Proposed Solutions

- 4.1. To help solve leadership problems and political interference in the energy industry, the energy sector itself could help establish mechanisms of electing leaders, such as calling for CVs from the energy industry to develop a pool from which to elect the best candidates for leadership positions in the sector.
- 4.2. Solve geographic power access inequality by moving away from big utility approach to a distributed generation model. Get communities involved through ownership in such projects.
- 4.3. To manage disruptions which can strand long-term assets, focus on smaller, modular and more flexible systems.

5. Parting Thought

“The arrogance of success is to think that what you did yesterday will be sufficient for tomorrow.” – William Pollard