European Union Chamber of Commerce and Industry in Southern Africa Submission to the National Energy Regulator of South Africa Request for Comments on the Proposed Determination for New Generation Capacity

To: The National Energy Regulator
526 Madiba Street
Arcadia, Pretoria
0007

14 April 2020

Dear Sirs,

European Union Chamber of Commerce and Industry in Southern Africa Submission in Respect of the Consultation Paper: Concurrence with the Ministerial Determination on the Procurement of New Generation Capacity from the Range of Energy Technologies, issued 18 March 2020.

Introduction

1. This submission is made to the National Energy Regulator of South Africa ("**NERSA**" or the "**Regulator**") in response to its invitation for public comment on the proposed determination that 2GW of new generation capacity is required, signed by the Minister of the Department of Mineral Resources and Energy ("**DMRE**") on 18 February 2020 ("**the Determination**"). The Determination is made in terms of section 34(1) of the Electricity Regulation Act, 2006 ("**ERA**").

2. The submission is made on behalf of the European Union Chamber of Commerce and Industry in Southern Africa ("EU Chamber") is a member-driven, non-profit, fee-based organisation representing European business in Southern Africa. The EU has historically been South Africa's main trading partner and the biggest source of foreign direct investment (FDI). Firms from EU Member States represent over 75% of SA's total FDI inward flow of $1.325bn (2017). The EU Chamber is the voice of all European investors in Southern Africa, that is, 2,000 companies with 300,000 employees. EU-based companies invest in a wide range of economic activities in the country, notably participating in the various bid rounds of the REIPPPP, and these

companies continue to be major contributors to South Africa's industrialisation and transformation agenda.

3. NERSA's consultation paper requests that responses are provided to a set of questions provided therein, but does not limit the submission to these. This submission thus :

   a. Provides an overview of the electricity supply crisis as well as expressed policy objectives of the DMRE and government broadly, which informs the submission;

   b. Outlines the implications of the Determination as drafted, on the energy sector;

   c. Identifies the key national electricity generation policy priorities based on the ERA, the national Integrated Resource Plan 2019 ("**IRP**") for electricity, and the Minister's Determination itself, as well as the views of the EU Chamber and its members;

   d. Notes a number of items that are unclear in the Determination and which, at the minimum, would require clarification by the DMRE to allow concurrence by NERSA;

   e. Presents the EU Chamber's recommendations, which argue that NERSA should not concur with the Determination as gazetted; and

   f. Concludes by answering the questions listed in the NERSA consultation paper to assist NERSA in its consideration of its response.

4. The European Union is a major stakeholder as the country's largest foreign direct investor, and the EU Chamber welcomes this opportunity to make submissions and suggestions on the Determination for NERSA's consideration.

5. It is noted that the submission is submitted in the interests of ensuring security of energy supply for all South Africans and in assisting in improving inclusive, employment creating and low-carbon economic growth in South Africa. It is intended to offer constructive suggestions as to how this can best be achieved.

South Africa's Electricity Supply Crisis and Policy Response

6. Rolling blackouts intensified in the second of half of 2019 and this trend has continued in 2020. Eskom had to move to an unprecedented Stage 6 (6 GW) of load shedding on 9 December 2019, forcing President Ramaphosa to abandon an official state visit to Egypt in order to deal with the crisis personally. In early January 2020 municipalities were warned by Eskom to prepare for Stage 8 (8 GW) load shedding. Indeed, the CSIR has calculated that in the first two months of 2020 load shedding equal to 65% of the total load shedding for 2019 was required.

7. Shortly after taking office on 6 January 2020 the newly appointed Eskom CEO, Andre de Ruyter, announced that due to the poor state of Eskom's equipment and unfavourable contracts, '*if we do nothing, Stage 8 will be a regular event by June 2021*'.

8. Eskom has initiated an 18-month service and maintenance programme which will lead to regular outages. This was impliedly confirmed by President Ramaphosa in his State of the

Nation Address ("SONA"), when he said '*load-shedding will remain a possibility for the immediate future*.'

9. The economic impact of regular outages for extended periods on South Africa's energy intensive economy is significant. StatsSA reported that the economy contracted by 1.4% in the fourth quarter of 2019, following a contraction of 0.8% (revised) in the third quarter. The GDP growth forecast for 2020 was halved by Moody's from its September estimate of 1.5%, to 0.7%. Ultimately, the rating agency after a long process, with multiple warnings, dropped the country's investment grade to 'junk' status.

10. The statement issued by Moody's to explain its downgrade of South Africa places electricity first and notes that "*Unreliable electricity supply, persistent weak business confidence and investment as well as long-standing structural labour market rigidities continue to constrain South Africa's economic growth*." The statement then goes on to articulate views shared by the business community and all electricity users in the country, that "*Moreover, a strategy to stabilize electricity production has been slow to emerge and has yet to prove its effectiveness. Moody's assumes that while power supply will become more reliable, the restoration of full capacity will take some years to complete*." This highlights the absolute need for a clear strategy to stabilise electricity supply as well as the need to do so rapidly.

