SUBMISSION

Joint Submission to for the Draft South African Renewable Energy Masterplan

18 August 2023

The Congress of South African Trade Unions (COSATU) and the Institute for Economic Justice (IEJ) welcome the opportunity to comment on the draft South African Renewable Energy Masterplan (SAREM).

COSATU is a Federation of trade unions whose aim is to fight for worker rights. Amongst COSATU's objectives are to secure social and economic justice for all workers; and to understand how the economy of the country affects workers and formulating clear policies on how the economy should be restructured in the interests of the working class.

The IEJ is a progressive economic policy think tank committed to advancing economic justice, systemic change, and the equitable distribution of resources to ensure rights realisation and planetary wellbeing.

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1. Overview: Background Context

The South African Renewable Energy Masterplan (SAREM) is one of 14 industry-specific masterplans which form part of a national process led by the Department of Trade, Industry and Competition (DTIC) to inform an industrial strategy. COSATU has actively participated in the debates and negotiations involved across the sector masterplans and acknowledges the efforts to finalise the SAREM after almost 3 years of development.

The ongoing process to establish the SAREM is an opportunity to transform existing industrial policy to ensure maximum benefit in the process of realising a just energy transition. This document provides reflective comment on the Masterplan and offers key recommendations which advance employment creation and decent work in support of the labour movement.

COSATU has engaged consistently with the SAREM process with the support of the IEJ since its inception and has provided comments and reflections to the initial inception report (prepared by Green Cape NPC), affiliate participation in working groups, and through the executive oversight committee.

Over the various iterations of the Masterplan, there have been several areas where proposed recommendations have been incorporated into the plan, particularly the inclusion of Employee Ownership Schemes, Technology Transfer Systems, consideration of recycling, and mention of decent work opportunities.

This submission discusses the most recent SAREM draft, made public for comment, and offers final recommendations to the coordinating committee, consistent with COSATU and the IEJ's inputs throughout the SAREM development process.

1.1. The re-emergence of the state-led industrial policy in major economies

The contextual analysis for the SAREM does acknowledge the impact of the supply chain crisis. By consequence, it is also reflects on the significant shifts which have been taking shape in major industrial economies with the emergence of a growing variety of aggressive green industrial policies which include strong state-led energy transition mechanisms (utilising public

investment and encouraging strategic public asset ownership), a bouquet of generous incentives to spur local manufacturing, and the use of trade protections to privilege and encourage the expansion of local manufacturing capacity.

In Europe, falling profitability for European wind Original Equipment Manufacturers (OEMs), as discussed in Box 1, has already resulted in jobs losses and the offshoring of production (largely to the benefit of Chinese competitors). This despite the publishing of aggressive green targets issued by the EU through the European Green Deal and the RE PowerEU initiatives, calling for the tripling of European renewable energy capacity, and which is a clear warning for South Africa.

The predicament confronting wind manufacturers in Europe closely resembles patterns witnessed in the region during the early 2000s. During that time, the local manufacturing capacity of solar photovoltaic (PV) systems crumbled due to the rapid rise of Chinese PV manufacturers. These Chinese companies took advantage of the incentives provided by European clean energy goals and feed-in tariff incentives. The decline of local manufacturing was, to some extent, facilitated by the absence of sufficient trade safeguards and suitable industrial policies.

This situation allowed China to make a significant leap from having minimal PV manufacturing capacity before 2006, to establishing its present-day dominance across the entire solar PV value chain. China's approach to its solar industry's industrial policy was marked by a meticulous focus on a single technology: wafer-based silicon solar cell technology. This approach enabled them to provide substantial state support to manufacturers, attracting foreign direct investments and incorporating imported technology, notably from the United States of America.

Manufacturers were enticed with favourable terms, including the provision of cheap debt at state bond rates. However, these benefits came with stipulations favouring Chinese ownership. Additionally, manufacturers enjoyed incentives like tax exemptions and preferential loan arrangements, fostering an environment conducive to growth and innovation.

China pursued technology transfer aggressively, strategically aiming to acquire technological know-how. This enabled them to capitalise on their expansive domestic market, resulting in the growth and strengthening of domestic OEMs. This astute use of resources and market influence allowed China to cement its position as a global leader in the solar industry.

The wind value chain has proven to be a more complex localisation challenge for China, by 2020 China’s wind value chain employment figures were 4 times less than the EU and 5 times less than the USA per MW of wind installed. China has responded by using industrial subsidies for manufacturers including tax incentives, direct subsidies, state support for research and development (for technology transfer), below market land sales for wind plants, and the strategic use of state investment funds and aggressive local content requirements (as high as

70%) for private wind power plants to support their localisation effort. Since the onset of the global supply chain crisis, and the rising commodity price hikes, Chinese wind OEMs have begun to dominate new installed wind plant projects leveraging its own large domestic demand and an international market including 77 countries (South Africa included). Steel (which is critically important for the wind value chain), and polysilicon wafer production (for the solar PV value chain) are highly energy intensive and currently dependent on coal-fired power stations, which in the Chinese case are publicly owned allowing an increased ability to control a key input production cost to strategic manufacturing sectors. Western wind OEMs still dominate the global market share for wind turbines, however, China's industrial policy gambit is threatening to continue to make inroads locally and abroad demonstrating the important role public coordination of the green economy can play in the energy transition.

