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Re. THE GREEN CONNECTION COMMENTS ON TEEPSA BLOCK 5/6/7 - DRAFT SCOPING REPORT

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1.

A. INTRODUCTION

These comments are submitted on behalf of the Green Connection, a registered non-governmental organisation, that believes that economic growth and development, improvement of socio-economic status and conservation of natural resources can only take place within a commonly understood framework of sustainable development. The Green Connection aims to provide practical support to both the government and non-governmental/civil society sectors, which are an integral part of sustainable development.

2.

The comments relate to the draft Scoping Report (DSR) prepared as part of the Environmental and Social Impact Assessment (ESIA) process being undertaken in respect of an application for authorisation to undertake exploration well drilling in Block 5/6/7 off the West Coast of South Africa.

3.

These comments are submitted with a view to having the Green Connection's concerns and comments taken into account in finalising the DSR, including its concerns and comments regarding the terms of reference for the specialist studies and modelling to be undertaking in the subsequent impact assessment phase of the ESIA. It is at this stage in the ESIA process that interested and affected parties (I&APs) have an opportunity to influence these terms of reference to ensure that sufficient and relevant information is placed before the competent authority in the final EIA report.

4.

B. ROLE OF PASA IN NEMA EIA PROCESS

It is noted that the DSR indicates that key steps in the Scoping Phase included:

- A pre-application meeting held with the Petroleum Agency of South Africa (PASA) on 19

May 2021 '*to inform them of TEEPSA's proposed project and application for Environmental Authorisation, as well as to obtain agreement on the ESIA process*'.[1] A follow-up meeting was held with PASA on 21 February 2022; and

- Compiling an Application Form for Environmental Authorisation and DFFE National Screening Tool and submitting it to PASA.

5.

The DSR indicates further that completion of the Scoping Phase will include the *'[s]ubmission of the final Scoping Report to PASA for consideration and review. PASA will then make a recommendation on the acceptance or rejection of the report to DMRE, who will make the final decision'.*[2]

6.

With regard to the Impact Assessment Phase, the DSR indicates that the '*final ESIA Report will be submitted to PASA for consideration and review*',[3] whereafter PASA will provide a recommendation to the DMRE on whether or not to grant an environmental authorisation.

7.

On 18 June 2004, the then Minister of Minerals and Energy designated[4] PASA to perform the functions set out in Chapter 6 of the Minerals & Petroleum Resources Development Act (MPRDA).[5] It is relevant to note that the Minister was exercising powers conferred in terms of section 70 of the MPRDA, and not NEMA. Section 71 of the MPRDA sets out the functions of PASA as the designated agency, which include (among other things) that the designated agency must:

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[1] DSR, page v.
[2] Ibid.
[3] DSR, page vi.
[4] GN733 of 18 June 2004: *Designation of the Petroleum Agency South Africa (Proprietary) Limited for the purposes of the Petroleum Resources Development act, 2002 (Act No. 28 of 2002*). Section 70 of the MPRDA provides that the Minister Mineral Resources may designate an organ of state or a wholly owned and controlled agency or company belonging to the State to perform the functions referred to in Chapter 6 of the MPRDA (Petroleum Exploration and Production).
[5] Act 28 of 2002 (as amended).

> review and make recommendations to the Minister with regard to the acceptance of environmental reports and the conditions of the environmental authorisations and amendments thereto.[6] (underlining added)

8.

The MPRDA as the enabling statute thus mandates PASA to perform a very limited role relating to environmental matters, namely to review and make recommendations to the DMRE Minister with regard to:

- the acceptance of environmental reports; and
- the conditions of environmental authorisations and amendments thereto.

9.

In terms of the NEMA EIA Regulations Listing Notice 2 of 2014,[7] the Minister responsible for Mineral Resources is identified as the competent authority where the listed activity is or is directly related to (among other things) exploration of a petroleum resource. Section 42B of NEMA provides that the Minister responsible for Mineral Resources may in writing delegate a function entrusted to him/her in terms of the Act to the Director-General (DG) of the Department of Minerals and Energy; or any officer in the department of Minerals and Energy. It is relevant to note that s42B of NEMA does not empower the Minister responsible for Mineral Resources to delegate a function to state-owned agencies or companies, such as PASA. Section 42B of NEMA also does not include a power to subdelegate.[8]

10.

Thus while PASA is empowered to receive applications (made under the MPRDA, not NEMA) for reconnaissance permits, technical co-operation permits, exploration rights and

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[6] Section 71(i).

[7] GNR.984 of 4 December 2014 (as amended).

[8] Unlike s42(2)(d) of NEMA, which specifically provides that the Minister responsible for environmental matters may delegate a power or duty vested in him/her to the Director General, an MEC, the management authority of a protected area, or any organ of state (by agreement with that organ of state). In terms of s42(2)(a) this delegation must be in writing and may include the power to subdelegate.

production rights in the prescribed manner,[9] and to evaluate such applications and make recommendations to the Minister,[10] it is not empowered in NEMA environmental impact assessment (EIA) processes to 'receive applications', hold pre-application meetings with the applicant, agree the ESIA process, or to make recommendations on whether or not to grant environmental authorisation.

11.

The Green Connection submits that the pre-application meeting held with PASA on 19 May 2021 '*to inform them of TEEPSA's proposed project and application for Environmental Authorisation, as well as to obtain agreement on the ESIA process*', the subsequent meeting with PASA on 21 February 2022, as well as the submission of the EIA application to PASA, are functions that should be performed by the competent authority.

12.

The Green Connection submits further that the intended submission of the final ESIA Report to PASA *'for consideration and review*' and for PASA to thereafter provide a recommendation to the DMRE on whether or not to grant an environmental authorisation, is also not authorised by the empowering provisions of NEMA. And while PASA is empowered under a separate statutory scheme (namely the MPRDA) to review and make recommendations with regard to the acceptance of environmental reports and the conditions of environmental authorisations, PASA is not empowered under the MPRDA to perform the functions of the competent authority in accepting the final ESIA Report or to make recommendations to the DMRE on whether or not to grant an environmental authorisation.

13.

This is particularly concerning given that the MPRDA imposes a mandatory obligation on PASA to promote offshore exploration for an production of petroleum.[11] It is submitted that by allowing PASA to perform functions that should be undertaken by it as the competent

[9] Section 71(b).
[10] Section 71(c).
[11] MPRDA, section 71(a).

authority, the DMRE is unlawfully abdicating its responsibilities in the EIA process. It is also misconstruing the statutory functions of the DMRE as the competent authority in NEMA EIA processes, and the functions to be performed by PASA under the MPRDA (a material error of law).

14.

The Green Connection submits that in order for the EIA process to be lawful and procedurally fair, PASA should strictly limit its role in the EIA process to functions mandated under section 71(i) of the MPRDA.

15.

