DENTONS

Powering the Future: Namibia and South Africa's Electricity Plans

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As countries sharing borders, histories, and growth objectives, the energy sectors in Namibia and South Africa are transforming concurrently. Consistent with developments in other developing economies, both countries continue to pursue greater energy independence, resilience and sustainability, as well as the integration of lower carbon and affordable energy technologies into their energy mixes, and increased public and private sector participation. These significant goals are established through the pathways and scenarios laid out in their respective Integrated Resource Plans (IRPs). As such, the IRPs effectively serve as developmental blueprints for all stakeholders in the energy value chain as they present multiple opportunities for governments, financiers, generators, off-takers and communities.

Namibia

Namibia has bountiful renewable energy resources known to be the amongst the best in the world. This renewable energy potential positions Namibia to become a key player in the potential future export of clean energy to neighbouring nations and paves the way to produce green hydrogen and its derivatives, presenting multifaceted opportunities for sustainable energy development as well as economic development.

Namibia introduced its 20-year National Integrated Resource Plan (NIRP) in 2016 and more recently follow up with the 2022 draft NIRP. Both NIRP's focus on the electricity sector distinct from the broader energy needs of the country, forecasting and planning for the country's electricity demand, supply solutions, and associated costs.

The latest iteration of the NIRP highlights a shift in the country's electricity sector which has been ascribed to the non-materialisation of expected demand growth. The shift follows international developments, falling generation costs combined with the scalability of solar and wind energy, and the increase in net metering and embedded grid-scale projects. The 2022 NIRP also forecasts that Namibia is set on bringing energy imports down from 80% to 29% by 2028 by increasing domestic generation capacity and achieving universal energy access by 2040 as per the draft Electrification Policy. The Modified Single Buyer (MSB) model implemented in 2019 has helped underpin these shifts, opening up 30% of the Namibian electricity market to competition and with it, significant opportunities for especially the private sector.

Importantly, the 2022 NIRP also serves as a guide for policy, investment in least-cost generation options, and regulatory oversight by the Electricity Control Board of Namibia rather than as a prescriptive plan for NamPower (the state power utility), or other investors. The Plan also emphasises the attractiveness of solar PV, wind energy, and battery storage technologies due to their economic benefits and alignment with policy targets for renewable energy and self-sufficiency.

South Africa

Following the promulgation of the preceding IRP 2010-2030 followed by the current IRP 2019, South Africa's Department of Mineral Resources and Energy (DMRE) released a draft IRP in January 2024 for public comment (IRP 2023). To cater especially for material variances in assumptions and projections made in the IRP 2019 in relation to demand, supply and transmission capacity, as well as the implementation of Just Energy Transition Investment Plan (JET IP) and Energy Action Plans, the draft IRP 2023 aims to secure electricity supply by balancing the critical current supply and demand constraints that have yielded recurring bouts of loadshedding (power outages), with environmental impacts, supply costs and other variables in two distinct time "Horisons" (2023-2030 and 2031-2050 respectively). Each Horison in turn includes distinct scenarios and pathways to derive the preferred outcome for the first Horison, coupled with five proposed Interventions. The second Horizon then sounds out the key considerations and decisions inherent in the longer term balancing of decarbonisation, affordability and the security of supply. The second Horison's outcomes suggest that renewable energy, while providing cleaner energy benefits, are expensive to implement and will not solely secure supply. Instead, what is envisaged is a mix of dispatchable nuclear, renewable, clean coal, and gas, facilitated by a massive new build programme including a transmission network expansion.

The interventions in the first Horison highlight the need for continued short term reliance on Eskom (the national utility generator) by improving the lifespan and Energy Availability Factor (EAF) of its generation fleet. In addition thereto, non-dispatchable supply sources like renewables will, by both the state and the private sector, be combined into the generation fleet with the accelerated deployment of dispatchable generation options such as Gas-To-Power (GTP) in reducing the unserved energy risk. Acknowledging the electricity supply demand deficit in the first Horison for several years to come, the IRP is available for review on the DMRE's website and remains open for comment until 23 March 2024 with the intention that it will be revised, finalised and adopted in the first half of 2024.