The USA has responded to China's rising dominance in key green technologies with its own industrial policy package, the "Inflation Reduction Act" (IRA). Its relevant provisions explicitly aim to revitalise American manufacturing with an expansive basket of industrial subsidies, provide explicit support for workers, support the creation of unionised jobs in clean energies, and encourage the expansion of publicly- and privately- owned wind, solar, energy storage and nuclear power plant development.

In a similar vein, the UK labour party has developed a "Green Prosperity Plan" as a response to the IRA. The interventions in the plan aim to slash electricity bills, improve energy security, and create jobs through re-industrialising the economy while meeting its climate targets. An important, newly published report, Coordinating the Green Prosperity Plan, published by Melanie Brusseler (CommonWealth), demonstrates how a publicly coordinated green industrial policy plan could be used to ensure the transition yields clear meaningful benefits for the working class.

The analysis identified that the UK has gone through a period of economic stagnation and "structural underinvestment" making it inappropriate to expect private capital to coordinate the energy transition given the dramatic speed, scale, and alignment in planning which is required between areas of the economy which will experience divestment (fossil fuel intensive) and new areas in the green economy. Misalignment between investment/divestment in the energy transition was recognized as potentially contributing to further increases in inflation, unemployment, and the physical breakdown of existing productive systems. Direct public investment and ownership was also identified as having the potential to create more macroeconomic room for the fiscus, as productive industry would benefit from the cheapest possible electricity (with the aid of low interest rates) and the balance of payments would not suffer from outflowing rents to foreign multinationals.

1.2. Current Energy and Climate Policy

In alignment with the Independent Resource Plan (2019) and the National Development Plan (NDP 2030), heavy investments in solar photovoltaic (PV), wind turbine, and battery storage technologies, coupled with gas generation, have been identified as key technologies for the coming decade. South Africa's decarbonisation plans also identify opportunities to realign vehicle manufacturing to transition to electric vehicle manufacturing and investment towards the development of a green hydrogen fuel industry, both of which have demand implications for wind and solar PV value chains.

To support the planned infrastructure investment, the South African government launched a R1.48 trillion Just Energy Transition Investment Plan (JET-IP) at COP27 (November 2022) in Egypt. By sector the requested investment is spread as follows: electricity (70%), new energy vehicles (8.5%), and green hydrogen (21.5%). The JET-IP was designed leveraging a $8.5 billion Just Energy Transition Partnership (JETP) finance package offered by the United Kingdom, United States, France, Germany, and the European Union at COP28 to support South Africa's energy transition. The capital, largely committed through concessional loan agreements, is reportedly split approximately between infrastructure (89.4%), planning and implementation capacity (10%), skills development (0.15%), economic diversification and innovation (0.25%), and social investment and inclusion (0.2%).

COSATU and the IEJ have registered concerns on the exclusion of labour stakeholders from the formulation of the JET-IP and the negotiation of the committed JETP financing. Both policies carry significant implications for the prospects of green industrialisation and the distribution of benefits and opportunities for workers and working-class communities at large. The low levels of funding and disappointingly limited levels of grants available, particularly for skills development and social investment and inclusion, severely erode any serious potential to achieve a just transition. This is worsened by the austerity measures taken by National Treasury that will continue to shrink the size of industrial support.

In conjunction with the energy transition plans, the South African government has resolved to liberalise its electricity system and is in the advanced stages of unbundling Eskom. Recent market reforms, notably including amendments to Schedule 2 of the Electricity Regulation Act, enable an increased uptake of private generation projects. This measure has resulted in an aggressive surge in investments in back-up solar and battery storage systems as commercial enterprises, large industry and wealthy residential consumers move to invest in systems to reduce the impact of loadshedding.

In the international arena, the European Union has recently resolved to establish a carbon tariff on imported goods through its proposed Carbon Border Adjustment Mechanism (CBAM). The CBAM carries significant implications for South African manufacturers exporting or planning to export to European markets placing additional significance on the outcome of the decarbonisation plans. The DTIC, in an official submission to the European Commission, has registered concerns and opposition to the CBAM describing the measure as "coercive" and undermining trust and multilateral cooperation. The South African Reserve Bank released a

working paper assessing the potential impact of the CBAM which, beyond threatening trade, will result in price shocks and exchange rate volatility. The Reserve Bank working paper suggests that these shocks will require adjustments to the country's macroeconomic framework. The combined pressure to address loadshedding as quickly as possible, the threat of trade isolation from the coercive EU CBAM, and rising public pressure to accelerate the divestment from coal-based electricity generation impact the pace of the transition. A shift in the analysis and priorities in the high-level planning documents such as the JET-IP and SAREM is necessary to include specific protections and guarantees to workers and communities impacted by the transition, like state-led green industrial policy initiatives being spearheaded by major economies.