11. Government has acknowledged the deteriorating state of electricity supply and its devastating effect on the economy and the livelihoods on all South Africans. In response a number of announcements and actions have been taken by government to mitigate and address the energy supply crisis:

    a. On 2 February 2020, Minister Mantashe announced that government had agreed that it would allow mining companies to produce energy for their own use (www.fin24.com/Economy/South-Africa/mining-companies-can-generate-own-power-without-licenses-matashe-20200203).

    b. In the SONA, President Ramaphosa pledged, inter alia, that:

        i. A Section 34 Ministerial Determination will be issued shortly to give effect to the 2019 IRP, enabling the development of additional grid capacity from renewable energy, natural gas, hydro power, battery storage and coal.

        ii. Government will initiate the procurement of emergency power from projects that can deliver electricity into the grid within 3 to 12 months from approval.

        iii. The National Energy Regulator will continue to register small scale distributed generation for own use of under 1 MW, for which no licence is required.

        iv. Government will open bid window 5 of the renewable energy Independent Power Producers ("**IPP**") programme and work with producers to accelerate the completion of window 4 projects.

12. On 18 February, five days after the SONA, Minister Mantashe issued the Determination to NERSA, seeking its concurrence as required in terms of section 34(1) of the ERA. Section 34(1)

requires that any determination made in terms of that provision is made by the Minister "in consultation with" NERSA, which requirement has been judged by South African courts to mean that the agreement of NERSA is necessary to render the Determination binding in law.

13. It is noted that matters are complicated by the global COVID19 pandemic which is likely to reduce GDP growth globally and locally. The ratings agency Fitch announced that growing government debt and the impact of the pandemic on public finances and growth will, in their estimate, lead to a 3.8% contraction in GDP in 2020. Although this reduction in GDP growth may lead to some immediate reduction in electricity demand and hence some limited relief to Eskom's generation capacity it does not remove the supply gap in the short and medium term. The additional stress on public debt also suggests emphasis on strategies that reduce the burden on government or parastatal balance sheets and contingent liabilities.

Legal and Policy Basis for the Determination

14. The Determination must fit within the parameters of, and meet the requirements of, section 34(1) of the ERA, which provides for a Determination to determine:

    a. that new generation capacity is required (and impliedly, the amount thereof);

    b. the types of energy sources from which electricity must be generated;

    c. the buyer or range of possible buyers, or the manner in which the electricity must be sold;

    d. that the acquisition of the electricity generated be compulsory;

    e. the procurement process by which the electricity is acquired, and whether the private sector will participate.

15. Although not explicitly stated in the ERA, any determination should give effect to the current IRP. The Minister expresses this intention in the Determination and states that it is "*in accordance with the short-term risk mitigation capacity allocated under the heading "Others" for the years 2019 to 2022 in Table 5 of the Integrated Resource Plan for Electricity 2019-2030*".

16. In addition to the allocations outlined in Table 5 the IRP further states (pg. 44) that in the short-term supply and demand side interventions will have to be deployed to minimise the risk of load shedding and/or extensive usage of diesel peaking plant due to the low availability factor of Eskom's plants. The IRP states that the short-term gap is estimated to be between 2 000 – 3 000MW and notes that "*it generally takes about 36 months minimum for a green field utility scale projects to produce first power…".* The IRP also states that "*the development of generation for own use must also be encouraged through the enactment of policies and regulations that eliminate red tape without compromising security of supply*.".

17. The IRP (pg. 49) also notes that public inputs suggested that the allocation for distributed generation (also referred to as embedded generation) need to be increased, "*taking into account that the DMRE is inundated with requests from companies, municipalities and private individuals for deviation from the IRP in terms of section 10(2)(g) of the Electricity Regulation Act, in order for NERSA to approve their application for a generation licence*". The IRP concludes

that given the immediate energy shortage, "*increasing the embedded generation allocation as reflected in the capacity plan table present the opportunity to address the shortage*".

18. In addition to the IRP, the policy pronouncements by the DMRE and the President further suggest that the speed of deployment of new generation capacity is a key driver for the Determination, and the terms and conditions of the Determination should support that policy objective.

19. As you are aware, NERSA's decision-making authority must be exercised within the parameters of sections 9 and 10 of the NER Act, which would be directly applicable to a decision on the part of NERSA to agree, or withhold agreement, to a proposed Ministerial determination. NERSA would thus be duty-bound to explain its reasons for concurrence with a Ministerial determination, and to the extent that such a determination materially deviates from the IRP, rational reasons for doing so would have to be provided.

The Determination and its Implications for Energy Supply and Implementation of the IRP 2019

20. The Determination provides for the procurement of 2GW of power, which must be connected to the grid by no later than December 2021. The Determination requires that a fair, equitable, transparent, competitive and cost effective process is to be followed, as contemplated in section 217 of the Constitution and reflected in the Electricity Regulations for New Generation Capacity, 2011.

21. In the Determination, the Minister references the capacity provided for in the IRP under the heading 'Other' (Table 5) for the period 2019 to 2022, which references an '*Allocation to the extent of the short term capacity and energy gap*'.

