

14 April 2020

Mr Dennis Seemela
National Energy Regulator
Kulawula House
526 Madiba Street
Arcadia, Pretoria
0083

Per email: irp-procurement.techrange@nersa.org.za

Dear Mr Seemela,

RE: SAPVIA RESPONSE TO CONSULTATION PAPER - CONCURRENCE WITH THE MINISTERIAL DETERMINATION ON THE PROCUREMENT OF NEW GENERATION CAPACITY FROM THE RANGE OF ENERGY TECHNOLOGIES PUBLISHED ON 18th MARCH 2020

The South African Photovoltaic Industry Association ("SAPVIA" or "the Association") is a non-profit industry association that aims to promote, develop and grow the Photovoltaic ("PV") sector as part of the wider renewable energy industry in South Africa. The association serves the collective interests of its 130 members across the value chain of Solar PV, as well as 244 registered Solar PV installation companies.

On 18th March 2020, NERSA requested Stakeholders and members of the public to comment on the Consultation Paper - Concurrence with the Ministerial determination on the procurement of new generation capacity from the range of energy - in satisfying the proposed concurrence process in accordance with Section 34 of the Electricity Regulation Act ("ERA"). The Consultation Paper was obtained from the NERSA website at www.nersa.org.za, under Notices > Invitation to comment.

In line with the above, SAPVIA wishes to submit its comments and requests for consideration as follows:

General Comments

1. We are pleased to see both DMRE and NERSA responding to the energy crisis and load shedding risk to business and the South African economy in general.
2. Given the added impact of the COVID-19 pandemic, any economic stimulus plan will require power to drive it and so we, the Solar PV industry, are ready to respond as soon as lockdown measures are relaxed and President's plan for growth implemented.
3. NERSA has correctly identified that supply and demand side interventions will have to be deployed to minimise the risk of load shedding and/or extensive usage of diesel peaking plants

in the short term.

4. We are confident that such interventions, in line with the approved IRP 2019, will assist with creating reserve capacity needed to complement Eskom's declining performance and reduce the utilisation of diesel generators.

Request for Clarity

1. The Gazetted IRP 2019 Table 5 indicates that the allocation in the category "Other (Distributed Generation, CoGen, Biomass, Landfill)", and described as "Allocation to the extent of the short-term capacity and energy gap" in the footnote to the table, is estimated as 2000 MW.
2. According to the consultation paper, The Minister of DMRE has determined that 2000MW is to be procured from a range of energy source technologies in accordance with the short-term risk mitigation capacity allocated under the heading "others" for years 2019 to 2022. This accounts for the full estimated 2000MW allocated under the IRP 2019 for that period.
3. One of the most important requirements for licensing is Section 10(2)(g) of the Electricity Regulation Act ("ERA"), which states that applicants and NERSA must show "evidence of compliance with any integrated resource plan applicable at that point in time or provide reasons for any deviation for the approval of the Minister", for new license applications to be considered.
4. Distributed Generation is the fastest and least-cost option for South Africa to add more capacity quickly (no procurement process required from DMRE), it also promotes a just transition for the South African power sector by allowing a broad-based distributed participation of local entities across the country
5. The determination by the Minister seems to effectively fully allocate this capacity to a state procurement program, with Eskom as the designated buyer. It should be noted that this program will by nature most likely result in a lengthy procurement process. It should therefore be run in parallel to the Distributed Generation market process, that can deliver a large amount of capacity on a high-speed no-cost basis.
6. This could result in the Solar PV industry's distributed generation market segment no longer having an allocation in the IRP 2019 and requirement of a ministerial deviation from the IRP.
7. **We therefore ask that NERSA obtains clarification from the DMRE as to what allocation is still remaining for Distributed Generation in the years 2019-2022, per table 5 of the IRP.**

Recommendation: SAPVIA recommends that NERSA advises the Minister of DMRE to extend the 2000MW allocation to 4000MW and fairly share this between own-use builds (reserving an allocation per year for own-use builds) and public procurement programme. Should the increase in capacity not be acceptable, the recommendation to split public and private procurement still stands.

Responses to questions as raised by the NERSA

- i. Is 2000MW sufficient to ensure uninterrupted supply of electricity in the short and medium-term?

Response: Although the system distributor would be best-suited to answer this question, it is imperative that we seek interventions which are at least-cost to government and quickest to bring the required supply of electricity on line. Given the levels of load shedding (up to stage 6 - dropping 600MW) experienced over the last few months, we are confident that there is room for additional supply of electricity. We recommend that at least 4000MW of electricity be considered.

- ii. What should be the minimum and maximum plant size that should be allowed to be connected into the Grid?

Response: Grid impact studies like the GIZ (Assessing the Impact of Increasing Shares of Variable Generation on System Operations in South Africa) should be considered. This particular study indicated that the addition of 12.8GW of solar PV does not require additional Operating Reserves compared to those originally planned by the System Operator, the Eskom division tasked with managing the national grid. *We recommend that plant size not be a limiting factor to the electricity generation requirements. Plants should be considered on the applicability of use. Therefore, plants constructed for own-use should not have a limit – the export of excess electricity to the national grid would be an additional benefit. Technical compliance from a grid operator (Distribution Licence holder) perspective should be key. By example, if a Municipality could connect a single 25MW generator safely, it should do so.*

- iii. Provide your opinion on the socio-economic aspects of procuring energy from a range of energy source technologies (i.e. in terms of the number of jobs each technology can develop)?