Accordingly, the Green Connection submits that the EIA application should be withdrawn, and resubmitted to the appropriate competent authority (namely the DMRE Minister, alternatively the DMRE functionary to whom the Minister has in writing delegated his powers as competent authority).

16.

C. CONCERN OVER INDEPENDENCE OF EAP AND FISHERIES SPECIALIST

The Green Connections notes with concern that the environmental assessment practitioner (EAP) (SLR Consulting) for the ESIA, as well as the fisheries specialist (Capricorn Marine Environmental) appointed by SLR to conduct the Fisheries Impact Assessment in the ESIA,[12] have both previously provided consulting services to the applicant (TEEPSA) in relation to Block 5/6/7.

17.

For example, it is noted that the *CB203D-01 3D Seismic Survey in Block 5/6/7 (ER12/3/224): Survey Close Out Report* by SLR dated June 2020 indicates that:

[12] DSR, p25.

- SLR was appointed in an 'environmental management and quality control role for the duration of the seismic survey'[13] and to undertake 'environmental compliance',[14] and that SLR's services to TEEPSA included: compilation of the close-out report on behalf of TEEPSA (including a close-out audit and performance assessment);[15] compilation of a legal register prior to the commencement of the seismic survey;[16] compilation of a Communications Plan on behalf of the Operator prior to the commencement of the seismic survey;[17] conducting environmental awareness training for all the seismic vessel crew members;[18] distributing a Notice to Mariners on behalf of the Operator to all I&APs on the project database;[19] submitting an Environmental Notification to PASA on behalf of the Operator;[20] and distributing an end of survey notification to I&APs.[21]
- Capricorn Marine Environmental (aka CapMarine) '*was appointed to provide on-board independent Marine Mammals Observer (MMO), Passive Acoustic Monitoring (PAM) and Fisheries Liaison Officer (FLO) services for the duration of the survey'*[22]*,* and that CapMarine produced a close-out report summarising their onboard activities.

18.

The EIA Regulations stipulate that an EAP and a specialist must be independent.[23] The EIA Regulations define independent as follows:

> "**independent**", in relation to an EAP, a specialist or the person responsible for the preparation of an environmental audit report, means:
>
> (a) that such EAP, specialist or person has no business, financial, personal or other interest in the activity or application in respect of which that EAP, specialist or person is appointed in terms of these Regulations; or

[13] *CB203D-01 3D Seismic Survey in Block 5/6/7 (ER12/3/224): Survey Close Out Report* by SLR dated June 2020, pages i and 1.
[14] Ibid, page 10.
[15] Ibid, page 2.
[16] Ibid p12.
[17] Ibid, page 15.
[18] Ibid, page 16.
[19] Ibid, page 20.
[20] Ibid, p19.
[21] Ibid, p57.
[22] Ibid, pages iv-v.
[23] NEMA EIA Regulations, r13(1)(a).

(b) that there are no circumstances that may compromise the objectivity of that EAP, specialist or person in performing such work;

excluding:

(i) normal remuneration for a specialist permanently employed by the EAP; or

(ii) fair remuneration for work performed in connection with that activity, application or environmental audit;

(underlining added)

19.

The Green Connection records its concern that SLR's and CapMarine's prior involvement as consultants for TEEPSA in the Block 5/6/7 3D seismic survey may compromise the objectivity of both SLR (as the EAP) and CapMarine (as the fisheries specialist) in the current exploration EIA for Block 5/6/7. Having regard to the services provided during the 3D seismic survey, the Green Connection is further concerned that SLR and CapMarine have prior and ongoing business and/or financial interests in TEEPSA's offshore oil and gas exploration project.

20.

D. TECHNICAL MODELLING STUDIES & SPECIALIST REPORTS

The DSR indicates that three Technical Modelling Studies will be undertaken, namely Drilling Discharges Modelling, Oil Spill Modelling and Underwater Noise Modelling. In addition, a Marine Ecology Impact Assessment, Fisheries Impact Assessment, Socio-Economic Impact Assessment and Climate Change and Air Emissions Impact Assessment will be undertaken.

21.

(i) OSM Study does not make provision for modelling worst-case scenario relating to duration of an uncontrolled oil spill

It is noted that the terms of reference for the OSM study indicates that the trajectory and fate of a 20-day crude oil blow-out will be modelled for a 90 day period.

22.

The DSR indicates that:

> TEEPSA motivate that 20 days is a reasonable and realistic assumption for the installation of a capping stack in the unlikely event of a blow-out. The current state of knowledge, available technology and approach to well blow-out responses by the drilling industry has advanced since, and because of, the Deepwater Horizon spill event. As a result of this advancement, the duration of the Deepwater Horizon event is not considered relevant as a benchmark of a reasonable response period. It is relevant that subsea capping and subsea containment equipment (managed by OSRL, a cooperative dedicated to response to marine pollution by hydrocarbons) is installed at Saldanha and, therefore, well placed for a rapid response to an unplanned event in Block 5/6/7.[24]

23.

While the DSR states that '*the duration of the Deepwater Horizon event is not considered relevant as a benchmark of a reasonable response period'*[25] as a result of technological advances since the Deepwater Horizon catastrophe, this statement is not referenced or validated. In addition, the capping stack held by OSRL in Saldanha Bay is a 10K capping stack, which would not be suitable in the event that the wellhead pressure exceeds 10 0000 psi. In such an event a 15K capping stack would need to be sourced from WWC in Aberdeen.

24.

The DSR indicates that site locations will be selected based on a number of criteria in order to assess the worst-case scenarios for oil spill dispersion for an unplanned event. These (and other) modelling results will in turn be used in the assessment of impacts on marine fauna an commercial fisheries.

25.

The Green Connection submits that a crude oil blow-out with a 20-day duration is not a worst case scenario for oil spill dispersion (it is more likely a best case scenario), especially if the

[24] DSR. Section 6.4.6.6, page 103.
[25] Ibid.

wellhead pressure exceeds 10 000 psi or if capping efforts are unsuccessful and it becomes necessary to drill a relief well.

26.

In contrast, the *Deepwater Horizon* oil spill duration was 87 days (before it was finally capped).[26]

27.