22. The Determination has the following additional conditions (amongst others):

    a. The new generation capacity must be grid connected.

    b. The new generation capacity must be purchased by Eskom.

    c. The procurer is the DMRE, which will run the process.

    d. The electricity must be purchased from IPPs.

23. The Determination must be understood relative to a second determination made on the same day, 18 February 2020, by the Minister. The second determination provides for new generation capacity of up to 11 813MW, from a combination of solar photovoltaic, wind, storage, gas and coal ("**the Second Determination**"). The Second Determination is the subject of a separate NERSA consultation paper to which a direct response will be submitted but as the two determinations act in concert in relation to the IRP their joint impact must be considered in making a decision on the first Determination.

24. Although the expressed intention of the Determination is to give effect to the IRP the actual impact of the Determination, when read in parallel with the IRP, is likely to introduce further lack of policy and regulatory clarity, rather than giving effect to the IRP. In contradiction to the

objectives of government and the IRP, the Determination will have the effect of limiting projects that can deliver electricity into the grid within 3 to 18 months from the date of approval, rather than enabling them.

25. The Determination is not clear as to the **types** of energy sources from which electricity will be generated. In this regard:

    a. By referencing the category of 'Other' (in Table 5, IRP 2019 corrected version) the Minister implies that the following technologies will be used: Distributed Generation, Cogeneration, Biomass and Landfill.

    b. Distributed generation refers to the location of projects within the energy system and not their technology, and such projects could generate electricity from any number of energy sources.

    c. The Determination is therefore not clear as to whether wind, large solar, storage, coal waste-to-energy and gas will be considered in the procurement programme to give effect to the Determination, and therefore does not introduce the necessary planning certainty to allow IPPs to develop and structure such projects rapidly. Nor does it give clear guidance to NERSA and to the DMRE itself as to the technology types to be licensed.

26. The Determination contradicts the intention of the IRP to allocate part or all of the "Other" allocation of 2GW to own use and embedded generation projects:

    a. The IRP notes that the category of Other / Distributed Generation includes "*all generation facilities in circumstances in which the facility is operated solely to support electricity to and end-use customer within the same property within the facility*". The IRP therefore clearly contemplates that own use projects are to be included in the 2GW of power to be supplied under the "Other" allocation. Further support for own use projects in the IRP has been outlined above.

    b. The requirement in the Determination that Eskom is the buyer of **all** the electricity generated pursuant thereto is therefore clearly in contradiction with the IRP and serves to undermine its objectives. In effect the Determination allocates the entire 2GW of "Other" capacity to a centrally managed procurement programme with Eskom as the sole buyer. The consequence of doing that, is very likely that it will remove the ability for NERSA to license projects in accordance with the IRP (which as stated above) allocates this capacity to own use and embedded generation projects.

    c. If the 'Other' allocation is reserved for a central procurement programme with Eskom as the sole buyer, all the distributed generation projects would have to obtain section 10(2)(g) approval from the Minister before they can be licensed.

Submission on NERSA Concurrence with the Determination

27. The EU Chamber acknowledges and applauds the rapid response from the Minister, following the SONA announcement; and the decision to opt for IPPs to build and operate the new generation capacity needed. The EU Chamber confirms its support for this process, and the

specific objective of meeting the electricity shortfall as rapidly as possible whilst not hampering other initiatives that would contribute thereto, or other longer-term initiatives for large-scale procurement.

28. However, as outlined below, it is submitted that the Determination as structured does not best meet this objective and in fact has the unintended potential of undermining the objectives expressed by the Minister of addressing the immediate shortfall and those of the IRP.

29. We therefore welcome the Regulator's decision to institute a consultation process inviting stakeholders to comment on the terms of the Determination and, where appropriate, put forward suggestions in the interests of the broader South African economy.

30. The EU Chamber submits that an altered determination, in parallel with the Second Determination, can better meet the required objectives of the IRP as well as the expressed policy objectives of the Minister and of President Ramaphosa. NERSA should therefore not concur with the current Determination but rather rapidly consult with the Minister and the DMRE regarding a revised determination which gives effect to the IRP and, together with the Second Determination, allows **both** a rapid licensing of embedded and own use generation projects that are available for short-term implementation **and** a centralised procurement programme to be put in place as soon as administratively feasible to allow the continued procurement of utility scale projects in line with the IRP. The rationale for this submission is expanded on below.

31. As noted above, 'Other' generation capacity, as contemplated in the IRP, is intended for own use, embedded generation as opposed to large scale projects as per previous bidding windows of the REIPPPP. If the capacity allocated to 'Other' in the IRP is required to be purchased by Eskom as per the Determination, any municipal and own use power generation project will not be capable of being licensed by NERSA except with separate Ministerial consent in terms of section 10(2)(g) of the ERA. This would be extremely unfortunate given the backlog of projects with pending section 10(2)(g) approvals and the potential for these and other own use and municipal projects to contribute to an alleviation of the short-term electricity shortfall. This is a major concern of the EU Chamber with the Determination and is seen as a step backwards.