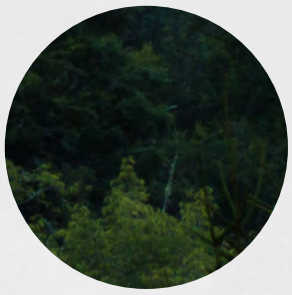
Cleaner Electricity?

Both IRP's promote sustainable energy development, inviting investment and scaling in renewables seeking to capitalise on the significant potential their geographies hold for the deployment of renewables. While both IRPs consider a range of technologies and energy sources, Namibia's IRP screens out coal-fired generation because of commitments made by the Namibian Government at COP 26. Assessing the remaining least cost investment scenarios in the seven assessed as part of the 2022 NIRP against the requirements of the 2017 National Renewable Energy Policy (NREP), the Namibian Government aims to achieve a minimum 70% share of GWh supplied from renewable energy sources (RES, encompassing wind, solar PV, concentrated solar power [CSP], biomass and hydropower) by 2030 and a self-sufficiency target of 80% of primary energy used in power generation by 2028. This will include Namibian solar, wind, hydro or gas but the NIRP concludes that the least cost investment for all seven scenarios point to the attractiveness of solar PV and wind energy technologies, combined with battery energy storage (BESS).

Pursuant to preceding IRPs combined with the need to overcome recurring loadshedding, South Africa has seen significant and ongoing adoption of RES primarily in the form of wind and solar PV (both in the state-run bid processes under its REIPPP and RMIPPP programs, but also in Small Scale Embedded Generation (SSEG) facilities serving residential, commercial or industrial sites in the case of solar PV). In contrast to Namibia's IRP, there is a marked reduction in renewables in the IRP 2023 compared to its predecessor, with wind in the first Horison reducing from 17 724 MW to 4 468 MW and solar PV managed downwards from 8 288 MW to 3 615 MW. This is driven by several learnings since the IRP 2019, including the constrained transmission infrastructure, the challenge of connecting and integrating utility-scale RES, and the need to maintain, improve and extend the performance of the country's coal-fired fleet to secure supply in the short terms as one of the first Horison's interventions referred to earlier.

As for gas (especially LNG) as a source of dispatchable baseload power, both countries are seeking to explore and commercialise significant offshore and onshore deposits. Gas is also seen as a transition fuel in the JET away from diesel and coal-fired generation. Nevertheless, save for a few contingent scenarios of gas from the soon to be complete Kudu export production being diverted for domestic use, gas does not take center stage in the 2023-2030 NIRP scenario. It does feature in South Africa's first Horison scenario, where the IRP 2023 provides for 6 GW of new Gas-To-Power (GTP) capacity. This constitutes a significant increase from the 2019 IRP and one that is likely to require initial imports of LNG potentially destined for the planned Richards Bay LNG terminal administered by another state-run authority, the Transnet National Ports Authority. In the meantime, the previous allocation of 1220 MW awarded to the Karpowership group still reflects as procured capacity in the 2023 IRP despite being embroiled in legal challenges and having since lost its grid access allocation.

As for nuclear and hydrogen power, it is not a key feature of either IRP, at least not in the period up to 2030. Nuclear does feature in the post-2030 scenarios in the SA IRP 2023. Hydrogen in the case of the 2022 NIRP in both near and longer- term scenarios is located in the NIRP as for the export market, with which the NIRP does not concern itself. SA's IRP 2023, while acknowledging that the country has several advantages in the pursuit of the hydrogen economy and against the backdrop of the Hydrogen Society Roadmap approved by Cabinet in 2021, does not rely to any material degree on hydrogen (including green hydrogen) and the potential for demand and resulting lower-carbon production by energy intensive sectors like manufacturing, mining and refining.