Elsewhere in the world, much longer 'worst case scenario' durations have been selected for the purposes of OSM. For example:

- OSM by RPS carried out in relation to an impact assessment conducted by ERM for the *Tamirand Resources – Tui Field* in New Zealand covered a 45-day and 110-day well blowout scenario.[27]
- A European Commission (EC) for a Regulation on Offshore Safety[28] technical peer review meeting report highlights, for example, that:

> JRC and other Commission representatives questioned if using the lower duration interval (15-50 days) is appropriate. One study indicates that once a blowout remains out of control for more than 14 days, chances are higher that it can only be controlled within 50-80 days (to allow time to drill a relief well)… [29]

and

[26] https://www.epa.gov/enforcement/deepwater-horizon-bp-gulf-mexico-oil-spill

[27] Technical Review of Oil Spill Modelling - Tamarind Taranaki Ltd. Application EEZ100016, conducted by Coffey on behalf of the New Zealand Environmental Protection Authority (26 June 2018), at pages 3 – 4. Available online at https://www.epa.govt.nz/assets/FileAPI/proposal/EEZ100016/External-advice-and-reports-EPA-reports/Coffey-technical-review-oil-spill-modelling-v3-26-06-2018-EEZ100016.pdf

[28] Which was subject to technical peer reviews by the EC in 2012, chaired by an independent representative of UK Health and Safety Laboratory, and was accompanied by an Impact Assessment regarding policy alternatives, their effects on risk reduction of a major offshore incident, and the costs associated with the implementation of the alternatives. See PEER REVIEW MEETINGS ON THE ASSESSMENT OF RISKS IN THE OFFSHORE OIL AND GAS INDUSTRY 28 MARCH 2012 & 2 MAY 2012 SUMMARY REPORT, available online at: https://ec.europa.eu/energy/sites/ener/files/20120703_summary_report_en.pdf

[29] PEER REVIEW MEETINGS ON THE ASSESSMENT OF RISKS IN THE OFFSHORE OIL AND GAS INDUSTRY 28 MARCH 2012 & 2 MAY 2012 SUMMARY REPORT at p8, available online at: https://ec.europa.eu/energy/sites/ener/files/20120703_summary_report_en.pdf, citing *Report for Statoil ASA: Miljørisikoanalyse for letebrønn 30/6-28 Crux I Nordsjøen – App. 1 Technical note to blowout scenario analysis (DNV reference: 2011-0830 / 13GN2EA-2, Rev. 00, 2011-07-12).*

> The Commission remarked that in the Maitland report of December 2011 (containing an independent review of the UK regulatory regime for offshore oil and gas), a recommendation has been made to plan for a worst-case scenario of 90 days for a blowout.[30]

- In a 2015 peer-reviewed report commissioned by the Wilderness Society South Australia Inc. (WSSA) by Lebreton titled *Stochastic analysis of deep sea oil in the Great Australian Bight* (hereinafter referred to as the 'Lebreton report'),[31] it is pointed out with regard to oil spill duration that estimating the release duration for a deep-water oil spill associated with a loss of well control event requires calculating the minimum time for the relief equipment to arrive on site and perform the blowout kill operations. BP's oil spill trajectory modelling study indicated two release duration scenarios: 35 days corresponding to the time required to place a capping system on the damaged well; and 158 days being the estimated time to drill a relief well. However, only the 35-day duration was used in the BP numerical modelling results as BP purported that this was the most credible worst case scenario. The choice of this duration was questioned by Australian Government officials. Lebreton indicates that the 35 day duration scenario was based on detailed logistics for the mobilisation and installation of a capping stack (see capping schedules shown in Tables 5 and 6 of the Lebreton Report).[32] Lebreton indicates that while best practice should be to take a conservative approach and use a release duration equivalent to the time required to drill a relief well, the 35 day and 87 day scenarios were selected to better compare with BP's modelling assessment.[33]

28.

The duration of a blowout is clearly a key input to an OSM study. An assumed low duration

[30] Ibid, p9.
[31] Lebreton (2015) *Stochastic analysis of deep sea oil in the Great Australian Bight*, p2. The report relates to a [then] proposed exploration drilling programme by British Petroleum (BP), joined by Norway's Statoil, in the Great Australian Bight (GAB). WSSA had expressed serious concerns regarding the likely impacts on the environmental values of marine ecosystems in the GAB, including [then] recently proclaimed Marine Parks, as well as over the oil spill response capabilities in a region where the oil industry was not established and did not have significant support resources available locally like in the Gulf of Mexico. The Lebreton report presents an assessment of socio-economic and ecological impacts of deep water oil spill scenarios based on best available information and industry standard numerical modelling methods.
[32] Lebreton, p20.
[33] Lebreton, p21.

will necessarily lower the prediction of the amount of oil that may be spilled into the ocean, and will also lower the significance of potential environmental and socio-economic impacts arising from any catastrophic spill.

29.

In light of the above, and having regard to strong currents combined with frequent extreme weather and wave conditions in the area of interest that could frustrate any rapid response to a deep-sea or ultra-deep sea blow-out, it is submitted that the OSM study should also include a worst-case scenario duration of at least 87 days for a crude oil spill due to a wellhead blowout. Such information is necessary in order for I&APs to have a realistic assessment of the negative impacts of a catastrophic oil spill, and for the relevant authority to be able to make an informed decision on authorisation.

30.

(ii) Relevant Parameters and Assumptions for Technical Modelling Studies not provided

It is noted that in respect of each of the Technical Modelling Studies, the DSR indicates that details of the relevant parameters and assumptions will be provided in the Assessment Phase, and that these parameters and assumptions will be reviewed in the 'independent' peer review study.[34]

31.

The Green Connection objects to the relevant parameters and assumptions being excluded from the DSR. Doing so prevents I&APs (and their experts) from commenting meaningfully on the appropriateness of these parameters and assumptions at the Scoping Phase, and denies I&APs the opportunity to influence the parameters selected and assumptions made before the Technical Modelling Studies are undertaken.

[34] DSR, sections 9.2.1.1, 9.2.1.2 and 9.2.1.3.

32.

The selection of relevant parameters and assumptions made are particularly relevant in relation to the planned Oil Spill Modelling of a crude oil blowout, and the Terms of Reference provided in the DSR for the OSM study should provide sufficient information to enable Green Connection (and other I&APs) to make meaningful comments.

33.

In particular, the Terms of Reference do not indicate (among other things):

- What the assumed flow-rate will be for the modelling, including a worst-case oil spill scenario assumed flow-rate;
- What the assumed total volume of oil spilled into the ocean will be over the modelled durations, including worst-case scenario volumes (for example, the *Deepwater Horizon* oil spill released approximately 507,245m^3 of oil into the ocean over 87 days);
- What critical threshold assumptions will be used for significant slick thickness and significant shoreline mass flux, including critical threshold assumptions that will be used to determine impacts on socio-economic resources;
- With regard to sub-surface spill modelling, how the magnitude and direction of currents used in any such sub-surface modelling will be determined (including variabilities in current instantaneous velocities, localisation, whether any jet and plume will been simulated, what information will be provided e.g. the diameter of the pipe from which the oil escapes to enable calculation of oil exit velocity, whether the distribution of oil on the sea floor from multiple pathways will be predicted etc.);
- What the assumed viscosity of anticipated spilled crude oil will be; and
- How underlying data informing the various assumptions made in the OSM study will be validated, especially where such data is provided by the applicant.

34.