32. The EU Chamber notes that this unfortunate consequence may not be the intention of the Minister, but that it would nevertheless be the impact of the Determination, and hence this submission suggests an alternative approach rather than concurrence with the Determination in its current form. This approach is explained below:

    a. Our understanding from the IRP itself as well as from the media and discussions with EU companies participating in the South African energy sector is that a substantial backlog of projects requiring so-called Ministerial exemptions under section 10(2)(g) of the ERA has built up over the last several years, for at least some portion of which there was a self-imposed moratorium by NERSA on the processing of such applications. The rationale for this moratorium being that, since there was no explicit provision made in the prevailing IRP for "own use" generation projects, such projects required Ministerial approval for deviation from the IRP in terms of section 10(2)(g).

b. The finalisation of the IRP in 2019 has provided clarity under the "Other" category that at least 2GW is allocated to embedded and own use generation. This means that the requirement for Ministerial approval for deviation from the IRP is not required, as NERSA can now license such projects in accordance with the IRP, as per section 10(2)(g). In practical terms, the applications for Ministerial approval can be withdrawn and the applications submitted directly to NERSA as licensing applications, by virtue of the 'Other' allocation in Table 5 of the IRP.

33. The purpose of Chapter VII of the ERA, providing for new generation capacity to be determined, is to provide for circumstances where the generation capacity contemplated in the IRP does not materialise for any reason, or the Minister wants to initiate an electricity procurement programme which is centralised and co-ordinated at national executive level. In that scenario, the Minister can intervene to ensure uninterrupted supply, by issuing a determination. However, this motivation is not appropriate with regard to the current Determination, for the following reasons:

a. The Minister, DMRE and NERSA have not yet provided sufficient clarity to allow and facilitate the 'Other" category of embedded and own use generation to be licensed and built. As per the IRP this should be the urgent focus of attention;

b. As explained previously the effect of the Determination would be to remove the possibility of projects being rapidly licensed under the 2GW 'Other' allocation in the IRP by NERSA, and the Determination would effectively "sterilise" all these potential projects;

c. The Second Determination provides for one or more IPP procurement programmes to procure the identified power required under the IRP, therefore there is no need to use the 2GW 'Other' allocation for another IPP procurement programme. A procurement programme contemplated in the Second Determination aimed at securing power on the grid by 2022 would have to run essentially in parallel with the procurement envisaged under the first Determination. This makes no practical sense and raises the question of why two processes would be needed;

d. To the extent that 'Other' projects are not implemented on their own initiative, over the period of establishment of the IPP procurement contemplated in the Second Determination, the Minister can simply extend the Second Determination to increase the capacity allocated and procured, to the extent necessary. Therefore, there is no loss or increase in risk in keeping the 'Other' capacity allocated to own use embedded generation without a centralised procurement programme. It is a no-regrets strategy, as opposed to the centralised procurement process which has the real risks of sterilising projects which would otherwise be rapidly built.

e. It is submitted that the licensing of 'Other' projects and the IPP procurement programmes contemplated in the Second Determination can run in parallel, and both on an expedited basis, so that delays in implementation are minimised. Launching essentially identical programmes (first and Second Determination) simultaneously is likely to have the unintended effect that they compete, which has the possibility to compromise the

intended outcomes and will introduce a lack of clarity as to what can be developed and licensed by NERSA outside of these programmes.

34. Consequently, NERSA should not concur with the full allocation of the 2GW under the Determination as it runs counter to the allocation in the IRP and would create practical obstacles to deployment of distributed generation projects which are in line with the IRP and meet the policy requirements of speed of new capacity construction and regulatory certainty.

35. Rather, NERSA should:

    a. Consult with the DMRE and the Minister to ascertain whether there are any compelling reasons for allocating a portion of the own use and embedded generation 'Other" capacity under the IRP to a centralised procurement programme with Eskom as the sole purchaser in addition to the IPP procurement programmes envisaged in the Second Determination.

    b. If there are compelling reasons for allocating a portion of the above allocation to purchase by Eskom, request the Minister to issue a revised determination which clearly apportions the capacity allocated to addressing the immediate short-fall in capacity, between own use and embedded generation and a centralised procurement programme in an appropriate split.

    c. NERSA should only concur with any revised future determination which contemplates large scale purchase of electricity by Eskom from IPPs if it does not preclude other smaller scale and mining, industrial and municipal own use projects, or other projects which are contemplated in the allocation under 'Other' in Table 5 of the IRP 2019.

Implication of Non-Concurrence by NERSA

36. In the EU Chamber's view, having regard to the requirements of sections 9 and 10 of the NER Act and NERSA's functions in terms of the ERA:

    a. The Regulator should be guided by the IRP in its consideration of the Determination. South Africa now has a cabinet approved IRP, which allocates the 2GW which is the subject matter of the Determination, to 'Other' projects which fall outside of the procurement contemplated in the Determination.

    b. In the event that the Regulator does not concur with the Determination and until such time as there is a revised Determination to the contrary, the Regulator should license projects in accordance with the prevailing IRP.

    c. Consequently, if an applicant for a generation licence demonstrates that the generation facility is in compliance with the IRP, which includes 2GW allocated to own use and embedded generation, and its licence application meets the Regulator's procedural requirements, then the Regulator must evaluate the application and, as appropriate, issue a licence. Only if the generation capacity for which application is made falls outside the allocation in the IRP must it go to the Minister for approval in terms of section 10(2)(g) of the ERA.