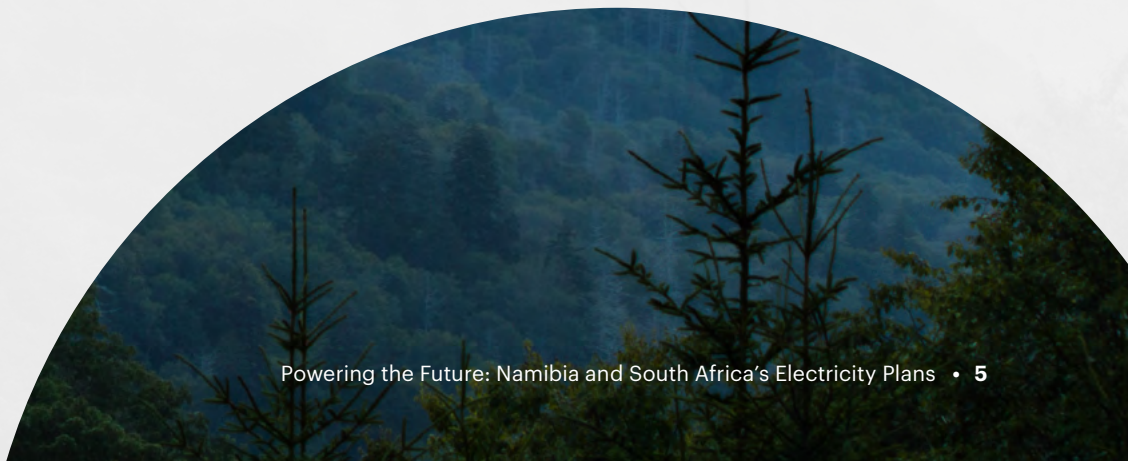


Market Liberalisation

With both countries heavily dependent on their constrained national utility enterprises (Nampower and Eskom respectively) and their historic monopolies in especially the generation and transmission sub-sectors, their IRPs continue to support the welcome liberalisation of their respective domestic electricity markets. Following the implementation of the MSB market in September 2019, 452 MW was allocated to be supplied by eligible sellers. Of this, 11% (49MW) was licenced by the Electricty Control Board of Namibia.

Under the MSBM in the NIRP, 30% of the annual energy consumption of the power market is open to competitive supply by the private sector. While it is not required to comply with the NIRP, the private sector is not free to do as it pleases, as it is still subject to regulatory oversight by the Electricity Control Board of Namibia. Nonetheless, there are multiple attractions for the sector. Alongside the consolidation of several regional electricity distributors, the focus on the domestic market and the reduction of reliance on significant electricity imports, historically low average line losses and transparent tariff setting mechanisms, the MSBM means that IPP's may compete for supply to both Nampower as well as large customers directly, who traditionally relied on Nampower. Most notably among these are mines and regional electricity distributors themselves, who may now procure up to 30% of annual consumption directly from IPP's. Combined with the bias for RES and under-reliance on hydropower, coal and imports, the NIRP provides fertile ground for the seeds of IPP investment. South Africa has pursued a similar path. With the introduction of the REFIT and then the REIPPPP in 2011, preceding IRP's have enabled significant participation by IPP's in public-private-partnerships (PPP's) through a series of bidding windows. Around the same time as the release of the IRP 2023, Bid Window 7 was released for 5000 MW of RES, 3000 MW of gas and around 600 MW of BESS. Coupled with enabling regulatory changes in the Electricity Regulation Act in the lifting of caps on generation as one of the interventions to address the impact of loadshedding, this has enabled significant private sector participation in especially generation for energy-intensive and dependent consumers like the mining sector and metallurgical industry, with ambitious plans from conglomerates like Anglo American seeking to integrate significant RES into their operations and be carbon neutral inside of the timelines envisaged by both Horisons.