Assumptions made for the purposes of the OSM study have the potential to have a significant bearing on the results of the OSM study. The Green Connection submits that in order for the

OSM report to be credible and the EIA process procedurally fair, these assumptions should be clearly stated in the Terms of Reference, and I&APs should be afforded an opportunity to provide comment on these assumptions.

35.

Given that the technical modelling studies '*will not assess any potential impacts as such, but rather provide supporting information for use in other specialist studies, which will review and interpret data relevant to identifying and assessing environmental and social impacts that might occur as a result of the proposed exploration activities in their particular field of expertise*',[35] a flawed OSM study will in turn undermine the credibility of the subsequent specialist studies as well as the assessment of the significance of potential impacts.

36.

A catastrophic oil spill can result in significant environmental and socio-economic impacts. It is for this reason that an EIA for offshore oil and gas exploration is a listed activity under NEMA, and a robust, accurate and objective OSM study is required in order to determine (among other things) the potential ecological and socio-economic impacts of a worst-case scenario oil spill resulting from a wellhead blowout.

37.

(iii) 'Independent' Review of Drilling Discharges and OSM

It is noted that the DSR indicates that an 'independent' peer review of drilling discharges and oil spill modelling studies will be undertaken. The brief terms of reference provided for this review indicates that this will include a review and comment on *'modelling methodology document'*, which in turn will include a '[*d]escription of model post-processing including the thresholds to be applied (i.e. oil thickness, suspended sediment concentration, etc.) and example outputs'*.[36]

[35] DSR, section 9.2, page 276.
[36] DSR, section 9.2.1.4, page 278.

38.

While no issue is taken regarding the independence of Mr. Luger (PRDW) from the applicant (within the meaning of 'independent' as described in the NEMA EIA Regulations), it is submitted that any review conducted by Stephen Luger should not be characterised as being independent of the EAP and the planned OSM study. As described in Table 3.1,[37] Mr. Luger clearly forms part of the ESIA project team and specialists.

39.

Green Connection submits that a credible peer review mechanism should be established as part of the EIA process for all Technical Modelling Studies and Specialist Reports. The Green Connection submits further that detailed and precise terms of reference for each technical modelling study, specialist study and peer review should be clearly stated in the DSR, together with the details of each specialist and suggested peer reviewers.

40.

The Green Connection submits further that, in order to make the EIA process credible, I&APs should be afforded a reasonable opportunity to comment on the selection of proposed peer reviewers, as well on the detailed and precise terms of reference for the peer reviewers.

41.

(iv) Socio-Economic Impact Assessment

While the DSR includes terms of reference for a Socio-Economic Impact Assessment, the terms of reference limit this assessment to the social impacts and benefits associated with the proposed exploration drilling activities, and to seek to identify the social impacts of a major oil spill.

42.

Despite acknowledging that the greatest potential risk of oil and gas exploration activities, in

[37] DSR, table 3.1 page 25.

the marine environment, is the impact of an unplanned event such as a well blow-out with negative social and economic impacts, the DSR suggests that that the '*assessment of the economic impacts as a result of unplanned events (i.e. such as a well blow-out) is challenging to accurately perform due to the many variables, assumptions and uncertainties that would be involved. The outputs of such an assessment are likely to be so broad that it would be of little direct value in informing the impact assessment process or the development of mitigation measures and ultimately decision-making*'.[38]

43.

Instead of conducting such an assessment, the DSR seeks to rely on its oil spill response planning through the development of well-specific OSCPs (in respect of which only framework documents will be included in the ESMP for public comment – discussed in more detail below) and OSM. It is also suggested in the DSR that the management of compensation in the event of a major oil spill falls outside of the scope of the ESIA process and will not be addressed directly, and that a process of determining the economic effects and related compensation would be initiated.

44.

Notwithstanding that it may be difficult to perform, the Green Connection submits that this is a crucial aspect of the EIA which cannot be ignored, and that an assessment of the economic impacts of a major spill (acknowledged in the DSR as the greatest potential risk of oil and gas exploration) and the adequacy of provisions made by TEEPSA to compensate anyone impacted by such a spill, should be conducted in the assessment phase of the EIA. Not only would such an assessment be directly relevant to a consideration of the Need and Desirability of the planned exploration drilling activities, but the potential economic impact of a major oil spill (including but not limited to the potential economic impact on small-scale fishers and communities that are dependent on the oceans for their livelihoods) is a highly relevant factor that the decision-maker will have to take into account when making the decision on authorisation. An *ex post facto* determination of the economic impacts of an oil spill defeats

[38] DSR, p280.

the objective of an EIA process, which is to identify and assess the potentially significant impacts of a proposed project.

45.

(v) Underwater Noise Modelling

It is noted that the DSR makes provision for an underwater noise modelling study to be undertaken, which is largely a desktop exercise.

46.

The Green Connection submits that the underwater noise modelling should include *in situ* testing to 'ground truth' the modelling and accurately determine the potential noise impacts associated with various aspects of the proposed exploration drilling programme (sound in the ocean is affected by pressure, salinity, temperature and temperature gradients, and can travel many kilometres from the source). The Green Connection submits further that the impacts of noise on all species should be assessed (different species have different sensitivities to noise), including (but not limited to) potential impacts on the migration of snoek (a species that is important to the livelihoods of small-scale fishers) and juvenile turtles (which are significant from a biodiversity perspective given their endangered status) that are in turn dependent on other species.

47.

E. BLOWOUT CONTINGENCY PLAN (BOCP) AND OIL SPILL CONTINGENCY PLAN (OSCP)

The DSR indicates that *'[a]lthough the probability of a well blow-out is extremely low, it is a worst-case scenario that provides the greatest environmental risk during drilling operations.'*[39] The DSR states further that TEEPSA will have a BOCP in place that sets out its detailed response plan and intervention strategy.

[39] DSR, section 6.4.4.2.4, page 81.

48.

The DSR also indicates in relation to an uncontrolled wellhead blow-out that *'[a] key response to such unplanned events, is a well-specific Oil Spill Contingency Plan (OSCP) that is driven by well-specific oil spill modelling, intensive pre-planning and appropriate preparation*'.[40]

49.

The DSR states further that *'[t]he ESMP will specify commitments on the approach to and key components of an OSCP. Framework documents for OSCP and Blow-Out Contingency Plan (BOCP), which give an indication of the typical content, will be included in the ESMP'.*[41]

50.

It is submitted that the final Scoping Report should clearly indicate that an OSCP and BOSCP will be included in the draft EIA report document set. Among other things, these plans should deal with specific equipment that will be available (including any offshore drilling equipment should a relief well need to be drilled), as well as the logistics informing actual response time etc. (such as – but not limited to - transport or shipping requirements for both the Saldanha Bay and Aberdeen capping stack mobilisation scenarios, implications of attempting to install a capping stack at a deep sea location in potentially adverse and challenging weather conditions, implications of having to drill a relief well should capping fail, and associated time requirements for all scenarios).