Response: The objective of adding small scale generation to the grid in a decentralised manner also allows for the maximising of jobs and allowing the SMME sector to flourish, as this sector has been shown to be able to rapidly scale up its skills development and job creation, and deployment rate. It is desirable to have a small-scale market that encourages a diversity of small-scale players into the SA market. Based on current industry data, Solar PV electricity generation can sustain 31 direct jobs every year to build 4MWs of rooftop Solar PV. 4000MW would then translate to 31000 direct new jobs. There are further upstream and downstream jobs that will be realised. Solar PV further offers the opportunity for upskilling and entrepreneurship.

- iv. What do you think should be the dominant energy source of technology in this allocation?

Response: Solar PV

- v. If the energy source is technology Solar PV and/or Wind Generation, should storage be included to cater for peak periods? If so what should be the storage capacity?

Response: Solar PV electricity generation can be constructed within the demand curve of users of electricity and is therefore able to compliment the energy users' requirements. With excess Solar PV generation applications, yes, storage should be considered to the extent that should be determined by the system operator to ensure a balanced and sustainable grid. This is only likely applicable under very high penetration of renewable energy.

- vi. Do you think coal-fired generation technology should form part of this allocation?

Response: Although we are not opposed to any other generation technology, we are cautioned by the countries commitment to the Paris agreement and reducing the national GHG emissions. We have and continue to promote a fair and transparent energy planning process to include generation technologies of least cost.

- vii. Should this range of energy source technologies be dispatchable?

Response: ? SAPVIA recommend that an IRP type modelling exercise is undertaken to determine the balance of dispatchable and non-dispatchable technologies.

- viii. Do you think the time allowed for this build allocation will assist in alleviating load shedding?

Response: Solar PV has the opportunity to reduce the time allocated for this build. The industry could potentially build 2000MW within a year should the enabling environment be created. Two simple adjustments in the regulatory process could achieve this enabling environment rather quickly. Clarification and dedicated resources to (1) the distributor connection agreement processes for generators wishing to connect to the network, and (2) the increasing of the self-generation cap and stream lining of application rules within the NERSA licencing/registration processes could reduce the build time of a Solar PV plant dramatically.

- ix. Provide your thoughts on the cost that will be associated with the new allocated generation capacity in line with a mandate to ensure long term sustainability of electricity supply industry as well as affordability?

Response: New generation at an LCOE of under R0.8/kWh should be considered.

Responses to questions as raised by the NERSA

- i. Provide your thoughts on Eskom as a chosen buyer of the new generation capacity?

Response: Any entity should be allowed to be a buyer (willing buyer / willing seller model). In line with the President's SONA earlier this year, municipalities, intensive users and mines, for example, in good standing should also be given the opportunity to buy this new generation capacity. Including Eskom as the only buyer especially under the current down grade credit scenario is a high risk strategy.

- ii. Must it only be Eskom who is the Buyer of this electricity or other Licenced Electricity Distributors (i.e. Municipalities or Private Distributor) must also be allowed to buy?

Response: Business and industries, or any legal entity, who requires electricity and are able to build for own use should also be given the opportunity to buy. In line with the President's SONA earlier this year, municipalities in good standing should also be given the opportunity to buy this new generation capacity.

- iii. Do you think the trader should also be allowed to buy this new capacity?

Response: Yes

- iv. Do you think it fair for Eskom to be restricted as the buyer instead of providing an option for it to be part of the build allocation?

Response: This should be a fair and transparent process. The build allocation should not be limited or restricted. We believe that should Eskom have been in a position to build its own power generation; it would have done so. Private sector participation should be seen as an opportunity to assist government and not compete with government.

- v. Provide your thoughts on IPPs as the chosen builders of the new generation capacity?

Response: We are confident that the market will select the builders for the own use generation builds and a fair and transparent procurement process will be employed for any Government procurement programme. To date IPPs have been the lowest cost, fastest option to build, so they should be supported.

- vi. Provide your thoughts on the method of procurement chosen for the procurement of new generation capacity?

Response: We support central procurement through the IPPO for any government procurement programme for utility scale projects. In addition, we would recommend removal of caps on private embedded generation and wheeling and allow the market to procure these projects in a safe and legal manner with no cost and at the highest speed for the State.

- vii. Provide what you consider to be the risks associated with the new capacity?

Response: There is a risk that the 2000MW will not be enough to deal effectively with the challenges of load shedding and/or extensive usage of diesel peaking plants. Another risk is that the full 2000MW allocation in the IRP will be assigned to a public procurement programme thereby destroying the own use generation market and thousands of jobs.

- viii. Provide your opinion on the security of supply impact in general as well as in light of the additional capacity?

Response: Given the levels of load shedding (up to stage 6- dropping 600MW) experienced over the last few months, we are confident that there is room for additional supply of electricity. We recommend that at least 4000MW of electricity be considered.

- ix. Must the NERSA concur with this ministerial determination as per the prescripts of section 34 of the Act?

Response: We recommend that the NERSA strongly consider the comments and recommendations from SAPVIA to determine a position and engage the Minister and the industry better before decisions are finalised.

We would like to thank the NERSA for the opportunity to comment as part of this consultation process. We believe that the NERSA will accept our comments as constructive and contributing to the energy security of the country. We further support the fast-tracked concurrence process to ensure a quick turnaround and expedited generation of needed electricity in South Africa.

Yours sincerely,



SAPVIA Chief Operations Officer

On behalf of SAPVIA