A critical dependency in the success of the IRP 2023 is the expansion and availability of transmission. With capex constraints on the South African state utility beyond essential maintenance, government has expressed its willingness to partner with private investment in executing the aggressive transmission and expansion program that envisages 14 000km of new lines being required by 2032 compared to the 4000km constructed between 2013 and 2022.



Opportunities

Unserved energy and loadshedding, increased demand especially for baseload power, the integration of renewable energy, the liberalisation of energy markets and the capital demands of scale projects, all spell opportunity for a range of stakeholders in the electricity value chain.

For **financiers**, sustained demand, lower barriers to entry, stable economies, easing of regulation, and the incentivisation of investment in renewable energy projects, all promote bankability and exit opportunities. South Africa for one has seen tax-deductible investments in qualifying renewable assets increased to 125% and the entry (and exit) of significant private equity attracted to project pooling and scale. Interest is also not confined to private equity, with commercial banks in the region showing support especially as capital markets show favour towards lower carbon investments. Development Finance Institutions (DFI's) have likewise demonstrated interest, with the likes of African Development Bank, Development Bank of South Africa, Industrial Development Corporation and the Development Bank of Namibia already financing significant RES projects.

For **developers**, especially those focused on generation and transmission, similar drivers apply. In addition, direct access to off-takers in both utility and sub-utility scale projects seeking alternatives to state utilities, the falling costs of technology especially in wind and solar, and technology convergence as seen with gas to power, renewables to green hydrogen, and more generally with BESS all offering higher prospects for co-location and scale, and finally a mature framework for PPP's, all present additional incentives and opportunities for developers in both the near and longer terms.

For **off-takers**, the liberalisation of the energy markets presents diverse sourcing options, price and service competition that could see the emergence of a mature trading market in which electricity is commoditised, security of supply is guaranteed, and the opportunity to support environmental stewardship and negotiate power purchase agreements (PPAs) that align with sustainability goals.

For **service providers**, the paths established by the IRPs will spur the deployment and increase of skills and labour in construction, engineering, legal, financial and other domains critical to the success of projects. From the core technical skills to assess and develop projects, to navigating policy and ensuring regulatory compliance and funding and closing transactions, service providers will play a crucial role in enabling and executing the objectives of the IRP's in both countries.

For **governments, regulators and communities**, the IRP's seek to present a balance of near and longer-term challenges and opportunities presented by a mix of power shortages, capital constraints, sustained demand, untapped resource beneficiation and increased industrialisation, Nationally Determined Contributions and the multiple benefits of electrification in all facets of the economy and life. Not without criticism, especially in relation to the data sources and reasoning of the pathways, they are intended to serve as blueprints for a better tomorrow.

Dentons: Energy solutions from the largest global law firm in the world

The energy future of Namibia and South Africa is bright. It holds significant opportunities for innovation, investment, sustainability and growth. As these nations pursue their energy futures, Dentons stands ready to provide the expertise and support necessary to realize these ambitions with teams in Cape Town, Johannesburg, Windhoek and 160+ other locations across the world and in every major market. Our team of M&A, banking and finance, real estate, regulatory compliance, and disputes lawyers and business professionals are steeped in the energy sector and able to support client needs from project conception, due diligence, legal and financial close, operation and post-investment care.

Recent work in Southern Africa includes support to a national utility in the legal close of several PPP's under the independent power purchasing program; project support to a national oil company in a strategic joint venture with an oil and gas major encompassing well, offshore and onshore assets and operations; and advising a multi-disciplinary committee established by the Presidency on material changes to the electricity regulatory framework.

With Dentons as your legal partner, tapping into energy opportunities becomes a strategic advantage. We invite you to connect with us to explore how we can support your energy needs in Namibia, South Africa and elsewhere.