51.

It is submitted that a failure to make these plans available for comment by I&APs during the EIA process will be procedurally unfair, and will result in any future decision on authorisation being unlawful and vulnerable to being set aside on appeal and/or judicial review.

[40] DSR, section 9.2.2.4, page 280.
[41] Ibid.

52.

F. NEED AND DESIRABILITY

The NEMA EIA Regulations stipulate that a scoping report must include a motivation for the need and desirability for the proposed development, including the need and desirability of the activity in the context of the preferred location.[42]

53.

With regard to need and desirability, a distinction is drawn between the 'general purpose and requirements' of the proposed activity and 'need and desirability'. The 2017 *Guideline on Need and Desirability* states as follows:

> **In order to properly interpret the EIA Regulations' requirement to consider "need and desirability", it is necessary to turn to the principles contained in NEMA, which serve as a guide for the interpretation, administration and implementation of NEMA and the EIA Regulations**. With regard to the issue of "need", it is important to note that this "need" is not the same as the "general purpose and requirements" of the activity. While the "general purpose and requirements" of the activity might to some extent relate to the specific requirements, intentions and reasons that the applicant has for proposing the specific activity, **the "need" relates to the interests and needs of the broader public**.
> …
> The consideration of "need and desirability" in EIA decision-making therefore requires the **consideration of the strategic context of the development proposal along with the broader societal needs and the public interest**. The government decision-makers, together with the environmental assessment practitioners and planners, are therefore accountable to the public and must serve their social, economic and ecological needs equitably. Ultimately development must not exceed ecological limits in order to secure ecological integrity, while the proposed actions of individuals must be measured against the short-term and long-term public interest in order to promote justifiable social and economic development – i.e. ensuring the simultaneous achievement of the triple bottom-line. Considering the merits of a specific application in terms of the need and desirability considerations, it must be decided which alternatives represent the "most practicable environmental option", which in terms of the definition in NEMA and the purpose of the EIA Regulations are that option that provides the most benefit and causes the least damage to the environment as a whole, at a cost acceptable to society**, in the long-term as well as in the short-term**.[43] (emphasis added)

[42] NEMA EIA Regulations, Appendix 2, section 1(b).
[43] DEA (2017) *Guideline on Need and Desirability*, Department of Environmental Affairs, at p 10.

54.

The Guideline requires need and desirability assessments to address the impact of planned activities on global and international responsibilities relating to the environment, including climate change.[44]

55.

(i) Description of Need and Desirability of proposed exploration project

The DSR addresses need and desirability in its executive summary, and in Chapter 5.

56.

In the executive summary, the DSR:

- Acknowledges that South Africa, like the rest of the world, is vulnerable to climate change;
- Makes reference to global concern of the need to reduce greenhouse gas (GHG) emissions and achieve carbon neutrality by 2050;
- Indicates that South Africa has a high dependency on fossil fuels and, as one of the top 20 global GHG emitters, will need to make substantial emission cuts;
- States that the rapid transition to carbon neutrality presents a potential risk to economic growth and sustainable development if not managed properly, and that South Africa is committed to 'just' transition to a net-zero economy and climate resilient society (as per South Africa's Low-Emission Development Strategy (LEDS) and draft NDC) '*whereby the need to reduce emissions is balanced with the need to grow the economy, create jobs and develop skills, so that the needs of vulnerable groups are addressed*.'[45]

[44] Ibid, paragraph 1.1.8, page 11.
[45] DSR, pvii.

- States further that there is a drive from National Government to stimulate development and grow the economy with a strong focus on job creation in all sectors, whilst protecting the environment, and that:

> In order to facilitate this economic growth and reduce dependency on imported fuel products, there is a critical need to ensure that there is sufficient, stable capacity in the country's energy supply by diversifying the primary energy sources within South Africa. In this regard, South Africa needs to balance the three core dimensions of what has been defined as the "energy trilemma": (1) affordability and accessibility, (2) energy security, and (3) environmental sustainability. In weighing up these core dimensions, the South African Government policy currently supports exploration for indigenous oil and gas resources and currently promotes the use of natural gas as part of the energy mix in the short- to medium-term up to 2030 (as per the Integrated Resource Plan (IRP) 2019).'[46]

- Acknowledges that the use of fossil fuels is not aligned with other National and International policies and plans, which identify the need to reduce the reliance on fossil fuels for South Africa (and worldwide) to reduce its GHG emissions and meet its commitments in this regard. The DSR goes on to state that:

> Notwithstanding the above, natural gas is included in the energy mix of the country to serve as a transition or bridge on the path to carbon-neutrality from 2050 onwards (as per the Paris Agreement) and provide the flexibility required to complement renewable energy sources (as per the IRP 2019). The "Just Transition and Climate Pathways Study" (NBI, 2021) concludes that a lack of gas supply threatens South Africa's decarbonisation strategy because the synfuels, power and industrial sectors would rely on carbon-intensive fuels (e.g., coal and diesel) for longer. In addition to the use of natural gas for electricity generation, the many other uses (e.g., transportation fuels, asphalt, and feedstocks for making chemicals, polyurethane, solvents, plastics, and other synthetic materials) will also need to see adaptation and mitigation during this transition period.[47]

- States that it acknowledges that the proposed exploration project would not result in the production of oil and gas, but rather the generation of information on possible indigenous resources. The DSR argues that by gaining a better understanding of the extent, nature and economic feasibility of extracting these potential resources, the viability of developing indigenous gas resources would be better understood. It goes on

[46] Ibid.
[47] Ibid.

to suggest that the proposed exploration project, as contemplated (i.e. not considering possible production): has no direct influence on South Africa's reliance on fossil fuels and whether consumers use more or less oil or gas, nor on which types of fossil fuels contribute to the country's energy mix; will not necessarily change how fossil fuels are used in South Africa; and has no direct influence on GHG emissions that would arise from the consumption of fossil fuels. The DSR states further that these aspects are influenced by South Africa's energy and climate change related policies, the financial costs of the various energy sources, and consumer choices in this regard.

- Suggests that the proposed exploration project will potentially lead to South Africa optimising its own indigenous resources to provide its identified oil and gas needs until the 2050 deadline to achieve carbon neutrality, rather than having to mainly import, as at present. The DSR suggests further that it won't necessarily change how fossil fuels are used in the short- to medium-term in the transition towards the goal of carbon neutrality by 2050, and that these National strategic policy issues relating to energy and climate change fall beyond the scope of this exploration project ESIA.

57.