37. It is noted that there are other factors which may influence the speed of deployment of 'Other' projects, such as credible Power Purchase Agreements, bankability issues, the absence of clear licensing procedures, lack of clarity regarding the terms and conditions of wheeling arrangements, lack of capacity within NERSA and so forth. These factors may limit the extent to which 'Other' projects are rolled out. It is submitted that the Regulator should do all within the ambit of its powers to ensure regulatory and administrative clarity on these matters so as to expedite the generation licensing process in the interests of national energy security and economic growth and development.

38. It is noted that the ERA allows the Regulator to appoint forums consisting of as many members of the Regulator, employees of the Regulator and other persons as may be necessary to advise the Regulator in general or on a particular matter. It is submitted that the establishment of a forum with representatives of IPP industry bodies and a small number of qualified legal and technical experts should be established to help the Regulator identify any blockages to rapid rollout of new power capacity which could be addressed by the Regulator itself.

Response to Specific Questions Raised in the NERSA Consultation Paper

39. *Is 2 000MW sufficient to ensure uninterrupted supply of electricity in the short and medium-term?*

a. Electricity demand averages between 29 000 and 32 000 MW in summer and increases to 34 000 MW during peak periods (morning and early evening) in winter. South Africa, although showing some signs of decoupling, is still a largely energy intensive economy, has experienced very low levels of GDP growth over the past decade. The IRP lists the average compounded growth rate for the years 2010 to 2016 at 2.05% but with GDP growth rates of 1.4%, 0.78% and 0.2% for 2017 to 2019 (World Bank), this figure has come down and with it electricity demand. Of course, a primary driver of low GDP growth is Eskom's inability to consistently meet national demand from 2006, when the electricity supply crisis began and improved security of supply will itself support greater economic activity, business confidence and GDP growth.

b. Eskom's installed capacity of ~46 000 MW, less the international norm of 15% as a reserve margin, theoretically implies that the national demand of between 30 000 to 35 000 MW can be serviced. However, its long neglected and aging power plants are not able to do so. In reality, the situation is dire. Eskom states that it has an unplanned output assumption of 9 500 MW (from Eskom online supply status reports) which equates to more than 20% of its nominal capacity. From this, it subtracts an operating reserve margin of 2 200 MW as well as the unplanned maintenance schedule, which for the period December 2019 to March 2020 varied between 4 500 to 6 500 MW (an average of 5 500 MW is assumed). Based on these figures, the best-case scenario is that Eskom is able to supply ~63% of its nominal capacity. However, unplanned outages and breakdowns which are now occurring more regularly mean that this figures can be as high as 13 000 to 15 000 MW (14 200 MW on 9 December 2019; 14 096 MW on 3 January 2020 and since December 13 2019, breakdowns have consistently been above 11 600MW, which was the level at which Eskom implemented stage 2 load shedding), dropping the supply figure to 50% of nominal capacity, or less than 25 000 MW. This is illustrated in the Table below.

	MW	MW
Installed Capacity	46 000	46 000
Operating Reserve Margin	- 2 200	- 2 200
Unplanned Outages Provision	- 9 500	- 14 000
Planned Maintenance	- 5 500	- 5 500
Output	28 800	24 300
Averange National Demand	- 30 000	- 30 000
Shortfall	- 1 200	- 5 700
Output as % of Installed Capacity	63%	53%

c. In as much as this is a snapshot and there are many moving parts, such as new capacity coming online (REIPPPP, Medupi and Kusile) or unplanned outages being lower than forecast, it can also be that the position deteriorates – further delays in commissioning of

Kusile, Medupi or IPP's; increased demand and greater than expected unplanned breakdowns.

d. In Eskom CEO De Ruyter's words "*if we do nothing, Stage 8 will be a regular event by June 2021*". Thus, in our view the Determination, assuming it is altered to give effect to the objective of speedy deployment and to include the authorisation to license own use and embedded generation to address the immediate shortfall, should authorise the maximum amount allowed for emergency power for in the IRP, namely 3 000 MW. By doing so it will take a bigger step towards closing the supply shortfall and will deliver the following benefits:

   i. Accelerate the reduction of Eskom's reliance on operating emergency diesel and gas turbines to meet supply, which costs > than R25 / kWh versus its averaging selling prices of R1 / kWh;

   ii. Make a stronger announcement to the ratings agencies that a definitive and effective strategy is now being implemented to address the electricity supply shortfall;

   iii. A stagnant, and now shrinking economy due to the COVID19 outbreak, will benefit from a programme which creates investment, a sizable portion of which will be foreign direct investment, which in turn will create jobs and provide increased grid stability to existing businesses which will be able to operate and thus maintain jobs;

   iv. Eskom coal plant decommissioning cannot be cost-effectively delayed (as well as some older plants contravening air quality requirements). Therefore, authorising a greater amount of new capacity is a no-regrets approach as such power will be required by the electricity system in the short to medium term in any event and is provided for in the IRP. The worst case is that later centralised power purchase programmes can simply procure lower volumes of power if appropriate.