2. Tensions around localisation in South Africa's transition

COSATU and its affiliates are responsible for introducing the notion of a 'just transition' into South Africa's public debate in its landmark 2011 COSATU Climate Change Framework document. COSATU policy has also consistently emphasised the importance of public ownership and clearly identified social protections for workers and communities historically dependent on fossil-fuel based economic activity, particularly in the coal value chain. Despite these efforts, 'just transition', as deployed in the SAREM itself, has become synonymous with a private-investment drive and widespread market reforms in the electricity sector. This policy position has implications to the extent to which the localisation drive can be used for employment creation and decent work in the context of a decarbonisation agenda. The following key issues should be reflected in the analysis section of the updated SAREM draft:

- The implications of the post-Covid-19 pandemic global supply chain crisis and the local implications for solar, wind, and energy storage value chains.
- A local assessment of the new localisation opportunities which have emerged because of the supply chain crisis.
- Meaningful engagement and consideration of public ownership in the energy system, and the potential role of a publicly coordinated industrial strategy.
- A prioritisation of state capacity building initiatives to ensure the monitoring and compliance of employment targets (including quantitative and qualitative aspects) and local content policies for public procurement.
- A definition, and clear integration of, the concept of decent work across the SAREM analysis.

2.1. The global supply chain crisis and its implications for SAREM

2.1.1. Localisation and supply chain crisis

The contextual analysis for the SAREM does not sufficiently acknowledge the impact of the supply chain crisis. Instead, the SAREM's contextual analysis only focuses on the growth of the renewable energy sector and the opportunities this has for decarbonisation and

re-industrialisation. Within the context of supply chain crises, the opening statements in the draft of the SAREM include a worrying embrace of the unfeasibly low project tariff bids in the 5th bid window of the South African renewable energy programme. While articulating the growth of the renewable sector is relevant, the absence of a supply chain crisis analysis in the SAREM, allows the SAREM to take a regressive stance on industrial policy instruments such as local content and an inadequate stance on industrial policy instruments such as tariffs on strategic components.

By the end of 2022, only 1759MW, including 784MW (wind) and 975MW (solar), out of a total of 2539MW awarded capacity in the Renewable Energy Independent Power Producer Procurement (REI4P) bid window had resulted in signed agreements. Rising project costs over this period came about because of a supply chain crisis precipitated by the Covid-19 pandemic economic response measures, and more recently by the Russia-Ukraine war.

The short-term trends of price shocks negatively impacting renewable energy project development has been spread across several markets internationally (see Box 1 for an analysis of the supply chain crisis affecting wind and solar). Despite this, the SAREM explicitly argues that high levels of local content in the existing public procurement rules are responsible for delays in progress – without a substantiating analysis.

COSATU and IEJ call for a thorough assessment of the performance of the REI4P's industrial policy measures in the final SAREM document.

Box 1. Brief analysis on the cost impact of the supply chain crisis on solar and wind plant costs and project viability

The global supply chain crisis saw key wind and solar value chain inputs such as steel (up 40%), aluminium (up 100%) and copper (90%) experiencing experience d price rises from January 2021 to April 2022 as observed by the IEA's (International Energy Agency's) Renewables 2022 report. The IEA had indicated that freight transport costs have gone up almost 400% in the same period, and upstream manufacturing outputs such as PV grade silicone also quadrupled, largely impacted by China's electricity supply crises (which included rising costs and limited power rationing). The wind value chain has been particularly susceptible to cost increases for steel, and risings costs have led to combined impacts, increased costs for new wind and solar projects to levels as high as 25% above pre-pandemic levels.

Competitive bidding procurement processes for wind and solar plants, including South Africa's famous REI4P, have placed downward pressures on private power purchase agreement tariffs, which are often celebrated on local and international media platforms. Private financiers for private power plants demand de-risked, state guaranteed deals with healthy return on investments, which in the context of rising input costs, has resulted in extreme pressure and declining profit margins for original equipment manufacturers. This disproportionately disadvantages smaller manufacturers with lower and smaller balance sheets. Even large European wind OEMs such as Vestas, Nordex and Siemens Gamesa (as seen by Figure 1) have been hit by the crisis, which has also been compounded by the rise in inflation across the globe, impacting the cost of capital.

In July 2023, a planned 1.4GW offshore wind development (over 25% of South Africa's combined wind and solar capacity installed through REI4) which was due to be installed and connected into the United Kingdom's electricity network was cancelled due to a raise in project costs of up to 40%. Vattenfall, a Swedish state-owned multinational utility, which was the project developer for this large-scale initiative has accepted a penalty fee of more than $500 million, equivalent to 5.88% of South Africa's Just Energy Transition Partnership commitment.