The DSR states that Chapter 5 on Need and Desirability provides an overview of the 'need and desirability' of the proposed exploration project, *'and essentially considers the strategic context of the project proposal within the broader societal needs and public interest'.*[48] The chapter goes on to highlight the applications for the use of hydrocarbons in the South African economy, and claims to indicate how these applications are aligned with the strategic context of South African national policy and energy planning, broader societal needs, and regional planning. Various policy documents (many of which pre-date the 'climate crisis' which we discuss in more detail below) are referenced to support this contention.

58.

It is noteworthy, however, that the DSR concedes that the National Climate Change Response White Paper ultimately recommends renewable energy and not fossil fuels (including gas) for

[48] DSR, p49.

climate change mitigation.

59.

While seeking to limit the consideration of Need and Desirability to the exploration drilling project 'as contemplated (i.e. not considering possible production)', the DSR goes on to emphasise that the successful exploitation of oil and gas resources would contribute to growth of the economy and relieve the balance of payments (without addressing the economic growth opportunities presented by the further roll-out of renewable energy options),[49] and uncritically presents the 'the ongoing exploration of local natural gas reserves'[50] as a key action required to ensure that natural gas is a viable transitional fuel for use in the national electricity generation mix (while making no reference to the negative implications of further emissions of methane gas associated with natural gas exploration, production, transportation and use).

60.

(ii) Discussion of Need and Desirability

Given that exploration operations are intended to define traps to be tested by drilling of a well with the intention of locating a discovery (of hydrocarbons below the seabed), and which in turn would likely lead to production operations should commercially exploitable hydrocarbon resources be discovered, the Green Connection is of the view that addressing the need and desirability within the context of ecologically sustainable development should give consideration to the potential impacts of the proposed exploration for new offshore oil and gas resources **throughout its life cycle**[51] (rather than ring-fencing the consideration of need and desirability to the exploration well drilling phase only).

61.

While the Green Connection is aware that the NEMA EIA listing notices list exploration

[49] DSR, at p53.
[50] DSR, at p54.
[51] Section 2(4)(e) of NEMA stipulates that responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.

activities separately to other stages in upstream offshore oil and gas development (such as activities requiring a production right under the MPRDA), it is submitted that in reality these activities are successive steps in a single process (which culminates in the production and combustion of oil and gas and the emission of GHGs that will exacerbate the climate crisis and impact on the livelihoods and access to food of small-scale fishers and fishing-dependent communities). The Green Connection submits that it is artificial to exclude a consideration of the impacts of future offshore oil and gas production, as well as the need for and desirability of producing oil and gas, when assessing the potential impacts of the exploration activities. Under the MPRDA, the close connection between exploration and production is also clear: section 82 of the MPRDA provides that the holder of an exploration right *'has the exclusive right to apply for an be granted a production right in respect of the petroleum and the exploration area in question'.* The granting of environmental authorisation for exploration drilling lays the foundation for the future approval of an environmental authorisation for production (as well as the future granting of a production right under the MPRDA).

62.

The Green Connections submits that a proper assessment of Need and Desirability should have regard to:

- The lifecycle implications of developing new oil and gas fields in Block 567 having regard to the climate crisis;
- The lifecycle implications of developing new oil and gas fields in Block 567 on South Africa's ability to meet its international climate change commitments (including whether the implications this may have on South Africa's ability to achieve its updated NDC mitigation targets);[52] and
- Ecological and socio-economic impacts associated with a major oil spill (such as an uncontrolled wellhead blowout), including (but not limited to) potential impacts on

[52] Available online at: https://www.dffe.gov.za/sites/default/files/reports/draftnationalydeterminedcontributions_2021updated.pdf#:~:text=South%20Africa%E2%80%99s%20intended%20nationally%20determined%20contribution%20%28INDC%29%28RSA%2C%20n.d.%29,Agreement.%20The%20INDC%20and%20first%20NDC%20are%20identical.

small-scale fishers and coastal communities that depend on the ocean for their livelihoods, as well as potential impacts on living organisms in South Africa's coastal waters.[53]

63.

(iii) The 'climate crisis'

Internationally, climate change has recently been acknowledged as a 'crisis' with human-induced climate change impacts being experienced in every region. It is also recognised that the climate change 'crisis' requires immediate, rapid and large-scale reductions in greenhouse gas (GHG) emissions to limit climate warming.

64.

In August 2021, the Intergovernmental Panel on Climate Change (IPCC) (an international body for assessing the science related to climate change) released its 6th Assessment Report (AR6).[54] In its summary for policymakers, the IPCC indicates (among other things) that:

- It is unequivocal that human influence has warmed the atmosphere, ocean and land, and that widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred;[55]
- The scale of recent changes across the climate system as a whole – and the present state of many aspects of the climate system – are unprecedented over many centuries to many thousands of years;[56]

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[53] In terms of the National Environmental Management: Integrated Coastal Management Act 24 of 2008 (NEM:ICMA), the '**interests of** the whole community' is defined as meaning the collective interests of the community determined by:

(a) **prioritising the collective interests in coastal public property of all persons living in the Republic over the interests of a particular group or sector of society**;
(b) **adopting a long-term perspective that takes into account the interests of future generations in inheriting coastal public property and a coastal environment characterised by healthy and productive ecosystems and economic activities that are ecologically and socially sustainable**; and
(c) **taking into account the interests of other living organisms that are dependent on the coastal environment.** (emphasis added)

[54] Climate Change 2021: The Physical Science Basis, available online at: https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/

[55] Para A.1

[56] Para A.2

- Human-induced climate change is already affecting many weather and climate extremes in every region across the globe. Evidence of observed changes in extremes such as heatwaves, heavy precipitation, droughts, and tropical cyclones, and, in particular, their attribution to human influence, has strengthened since AR5;[57]
- Global surface temperature will continue to increase until at least mid-century under all emissions scenarios considered, and that global warming of 1.5°C and 2°C will be exceeded during the 21st century unless deep reductions in CO_2 and other GHG emissions occur in the coming decades;[58]
- Many changes in the climate system become larger in direct relation to increasing global warming. They include increases in the frequency and intensity of hot extremes, marine heatwaves, heavy precipitation, and, in some regions, agricultural and ecological droughts; an increase in the proportion of intense tropical cyclones; and reductions in Arctic sea ice, snow cover and permafrost;[59]
- Continued global warming is projected to further intensify the global water cycle, including its variability, global monsoon precipitation and the severity of wet and dry events;[60]
- Many changes due to past and future GHG emissions are irreversible for centuries to millennia, especially changes in the ocean, ice sheets and global sea level;[61]
- From a physical science perspective, limiting human-induced global warming to a specific level requires limiting cumulative CO_2 emissions, reaching at least net zero CO_2 emissions, along with strong reductions in other GHG emissions. Strong, rapid and sustained reductions in CH_4 emissions would also limit the warming effect resulting from declining aerosol pollution and would improve air quality.[62]

65.