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

a. In the EU Chamber's view, there should be no minimum for any power plant which is for own use. Insisting on a minimum can only deter investment or drive it outside of the official process.

b. With regards to IPPs, the minimum size should be determined by the investors who are unlikely to invest in plants which deliver insufficient scale to be profitable.

c. Regarding the maximum size, a licensing approach would want to guard against putting all its 'eggs in one basket' so to speak, as has been learned from the Medupi and Kusile experience. Bigger projects are also likely to take longer, which would defeat the primary objective of this initiative. It is therefore suggested that no one project should be greater than 15% of 2 GW, or more than 10% of a 3 GW build programme.

d. Ultimately, the EU Chamber's view is that the scale is primarily for the applicant to decide based on its needs and requirements and it should be able to demonstrate to the Regulator that it is able to implement the licensed project satisfactorily and timeously.

e. With regards to a centralised procurement programme (such as the REIPPPP) this is a programmatic issue and should be decided by the IPP office, rather than the Regulator.

41. *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)?*

a. As mentioned in the upfront analysis and the response to the first question above the primary consideration for NERSA and the Minister should be speed of deployment. The ratings agencies have been clear in their reasoning for downgrading South Africa's credit rating that its unreliable electricity supply forms a major part of their decision. Retarding, and ultimately reversing this, will at the very minimum allow all businesses (public and private) to operate and in so doing protect, and even create new jobs if the economy is able to expand.

b. This initiative itself will create new jobs, both temporary and permanent, but the Regulator should not be distracted by this, as it has the potential to introduce less suitable solutions, increase costs and delivery times. There are other mechanisms in the economy, including Black Economic Empowerment requirements, Industry Charters, environmental and planning legislation and so forth that will bring the required pressure on any own use procurement to ensure that licensed projects are in line with national socio-economic objectives.

c. Licensing of technologies should therefore not be driven by consideration of employment creation per type of technology as this is not a primary policy objective of the energy system. A stable and cost-effective energy supply is the best way to secure current employment and to create additional employment in the economy.

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

a. Liu (Liu, 2015: Innovation in Global Energy Interconnection Technologies. Elsevier) defines Distributed Generation as *"...power generation facilities on the customer side connected to a nearby LV grid or multigeneration systems for integrated gradient utilization (including wind, solar, and other distributed renewable power generation), multigeneration equipment for residual heat, residual pressure and residual gas generation, and small natural gas-fired systems with combined cooling and heating capabilities. In essence, it is a small-capacity generating unit for development, grid connection, and energy consumption based on the proximity principle*".

b. On this basis, the EU Chamber contends that it is up to the investor to decide on the most feasible energy source of technology as long as it meets environmental and safety standards. The energy source will be decided by a business plan which is likely to consider: the type of business, the energy and storage needs, costs, access to feedstock (solar, wind, biomass, waste, gas etc), available space, location and other unique factors.

c. With regards to the energy sources to be selected under a centralised programme, as per the ERA, this will be guided by the IRP and implemented by the IPP office pursuant to a determination.

d. The EU Chamber's view that insofar as projects to be licensed exceed the required capacity there should be a preference for low GHG emitting projects over others in support of the climate change mitigation objectives of the country and in support of the sustainable development objectives in the Electricity Regulations on New Generation Capacity, issued in terms of the ERA.

43. *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?*

a. As per technology choice this should be decided by the investor in the absence of any specific requirement under the IRP.

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

a. No. For the following reasons: 1) The IRP does not allow for new coal until 2023, and therefore a separate Ministerial determination would be required for coal generation projects; 2) It is not possible to plan, secure finances, build and start operating a coal power plant by December 2021, regardless of the size; 3) Building additional coal will be contrary to national climate objectives; and 4) banks, including DFIs, are unlikely to fund new coal, again adding time and cost. This would possibly require the state to provide a guarantee or support it directly which is contrary to the stated objectives of this Determination.

45. *Should this range of energy source technologies be dispatchable?*

a. This aligns with the EU Chamber responses to questions iv and v above. This should not be an explicit requirement, both are acceptable. However, provision should be made to allow for such a possibility. This will provide an enabling environment and encourage private sector investment.