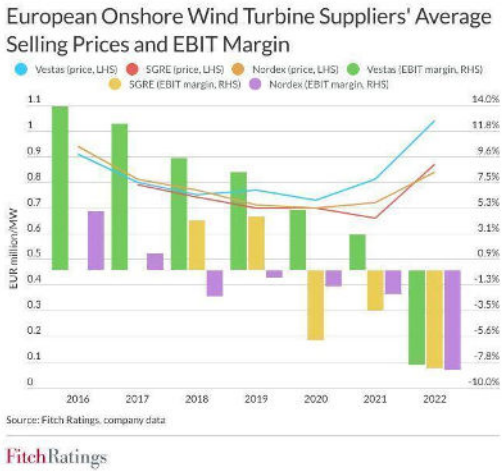

Figure 1. The Average selling prices and EBIT margins for European Onshore Wind Turbine Suppliers from 2016 - 2022.

2.2. The Importance of public ownership and publicly coordination

2.2.1. Reflecting on the potential for publicly-owned renewable energy systems

COSATU's 14th National Congress in 2022 made several resolutions regarding Eskom's role in renewable energy and low carbon projects during the transition. The congress proposed that Eskom should be the primary vehicle for implementing renewable energy initiatives and other environmentally friendly projects, while also emphasising its role in skills development.

Eskom's role in electricity transmission and distribution is acknowledged in SAREM, but there is no due consideration of its role in investing in new renewable energy generation projects in the future. The SAREM primarily accepts a private pathway for the energy transition where the state, including Eskom (primarily through public operation of transmission and distribution) is focussed on developing, enabling, and encouraging private investment in private generation projects.

COSATU and the IEJ have consistently emphasised the importance of public investment in manufacturing to reduce capital costs for equipment, influence procurement decisions, and promote increased worker participation in decision-making. By coordinating public procurement

processes with an industrial policy scheme, incentives can be tied to monitoring and compliance mechanisms, thus stimulating the local industry. The potential for public ownership and operation of renewable energy systems has not duly been considered across each of the 3 versions of the Masterplan drafts COSATU and IEJ have commented on.

Eskom could also own and operate pilot projects with high local content at decommissioned power plants like Komati (and soon Grootvlei), using these sites as a showcase to the sector of the capability of local manufacturers and homegrown South African expertise.

It should be appreciated that new employees joining a revitalised Eskom would benefit from standing collective bargaining agreements, providing a solid foundation for ensuring decent work conditions, high levels of occupational health and safety, and opportunities for upskilling. This approach would ensure that workers are protected and have a say in decision-making processes through union protection and worker representation on the Eskom board.

Globally, rural electrification, public housing initiatives (utilising solar geysers), and municipally-owned power plants have driven the demand for photovoltaic (PV) plants. These initiatives can leverage public procurement processes, tied to strong local content requirements, promoting the use of locally-manufactured products and in projects under public ownership, and supporting initiatives to improve basic service delivery.

To date, the REI4P has benefited from state subsidies and sovereign guarantees, ensuring project viability. COSATU has issued a demand to national government, through the Presidential Climate Commission (PCC) consultation process on the JET-IP, that an investigation should be conducted to assess whether an Eskom renewable-build programme could reduce production costs. By granting Eskom access to low-cost government debt for this initiative, it may create the financial capacity to offset the increased input costs associated with aggressive local content targets. The outcomes of such a study would have cross-cutting benefits for the SAREM process.

There are concerns about over-reliance on Broad-Based Black Economic Empowerment (BBEE) to meet the inclusive ownership ambitions of the SAREM without addressing the issues that have emerged in the existing REI4P programme. The idea of social and inclusive ownership is superficially introduced into the Masterplan through a reliance on implementation of B-BBEE. Bid window 5 of the REI4P included private developers, Mainstream Renewable Power, Scatec, and Red Rocket, which collectively accounted for 21 out of 25 projects, all of whom made use of the same B-BBEE partner, H1 Holdings. This does not constitute inclusive ownership.

2.2.2. Reflections on the potential for public coordination of green industrial policy from Vietnam

The investment drive to increase renewable energy use across several economies in recent years has been tied not only to plans to decarbonise but also to reduce the volume of fossil-fuel purchases, reduce the costs of electricity production, and by consequence play a role in mitigating against waves of rising inflation triggered by a global economic recession. What is not well appreciated in the SAREM analysis however, through a simplistic reference to the role of renewables in a "least cost system", is that electricity prices can be carefully regulated and controlled using a range of instruments: tax policy reform, monetary policy, and adjustments to tariffs, particularly from state-owned generation plants.