On 9 August 2021, the IPCC issued a press release relating to its AR6 report. It states that the report provides new estimates of the chances of crossing the global warming level of 1.5°C in

[57] Para A.3
[58] Para B.1
[59] Para B.2
[60] Para B.3
[61] Para B.5
[62] Para D.1

the next decades, and finds that unless there are immediate, rapid and large-scale reductions in GHG emissions, limiting warming to close to 1.5°C or even 2°C will be beyond reach.[63]

66.

Also on 9 August 2021, UN Secretary-General António Guterres described the AR6 report as nothing less than "*a code red for humanity. The alarm bells are deafening, and the evidence is irrefutable*".

67.

Guterres is reported as noting that the internationally agreed threshold of 1.5 degrees above pre-industrial levels of global heating was perilously close, and that we are at imminent risk of hitting this threshold in the near term. Guterres is indicated as advising that the only way to prevent exceeding this threshold, is by urgently stepping up our efforts, and pursuing the most ambitious path. Guterres is reported as stating that solutions are clear: "*Inclusive and green economies, prosperity, cleaner air and better health are possible for all, if we respond to this crisis with solidarity and courage*". Ahead of the COP26 climate conference in Glasgow in November 2021, Guterres stated that all nations needed to join the net zero emissions coalition, and reinforce their promises on slowing down and reversing global heating "*with credible, concrete, and enhanced Nationally Determined Contributions (NDCs)*" that lay out detailed steps.

68.

In April 2022, Guterres tweeted that *'[c]limate activists are sometimes depicted as dangerous radicals. But the truly dangerous radicals are the countries that are increasing the production of fossil fuels. Investing in new fossil fuels infrastructure is moral and economic madness'*.[64] Addressing graduate students in May 2022, Guterres expressed the view that Investing in fossil fuels is now *"a dead end - economically and environmentally. No amount of greenwashing or spin can change that. So, we must put them on notice: Accountability is coming for those who liquidate our future."*[65]

[63] https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/
[64] https://twitter.com/antonioguterres/status/1511294073474367488?lang=en
[65] https://news.un.org/en/story/2022/05/1118932

69.

The 26th Conference of the Parties of the UNFCCC (COP26) was held in Glasgow in the last quarter of 2021. Recognition of the climate 'crisis', as well as the urgent need to increase effort and to accelerate action to address climate change (including by developing nations), are reflected in the outcome of COP26 and recorded in the Glasgow Climate Pact. The Glasgow Climate Pact (among other things):

- Expresses alarm and utmost concern that human activities have caused around 1.1°C of global warming to date and that impacts are already being felt in every region;
- Reaffirms the long-term global goal to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
- Recognizes that the impacts of climate change will be much lower at the temperature increase of 1.5°C compared with 2°C and resolves to pursue efforts to limit the temperature increase to 1.5°C;
- Recognizes that limiting global warming to 1.5°C requires rapid, deep and sustained reductions in global GHG emissions, including reducing global carbon dioxide emissions by 45 per cent by 2030 relative to the 2010 level and to net zero around mid-century as well as deep reductions in other GHGs;
- Also recognizes that this requires accelerated action in this critical decade, on the basis of the best available scientific knowledge and equity, reflecting common but differentiated responsibilities and respective capabilities and in the context of sustainable development and efforts to eradicate poverty;
- Invites Parties to consider further actions to reduce by 2030 non-carbon dioxide GHG emissions, including methane;
- Calls upon Parties to accelerate the development, deployment and dissemination of technologies, and the adoption of policies, to transition towards low-emission energy systems, including by rapidly scaling up the deployment of clean power generation and energy efficiency measures, including accelerating efforts towards the phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies, while providing

targeted support to the poorest and most vulnerable in line with national circumstances and recognizing the need for support towards a just transition;

- Emphasizes the importance of protecting, conserving and restoring nature and ecosystems, including forests and other terrestrial and marine ecosystems, to achieve the long-term global goal of the Convention by acting as sinks and reservoirs of GHGs and protecting biodiversity, while ensuring social and environmental safeguards.

70.

The climate 'crisis' is also recognised by the International Energy Agency (IEA), of which South Africa is an IEA associated country. During or about July 2021, the IEA published its *Net Zero by 2050 – A Roadmap for the Global Energy Sector* report. In the foreword to this report, the Executive Director of the IEA states (among other things) as follows:

> We are approaching a decisive moment for international efforts to tackle the climate crisis – a great challenge of our times. The number of countries that have pledged to reach net-zero emissions by mid-century or soon after continues to grow, but so do global greenhouse gas emissions. This gap between rhetoric and action needs to close if we are to have a fighting chance of reaching net zero by 2050 and limiting the rise in global temperatures to 1.5 °C.
>
> Doing so requires nothing short of a total transformation of the energy systems that underpin our economies…
>
> Despite the current gap between rhetoric and reality on emissions, our Roadmap shows that there are still pathways to reach net zero by 2050. The one on which we focus is – in our analysis – the most technically feasible, cost-effective and socially acceptable. Even so, that pathway remains narrow and extremely challenging, requiring all stakeholders – governments, businesses, investors and citizens – to take action this year and every year after so that the goal does not slip out of reach.
>
> This report sets out clear milestones – more than 400 in total, spanning all sectors and technologies – for what needs to happen, and when, to transform the global economy from one dominated by fossil fuels into one powered predominantly by renewable energy like solar and wind. Our pathway requires vast amounts of investment, innovation, skilful policy design and implementation, technology deployment, infrastructure building, international co-operation and efforts across many other areas.
>
> Since the IEA's founding in 1974, one of its core missions has been to promote secure and affordable energy supplies to foster economic growth. This has remained a key concern of our Roadmap, drawing on special analysis carried out with the International Monetary Fund and the International Institute for Applied Systems Analysis. It shows that the enormous challenge of transforming our energy systems is also a huge opportunity for

> our economies, with the potential to create millions of new jobs and boost economic growth.
>
> Another guiding principle of the Roadmap is that clean energy transitions must be fair and inclusive, leaving nobody behind. We have to ensure that developing economies receive the financing and technological know-how they need to continue building their energy systems to meet the needs of their expanding populations and economies in a sustainable way. It is a moral imperative to bring electricity to the hundreds of millions of people who currently re deprived of access to it, the majority in of them in Africa…

71.

On fossil fuels used in energy production, the report states that:

> ***There is no need for investment in new fossil fuel supply in our net zero pathway.***
> Beyond projects already committed as of 2021, there are no new oil and gas fields approved for development in our pathway, and no new coal mines or mine extensions are required.

72.

The Green Connection submits that within the context of the climate change 'crisis' and the reality that the extraction and use of fossil fuels (including natural gas) will inevitably add to GHG emissions (including of methane gas), the proposed exploration drilling project it neither needed nor desirable.

73.