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

a. This question is addressed from two perspectives. The first is additional capacity and the second is alternate and supporting policy instruments.

b. For a centralised procurement programme to deliver power by end-2021, as the timeframes of the REIPPPP have shown, would require interventions and mechanisms to speed up the process, such as expedited approval processes.

c. Allowance for the rapid licensing of already developed projects for own use is more likely to bring additional capacity online within that timeframe and likely much faster for at least a portion of that capacity.

d. Those power users with the greatest need for energy security are also likely to implement projects most rapidly in their own interests – so there would automatically be the correct incentives for rapid delivery of new power under an open licensing process.

e. No build programme can alleviate outages and load shedding in the immediate short term. Here, Government and the Regulator should, in addition to additional capacity which unquestionably is needed, consider other proven policy tools. In this regard:

   i. Eskom's Demand Side Management programme was suspended by Eskom, without the approval of the Regulator[1], and notwithstanding the Regulator's MYPD 3 decision[2], a new agency has not been identified.

   ii. The long-term view of the Regulator is that all IDM programmes with the exception of system operator tools (such as DMP) should be implemented by a suitable agency.

   iii. In 2020, energy efficiency programmes are limited to legacy projects (pre-2015), such as Eskom CFL rollout, the appliance standards and labelling programme (UNDP/GEF) and some municipal projects under the Division of Revenue Act (DORA). The only active programme is the 12L tax incentive which targets high electricity users.

   iv. There is an urgent need for the Regulator in tandem with national ministries to identify and formulate a more strategic response to the electricity crisis – one which shields lower income groups from rising tariffs, implements Time of Use tariffs in the residential sector, promotes awareness and once again encourages, through a combination of communication, incentives and taxes for a more efficient and effective usage of South Africa's constrained electricity supply.

f. The EU Chamber does believe that emergency power is sorely needed and are of the view that if the process is simplified and the private sector encouraged through an enabling environment (for own use), that the investments will take place immediately, which will alleviate load shedding in the allowed period. It may be that not all projects will be completed by December 2021, but we do expect a net positive outcome.

g. In addition to the larger scale projects there also appears to be merit in NERSA rapidly concluding the process of establishing the long outstanding SSEG regulations that NERSA has been developing and the revision of tariff structures to move to a cost reflective approach.

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1. [1] www.nersa.org.za/Admin/NewsAndPublication/UploadImages/MYPD_Methodology_%20Consultation%20Paper_published%20on%2015%20April%2020201635471920161147 19.pdf (page 46)

2. [2] www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=8&ved=2ahUKEwinqqfMs9PoAhVfDWMBHfboB6AQFjAHegQIBhAB&url=http%3A%2F%2Fwww.eskom.co.za%2FCustomerCare%2FMYPD3%2FDocuments%2FNersaReasonsforDecision.pdf&usg=AOvVaw3sVWObC-0vzC5GmwJBs8H3 (page 30)

47. *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?*

    a. The EU Chamber is confident that if the allocated technologies, as detailed in the IRP and in a process that allows for own use, will result in the two objectives of ensuring long-term sustainability of electricity supply industry and affordability.

    b. Both these criteria will be carefully scrutinised by any user considering a sizable investment in own use generation. What would strengthen and improve return on investment and least cost electricity, and which is incumbent on the Regulator and the DMRE to ensure, is an enabling environment, including clear policy and regulatory rules (including norms and standards);

    c. With regard to procuring from IPPs, the four bid windows to date have demonstrated an effective and efficient process demonstrated by the average kWh generation costs decreasing with each round. This is a proven process from which this emergency process to procure additional power can leverage from – investors are familiar and accepting of the framework, the existing skills and expertise of the IPP office. In providing certainty this is the option most likely to lead to the shortest and most cost-effective build period.

    d. Regular procurement windows, reduced regulatory requirements for own use power generation and long-term prospects of investment opportunities will entice the industry to invest in the sector.

    e. As per worldwide experience, renewable energy prices will drop to become the most competitive sources of electricity.

    f. SA could accelerate the construction by facilitating the licencing of projects of awarded bidders (one-stop-shop, electronic submissions, etc.).

    g. What is strongly advised against is the consideration of new, untested and short-term solutions, such as power barges.

    h. To the extent that the Determination is given effect through a centralised procurement programme, the DMRE's IPP office, which administered the REIPP Procurement Programme for the period 2010 to 2018, at this stage is best placed to act as procurer for the DMRE, which is the delegated procurer in terms of the Determination. This is not explicitly stated, but it is suggested that the IPP office is well-suited to administer any bidding programme implemented to give effect to the Determination, and has existing skills, resources and experience which qualify it for the task.

NERSA Questions on the Procurement Process

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

a. Power generated for own use would not require a buyer. However, the EU Chamber notes that the risk of Eskom as a single off-taker is now taken seriously by many investors and could keep the prices of electricity higher considering the perceived risk.

b. Allowing other buyers, including creditworthy private sector companies and municipalities, to directly procure from the producing entities would allow for the reduction in the perceived risk and could bring prices down.

49. *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?*

a. In principle the concept of own use should extend to all Licensed Electricity Distributors as long as they can demonstrate that they meet all the required criteria as per the ERA. Insofar as a municipality is the proposed applicant or the off-taker of the capacity, NERSA should scrutinise whether the Licensed Distributor is in compliance with its license conditions and in particular whether it is in arrears with any payments due to Eskom. If so, such an application should be declined or at the minimum scrutinised more carefully.

b. Additionally, consideration could be given to developing a tariff for the cost of electricity transmission on the grid to ensure that Eskom is getting resources for its work as transmission operator.