An illustrative example of this approach is Vietnam, which is another recipient of a landmark JETP agreement ($15 billion in value), and which faces a very similar set of challenges to South Africa's transition where a significant base-load demand (just under 50%) is reliant on coal-fired power stations. Electricity Vietnam (EVN), an equivalent to Eskom, has been partially unbundled but the main operation and ownership of coal and hydro resources remain public. The state-owned electricity utility has played a key role in building Vietnam's export focused emerging industrial economy providing reliable electricity and state ownership, enabling greater control over electricity prices to meet social and developmental targets from the central government.

Renewable energy projects have been ceded to the private sector and are procured via state-guaranteed power purchase agreements, participation in the Vietnamese electricity market, and through the support of a rooftop solar PV feed-in tariff incentive scheme. Vietnam's feed-in incentive scheme offered healthy rates, inviting an incredible uptake rate adding almost 16 GWp (peak capacity) from 2018 to 2020 (more than 3 times the total REI4P capacity added by 2022). The market reforms deployed to encourage private solar PV use resulted in a rapid and uneven uptake across the country. After 2020, the government reduced the FiT incentive value to match international price benchmarks and to reduce what has been described as "unsustainable government expenses".

Efforts are being made to reform the retail electricity price to be more reflective of the renewable energy penetration in an area to ensure fairer prices across different parts of the country. Many utility scale projects have also been held back by a bottleneck in transmission expansion, an area which is likely to prove the focus of Vietnam's JETP (much like South Africa's).

The Communist Party of Vietnam maintains careful management of the prices of key strategic commodities as part of its "socialist market economy" philosophy. The state-owned EVN has played a central role in allowing the state to suppress electricity prices, offering specific benefits to industrial development. Monetary policy is set to ensure low, stable interests' rates and to control the levels of inflation (an approach that was recently on full display as their central bank slashed interest rates in March 2023 to buffer the economy from the global economic recession.

Foreign direct investment in EVN and foreign asset ownership of IPPs has posed a challenge to Vietnamese state planners as currency volatility risks increasingly impact the cost of electricity production. The state's ability to strictly regulate prices (including the electricity prices) has helped attract solar PV manufacturing investment (largely in partnership with Chinese solar PV OEMs).

By contrast, in May 2023 the South African Reserve Bank pushed interest rates up for the second consecutive year, rising to a 14-year high. This has negatively impacted the cost of living for the working class and creating harsher conditions for the unemployed. Moreover, a long-standing call from the labour movement for the Reserve Bank to broaden its macroeconomic framework to include employment creation and economic growth, which would see a reduction in interest rates, has been ignored. Importantly, the labour movement has also called on the Reserve Bank to directly participate in investing in South Africa's manufacturing base, which has also been largely ignored. Contention with these possible measures remains absent in SAREM, instead a simplistic use of "least cost models including wind, solar and storage projects" is deployed to imply that simply allowing the private sector to introduce a higher penetration of these technologies into South Africa's energy mix will be sufficient to ensure an affordable, reliable electricity system capable of meeting South Africa's broader industrial ambitions.

The Vietnamese experience shows that the market coordinated approach may still produce a "boom and bust" cycle for wind and solar value chains. Changing domestic economic conditions and priorities place pressure on the generous industrial incentives private players in the renewables sectors demand to participate. The proposed paradigm presented in the SAREM draft suggests that a liberalised electricity sector and market coordinated energy transition will be able to avoid the "boom-bust" pattern, but is it well appreciated what contingencies will need to be in place over the coming decade for this to happen? The challenges facing the tremendous transmission build provide a good example of the coordination challenges.

A 2020 World Bank study titled, Rethinking Power Sector Reform, which analysed electricity sector reforms in 15 countries across Eastern Europe, East Africa, Asia, and the Caribbean, acknowledged the significant role played by Vietnam's EVN in the power sector. The study highlighted key lessons, such as the effectiveness of state-centric institutions in developing the power sector when backed by a strong commitment from top-level government officials and supported by highly qualified staff.

Additionally, the study conceded that state-owned enterprises like EVN carried the advantage of consensus among sector institutions, as it enables enhanced coordination and collaboration, ultimately benefiting the power sector. On the whole SAREM fails to appreciate the potentially transformative role public-asset ownership could play in South Africa's green industrial policy.

Transmission investment bottlenecks have been identified as key challenges to upscaling renewable energy from large players like the US, China, and the EU, and peers like Brazil, Vietnam, and Mexico. The lack of coordination between investments in generation and transmission infrastructure is a structural feature of unbundled power sectors internationally. Vertically integrated utilities have the benefit of seeking investment for transmission and generation capacity simultaneously and this is one reason why campaigns for public energy have become more popular across international labour unions and progressive sections of the climate movement. These debates deserve to be fairly considered and engaged in service of the development of South Africa's green industrial plans.