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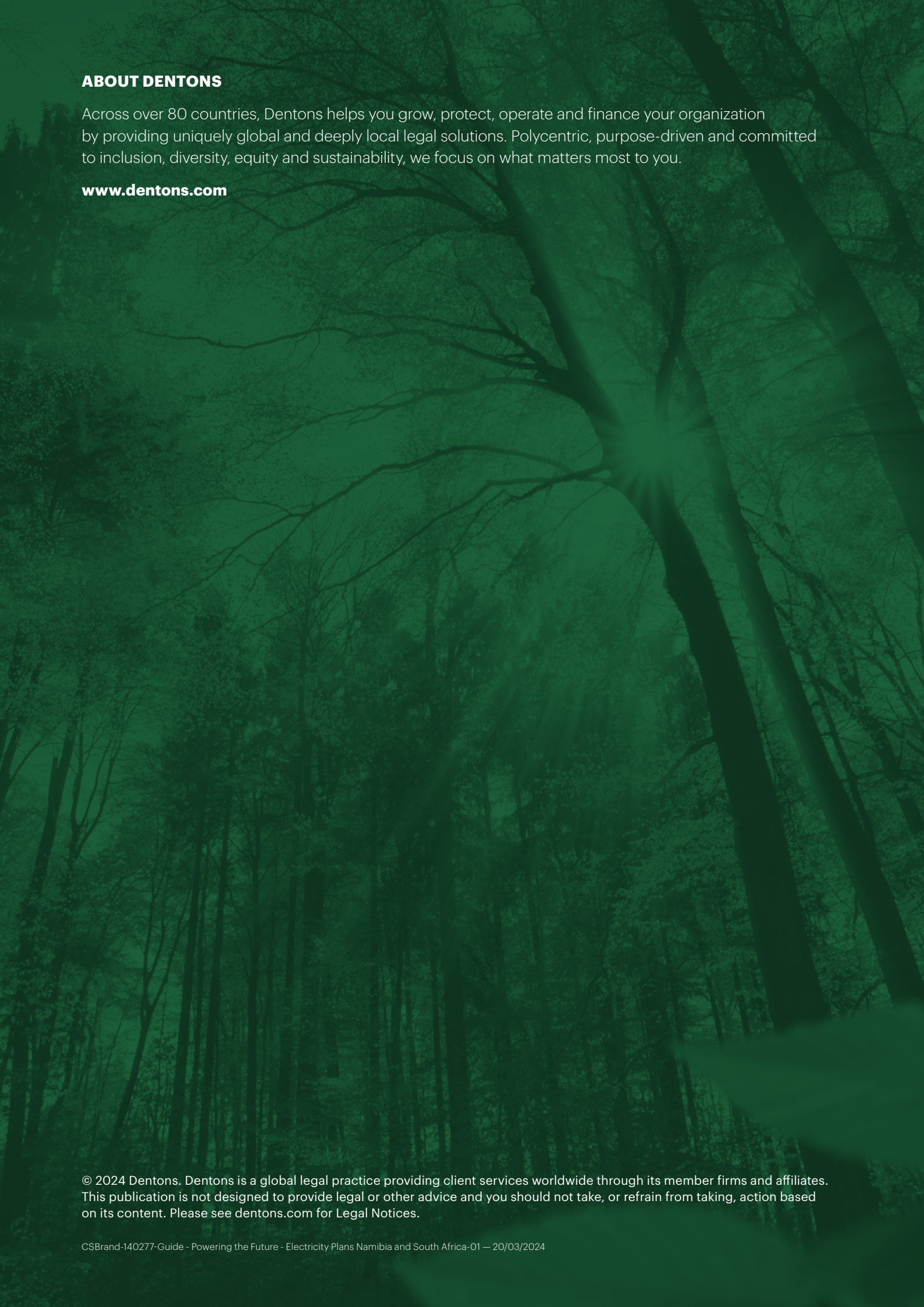

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