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

a. As above – the same rules should apply.

51. *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?*

a. If the Determination persists with the requirement that the new generation capacity must be procured from IPPs, Eskom would be excluded as per the 2011 New Generation Capacity Regulations (GNR 399), which contain the following definition of an IPP:

> *"Independent Power Producer" or "IPP" means any person in which the Government or any organ of state does not hold a controlling ownership interest (whether direct or indirect), which undertakes or intends to undertake the development or creation of new generation capacity pursuant to a determination made by the Minister in terms of section 34 (1) of the Act'*.

b. In the EU Chamber's view, there is no pressing reason to widen the category of potential producers of new generation capacity to include Eskom, in the short term. Given the imminent restructuring of Eskom's businesses and therefore the electricity supply landscape in South Africa, it would be preferable to keep Eskom out of the 'competition' at least until that restructuring process is complete and the single buyer function is legally separated from Eskom's generation business

52. *Provide your thoughts on IPPs as the chosen builders of the new generation capacity?*

a. The view of the EU Chamber, as detailed in the main body of this submission, is that the 'Other' allocation in the IRP 2019 should be allocated to own use and embedded generation as intended in the IRP, and as such it can be built and licensed outside of a centralised procurement process. To the extent that the decision is taken to proceed with a centralised procurement programme, we believe that IPPs should be the chosen builders.

b. The merits of an IPP approach has been demonstrated by the REIPPP programme where there has been an extremely high rate of preferred projects achieving financial close and where most large scale IPP projects have been built largely on time and under fixed-price and fixed-time contracts.

c. Under an IPP approach private providers takes on the construction, financing and operational risks and removes these risks from Eskom.

d. There are strong indications of a wide range of well-developed projects by IPPs that can rapidly be brought to financial close and construction.

e. South Africa's REIPPP programme has been considered as a success to leverage investments from the private sector. It seems appropriate to continue in the same format.

53. *Provide your thoughts on the method of procurement chosen for the procurement of new generation capacity?*

a. See the response provided in the previous question. A centralised procurement programme is suitable for large-scale procurement from IPPs, but not for own use or municipal generation projects.

54. *Provide what you consider to be the risks associated with the new capacity?*

a. There is a risk that if a centralised procurement process is not used, licensed projects may not be implemented. This both puts the energy system at risk if insufficient capacity is delivered and also possibly sterilises capacity if other projects are turned down in favour of new licensees. This can be addressed by:

i. Stringent review of applications to ensure that they are well-developed and credible and have a strong likelihood of being financed, including having a bankable PPA or offtake agreement in place. NERSA can make this a requirement of licensing.

ii. Time limits imposed on licensees to achieve certain milestones, such as financial close and construction start and finish, failing which their license falls away.

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

a. The EU Chamber believes that the fastest and most cost-effective approach to increasing generation capacity is through smaller own use projects, as envisaged in the IRP, and as has been detailed in this submission. Eskom's inability to meet demand and thus provide a reliable service has shifted the business motive to invest in own use energy from a

straightforward motive of achieving an acceptable rate of return, possibly supported by internal environmental policies, to one of outright energy security and survival. This fundamentally changes the motivation for investing in own use power and one which has the greatest opportunity to contribute positively to the economy. On this basis there is supressed demand[3] and it is the Regulator's role, in line with the ERA and the IRP, to support this investment by providing an expedited licensing process for such applications.

b. Once licensed, own use projects can start delivering power within a couple of months (size dependent) and will immediately alleviate energy demand, which can only improve security of supply. This has been detailed throughout this submission and is therefore not repeated here.

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

a. NERSA must concur in order for the Determination to have legal effect. This principle has been confirmed by South African courts.

b. However, in deciding whether to concur (with the Determination in its current form, or subject to amendments being made by the Minister) NERSA must exercise its discretion in accordance with the requirements of sections 9 and 10 of the NER Act, as well as in accordance with the requirements of the Promotion of Administrative Justice Act, 2000 and the principle of legality which requires, at minimum, a rational connection between NERSA's decision and the reasons for such decision.

c. This Submission has provided a range of reasons suggesting that NERSA should exercise its discretion and not concur with the Determination since the Determination does not properly give effect to the IRP or to stated policy objectives in the energy sector. In the interests of progress and inserting clarity into the energy sector the Submission has proposed that NERSA rapidly consult with the Minister and the DMRE to arrive at a revised determination that does give effect to the IRP. The EU Chamber is of the belief that the stated intention of the Minister, to make a determination which is aligned with the IRP is unfortunately not reflected in the terms of the Determination, and that therefore the actual consequences of the Determination as outlined in this Submission were likely not intended. Therefore, such a consultation process could be rapid and need not delay either the licensing of distributed generation projects or the implementation of a centralised IPP procurement programme for an appropriate portion of the immediate short-fall if required.

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[3] Based on interviews with industry members, SAPVIA and the EU Chamber members. See https://www.dailymaverick.co.za/opinionista/2020-04-08-independent-power-generation-constraints-must-be-removed-to-get-sa-running-again/