2.2.3. Critical importance of public coordination in just transition hotspot Areas

The energy transition will inevitably lead to job losses and the current plans and resources which have been committed do not deal sufficiently with how reskilling and upskilling with workers directly impacted by closures and losses in the coal value chain will take place at the necessary scale and in a coordinated fashion. The process to close, and the early aftermath of the decommissioning of, Eskom's Komati coal-fired power station offers key insights into both the current issues with coordination and the problematic position it has put workers in.

The plan to repower and repurpose Komati forms the flagship project of Eskom's Just Energy Transition plan. As part of Eskom's socio-economic impact study, the direct impacts, without repowering and repurposing interventions, threatens to place 791 jobs on site at risk along with a further 3375 indirect jobs. The study found that the closure may result in a decrease of approximately R9 million worth of household consumption, impacting businesses that heavily depend on local spending power. This is likely to affect various entities, including local street vendors, retail establishments, transportation services, and community services like education facilities and personal services.

One of the central pillars of the jobs plan included the manufacturing of containerised solar PV microgrid systems for use for rural electrification applications in South Africa and across the African continent. The plans included a manufacturing capacity of 500 units per annum employing 200 people on site. Eskom's own distribution division has been identified as a key potential off taker, however little information has been made publicly available about the status and timelines for the project. By March 2023, over a year after the final unit had been closed at Komati, the finalised impact study was unable to provide cost estimates for the microgrid assembly lines as the project is still in a conceptualisation phase. It also indicated that the short-term success and sustainability of the intervention will depend on the deployment of microgrids at other coal-fired power stations that are shut down by Eskom.

2.3. The Importance of key state capacity building initiatives

The current draft of the SAREM provides a schematic for the ramping up of Local Content Requirements (LRC) from a defined baseline (see SAREM Table 1 on pg. 11), but leaves the job

of proposing and identifying local content targets over the coming decades open for later deliberation. It is disappointing that after almost 3 years of SAREM development the Masterplan is unable to place a peg in the ground to clearly include proposed local content targets in its public consultation draft. The forum and process to negotiate these targets is not defined in the draft. Therefore, it is difficult to pass substantive comments on the appropriateness of the measures in the plan.

There is also no mention, throughout the SAREM draft, on challenges related to the current mechanisms for monitoring compliance of content targets in the REI4P. Private developers have historically exploited process loopholes which have enabled developers to bypass local manufacturers of designated components (for example PV modules, transformers, and inverters).

COSATU and the IEJ does however note that on 1 August 2022, as part of an inter-ministerial panel addressing measures to address the electricity crisis, DTIC Minister Ebrahim Patel asserted that the coming bid rounds for the REI4P would implement a 35% LCR for local solar modules. He went further to insist that for future bid windows, the targets would be incrementally increased to allow the scaling up of local production to create jobs and create supply chain security. These measures are already more ambitious and aggressive than what has been put forward in the previous SAREM draft's local content point system of 70/20/10 (Price/Local Content/Transformation). The pronouncements made by Minister Patel were an important step and must be concretised and explicitly reflected in the SAREM final version itself.

COSATU and the IEJ proposed the issuance of a schedule of import tariffs with a 6-month lead time in 2022 during the second draft version of the SAREM. As has been observed by the analysis the market reforms for the electricity sector have seen an increased uptake in private-private projects which rarely have local content targets in place. A report by XA Global Trade Advisors has recently shown excessively long turnaround times for the International Trade Administration Commission of South Africa (ITAC) to respond to import duty applications. ARTsolar, one of South Africa's only PV module applications, has had a 10% import duty application pending with ITAC for over 50 months.

Despite this application covering the full duration of the SAREM process it is not referred to once in the SAREM analysis. The latest SAREM version represents and improvement in the state of the debate on the role of import tariffs, with a commitment to discuss potential applications for import tariffs, under the SAREM with ITAC, under a 6-month timescale (see SAREM page 25), however the SAREM analysis does not express a sense of how using these protections is connected to its industrial strategy approach. COSATU and the IEJ recommend that a clear statement from the SAREM be made in its analysis to declare, explicitly, the intention to protect local industry with the full bouquet of relevant industrial policy measures (including import tariffs), citing an analysis of the PV module case as a practical example.

Stronger links between the necessary skills development and the process of local technology development can be facilitated by a well-designed technology transfer system (TTS). The current version includes a welcome embrace of labour's recommendation listed in the supporting interventions of the plan, however, the role of technology transfer is difficult to determine from the plan itself. Technology transfer system outcomes will need to be closely aligned with the planned industrial policy mechanisms (many of which are themselves still in development – like import tariffs) so the plan would benefit from an improved high-level explanation of how TTS will feature in the SAREM strategy. Opportunities have already been missed with the JETP agreement which would have been an ideal environment to secure state-to-state agreements to support technology transfer.

2.4. The importance of coherent approach to 'decent work' in SAREM

Labour has put forward the importance of ensuring decent work. However, it is unclear how the SAREM understands what 'decent work' (see SAREM pg. 9; Figure 1, pg. 10, and pg. 27) or a 'decent job opportunity' constitutes (see SAREM pg. 34). A critical reflection of the real job performance in the REI4P is absent. The document inadequately reflects on the qualitative aspect of the existing jobs in the wind and solar value chains in South Africa.

Labour has expressed concerns about the temporary and casualised nature of many of the opportunities currently created in the REI4P. South Africa's green industrial ambitions must offer greater security for workers. It is discouraging that much of the focus in the plan is given to the need for new skills while failing to engage with the conditions of the existing workforce which needs to be protected and upskilled.

Eskom has historically grown its professional base through Engineer-in-Training and technician apprenticeship programmes, a pipeline producing generations of registered professionals, and supported the development of programmes in public universities, TVETs and SETAs. In fact, Eskom accounts for an overwhelming portion of the SETA budget to support upskilling workers and yet its potential role in developing a skilled workforce for wind and solar value chains is not explicitly mentioned.

We should demand that public procurement of renewable energy demonstrate the gold standard for employment reporting and worker conditions. COSATU and IEJ recommend that where the SAREM prescribes industrial incentives for both local manufacturers and RE plant developers these should include accompanying job creation requirements and the prescription of decent work opportunities. Instead, the Masterplan offers a reliance on the promotion of programmes offering sector internships, which while listed (see SAREM pg. 32 and pg. 33), it is unclear how these relate to the objective of "decent job creation" outlined in the SAREM objectives.

SAREM should include, as an action item, recommendations to improve transparency on the job performance reporting and should be extended to include qualitative aspects of employment.

SAREM should identify a process to ensure there is standardisation of appropriate job metrics for reporting in renewable energy projects. This is an important co-requisite for developing an appropriate monitoring and evaluation framework for decent work in the sector.

By way of example, the recent publication of the Inflation Reduction Act in the United States has tied significant tax incentives, and an arrangement of other subsidies for wind and solar industries, to strict targets for worker-centred benefits in emerging industries. Note below a list of proposals:

- To be eligible for a full 30% tax credit for projects over 1MWac, labourers and mechanics installing the solar power projects must be paid prevailing wages by their employer and must be part of an electrical apprenticeship programme.
- Qualifying projects must also adhere to a ratio of apprentices to fully trained workers, which is monitored by reports to the Department of Labour. Contractors or subcontractors who employ more than 4 individuals performing construction, alteration, or repair work must employ at least one qualified apprentice to perform such work.
- Violations will result in fines to the Secretary of Labour of $5,000 for each labourer or mechanic who is underpaid. If the underpayment is found to be intentional, the fine doubles to $10,000 per labourer or mechanic.

3. Recommendations

In this section, we outline the primary suggestions put forth by COSATU and the IEJ building on recommendations which have been made across the SAREM development process. Throughout the development of the different versions of the SAREM, the consultation process has been extensive but uneven, labour contributions have often received little explicit feedback and several key arguments have been excluded from engagement in the draft plans. COSATU and IEJ call on the SAREM executive oversight committee to ensure that labour inputs are duly recorded and reflected in the main consultation process and note that the key ambitions are explicitly responded to through the plan.

Recommendations listed in **RED** have not been addressed to over the last 2 versions of the SAREM, **ORANGE** shading refers to partial inclusion, and **GREEN** refers to a satisfactory adoption of a recommendation into the Masterplan text.

Objective	Mechanism	SAREM Draft Response	Additional Recommendation
Cement "decent work" as central to the Masterplan	Ensure that decent work appears as an overall goal of the Masterplan: The centrality of decent work must be reflected and elaborated on under "Implementation Plan Elements".	Listed as an objective but nothing clear, measurable and time bound found in the suggested implementation	• SAREM must provide clear conditionalities for decent employment for any enterprise receiving public incentives to support local investment and localisation. • SAREM must be updated to include a clear definition of decent work (building on its current inclusion in the plan objectives)
	Establish a framework for monitoring and evaluating the employment opportunities in line with the decent work criteria: Ensuring the bulk of the employment opportunities generated from increased renewable energy component demand and associated localisation are decent work opportunities. Incentives offered to RE projects and local manufacturers should be accompanied by compliance targets in the decent work framework. Penalties for non-compliance should be issued to ensure adherence to targets articulated.	No decent work framework provided	• SAREM is yet to address, but must engage, this recommendation.

Develop industrial policy to enable deep localisation of RE value chains	Market structuring: Nascent local industry must be protected through the appropriate use of import tariffs. The publication of the SAREM must be accompanied by the publication of a schedule of tariffs for strategic components targeted for localisation in South Africa.	Listed as a supporting measure but not incorporated in the analysis	● Infant industries must be protected using the full set of tools available in industrial policy mechanisms. The SAREM should engage with the specific example of the pending application for PV module tariffs.
	Technology transfer: The SAREM must accompany the establishment of a technology transfer system to facilitate technology absorption targeting renewable energy technologies that capacitate local manufactures. The TTS is to be coordinated by the Department of Science and Innovation (DST), DTIC and the Department of Higher Education and Training (DHET), OEMs, and local industry associations.	Listed in supporting measures as a commitment to be declared at launch by DTIC & OEMs. Not incorporated well in analysis. More detail required including on resourcing	● Beyond an action item to issue a commitment at the SAREM launch, a clear mechanism must be identified to initiate the development of the technology transfer system to ensure this does not fall to the wayside
	Establish aggressive local content rules: The SAREM should affirm aggressive local content requirements which reflect South Africa's ambition to localise key components for RE systems. ● An industry survey must be conducted by DTIC within 6 months, and made public, identifying the state, and capacity, of local manufacturers in the wind and solar value chain. The results of this survey must be used to	Listed in Table 1: Baseline and ramp up targets shown schematically but ambition not mapped into numerical targets. It is unclear what the process will be to negotiate local content targets	● COSATU and IEJ are deeply concerned by the absence of explicit local content targets after a three-year policy process.

	update the component designation list compiled by the DTIC. ● Local content requirements should be set to 50% for the next wave of public procurement RFPs (starting with Bid Window 6).		
	SAREM must consolidate efforts to develop a framework for ramping up LCR for strategic components: In line with the Minister of Trade and Industry's pronouncements (see note on LCR policy), a framework for the phased ramping up of local content requirements, as local capacity increases, must be developed, within 6 months, to formalise measures taken to localise the solar value chain.	Listed as a measure in the industrial development pillar but it's very preliminary	● SAREM should strive to give an indicative baseline and target (example a multi-year target – 5yr ramping target)
	Capacitate the monitoring of compliance mechanisms for local content rules: SAREM must call for a revision of the mechanisms and institutional capabilities for monitoring and enforcing compliance. Moreover, resources must be allocated to ensure adequate monitoring and enforcement.		● COSATU and IEJ call on SAREM to establish mechanisms for public monitoring of local content compliance through introducing data transparency in reporting for all projects commissioned under public procurement processes. ● SAREM should invite labour, civil society and industry associations to play a role in supporting the official monitoring and oversight of local content compliance.

Centring transformation, public ownership, and worker control	Leverage public investment in infrastructure and manufacturing: Advocating for the role of public ownership, the provision of cheap debt, and mechanisms for controlling the economic rents on private projects in developing RE manufacturing capacity to be listed explicitly as a priority for the SAREM. Low-cost debt will help offset the high cost of locally produced goods. Public, and where applicable, worker ownership will help shift procurement decisions in favour of locally produced components.	Role of local DFIs is included in the supporting measures not incorporated well in analysis. Role of the potential for Public Ownership is under appreciated	• COSATU and IEJ call on SAREM to engage the proposed inputs on ownership (role of Eskom) • The SAREM analysis should explicitly consider Eskom's participation in RE and assess the opportunities for DFI support for public generation. • SAREM should support calls to demand a shift in the mandate of the Reserve Bank, encouraging it to play a role in direct investments in utility scale projects (Eskom) and strategic local manufacturing initiatives. • SAREM should propose measures to encourage private investment, which may facilitate small scale social ownership, SMME and co-operative uptake, to invest in locally manufactured components by offering targeted incentives
	Employee Share Ownership Plans (ESOPs) must be advanced as a means for achieving B-BBEE compliance: ESOPs should be encouraged, structured, and regulated in emerging green industries to ensure improved overall material benefits for workers and increase workplace democracy. Clear	ESOPs have been included in the suggested interventions however there is a lack of analysis on the concerns of B-BBEE concentration in REI4P	• COSATU is conducting a process to develop guidelines for ESOPs with relevance to several masterplan processes. SAREM is invited to engage COSATU on how the models being developed can be incorporated into the proposals in the implementation plan

	guidelines and best practices for ESOPs must be assembled and promoted.		
	Worker participation in company boards must be encouraged: To improve governance, worker buy-in, and workplace democracy, where companies have boards, worker representation should be included with voting authority.		• COSATU and the IEJ insist that SAREM should explicitly advocate for worker participation in company boards.
Proactive development of a recycling industry	Explicitly identify pathways for the development of a local recycling industry: An incentive structure for the development of recycling industries should be developed.	Covered by supporting intervention on the development of end-of-life industry. Specific recommendation can be filtered down to working group	
	Establish a recycling industry at municipal level: A strong commitment to ensuring the end-of-life management of renewable energy systems (particularly solar PV) must be made clear. The recycling of key components in this sector requires high levels of public subsidisation to be economically viable at scale. This makes recycling activities well suited for public ownership. For solar PV modules, this could be realised through investing in municipal recycling depots.	Same as above	