As was noted above, the DSR references the "*Just Transition and Climate Pathways Study*" (NBI, 2021) in support of the contention that that a lack of gas supply threatens South Africa's decarbonisation strategy because the synfuels, power and industrial sectors would rely on carbon-intensive fuels (e.g., coal and diesel) for longer, and that in addition to the use of natural gas for electricity generation, the many other uses (e.g., transportation fuels, asphalt, and feedstocks for making chemicals, polyurethane, solvents, plastics, and other synthetic materials) will also need to see adaptation and mitigation during this transition period.

74.

However, two recent independent studies challenge the view that fossil gas is necessary for electricity generation and as a transition fuel:

74.1. The International Institute for Sustainable Development's (IISD) *Gas Pressure: Exploring the case for gas-fired power in South Africa* (March 2022) report points out that while there used to be a rational view that fossil gas would be necessary either during a transition to low-carbon energy or as part of the long-term energy mix for electricity production:

> ….revolutions first in renewable energy costs and then in battery storage costs have upended this view. Analysis of the South African electricity system shows that gas supply is not technically necessary until at least 2035, if ever. In the last few years, either the risks associated with gas have increased, or the understanding of existing risks has increased. Consequently, South Africa may see significant negative outcomes from developing a large gas-to-power system now… the trend toward decarbonization, coupled with cost reductions for renewable energy and storage, creates risks for gas investment. Investment in gas can reasonably be expected to lead to higher costs for consumers, just transition challenges for workers, and losses for investors.[66]

The ISSD report highlights some of the risks associated with gas-to-power investment in South Africa. These risks include significant contributions to climate change (as a consequence of CO_2 and methane emissions when gas is burned), increasing international pressure to move away from gas due to climate impacts, financial risks linked with gas-to-power, the risk of reduced security of affordable gas supply, the risk of stranded assets, and the risk of creating an additional just transition burden (future gas workers and communities face a repeat of the transition hardships currently faced by the coal sector).[67]

74.2. Meridian Economics' *'Hot Air about Gas – An Economic Analysis of the Scope and Role for Gas-Fired Power Generation in South Africa'* (June 2022) report points out that while South Africa's large-scale use of gas appears to be central to current energy policy direction in South Africa, '*this rests on a 2012 vision which pre-dates dramatic reductions in renewable energy costs and carbon emissions space*'.[68] The report goes on

[66] IISD report, piv. Available online at: https://www.iisd.org/publications/report/south-africa-no-need-for-gas
[67] IISD report, pages 8 – 12.
[68] Meridian report, page ii. Available online at: https://meridianeconomics.co.za/wp-content/uploads/2022/06/Hot-Air-About-Gas.pdf

to state that independent analysis of the power sector across multiple recent studies shows that South Africa's power needs can be met both now and in the future with very little use of gas, and that there is '*no evidence to support the large-scale gas envisaged in the GMP; this is uneconomical even before carbon emissions are considered*'.[69] Meridian point out that *'the assumption that gas-fired power generation would replace coal ignores the fact that other technology combinations are now better at replacing coal-fired power than gas, and it is against these technologies that gas-fired generation should actually be compared*'.[70] Meridian demonstrate that existing modelling provides no economic rationale for "big gas" in the power sector, and that *'the impact of using large volumes of gas to generate power will be borne by electricity consumers and will essentially be a subsidy provided by power consumers to otherwise unviable gas use in other sectors'*.[71]

75.

While the increased use of gas as a 'transitional fuel' is promoted by government and vested interest groups, the Green Connection is concerned that the increased use of gas (especially in electricity generation) will lead to increased emissions of climate warming GHGs, and methane (CH_4) in particular. While natural gas combustion is less carbon-intensive than that of coal, fugitive emissions arising from the production, transport, storage and use of natural gas have a much greater climate impact than CO_2. In particular, over a 20-year period (which is particularly relevant since the next 20 years are a critical window for addressing the climate crisis) methane emissions, which make up approximately 70-90% of natural gas emissions, are projected to be 82.5 times as impactful as those of CO_2.[72] The desirability of using gas as a 'transitional' fuel is also questionable having regard to volatile international gas prices, as well as the potential risk of Carbon Border Taxes being introduced in the future.

[69] Ibid.
[70] Ibid, p1.
[71] Ibid, p37.
[72] See the IPCC's 6th Assessment Report (AR6), Working Group 1, Chapter 6 *The Earth's Energy Budget, Climate Feedbacks and Climate Sensitivity*, Table 7.15 at p1017. Available online at: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter07.pdf

76.

The Green Connection is of the view that having regard to the need to effectively address the climate change crisis and achieve the rapid, deep and sustained reductions in GHG emissions that are required to limit global warming to 1.5°C (including accelerated action in this decade to reduce global carbon dioxide emissions by 45 per cent by 2030 relative to the 2010 level and to net zero around mid-century), further exploration for oil and gas is not needed, nor is it desirable.

77.

(iv) South Africa's international climate change commitments

South Africa is a Party to the UN Framework Convention on Climate Change (UNFCCC), which enjoins State Parties to take precautionary measures to anticipate, prevent or minimize the causes of climate change (Article 3.3).

78.

South Africa, as a Party to the UNFCCC that ratified the Kyoto Protocol and adopted the Paris Agreement, has committed to *'working with others to ensure temperature increases are kept well below 2°C above pre-industrial levels, which could include a further revision of the temperature goal to below 1.5°C in light of emerging science'* by reducing GHG emissions. South Africa has also committed (among other things) to:

- Preparing, communicating and maintaining Nationally Determined Contributions (NDCs) that it intends to achieve reach global peaking of GHG emissions as soon as possible, and to undertake rapid reductions thereafter;[73] and
- Striving to formulate and communicate long-term GHG emission development strategies.[74]

79.

[73] Paris Agreement, Article 4.1 – 4.3.
[74] Paris Agreement, Article 4.19

There have been various Conferences of the Parties and meetings since, with decisions related to Nationally Determined Contributions (NDCs) contained in decisions 4/CMA.1 and 18/CMA.1 and their annexes.

80.

South Africa revised its NDC in 2021:[75]

Table 2 - South Africa's updated NDC mitigation targets

Year	Target	Corresponding period of implementation
2025	South Africa's annual GHG emissions will be in a range from 398-510 Mt CO_2-eq.	2021-2025
2030	South Africa's annual GHG emissions will be in a range from 350-420 Mt CO_2-eq.	2026-2030

South Africa's energy sector is estimated at contributing about 84% percent to the country's overall GHG emissions (including Carbon Dioxide and Methane).[76]

81.

In February 2020, South Africa submitted to the UNFCCC its first long-term low GHG emission development strategy titled *South Africa's Low Emission Development Strategy 2050.* It is indicated in the executive summary of this strategy that South Africa, as one of the top 20 global GHG emitters and with a high dependency on fossil fuels, will need to make substantial emission cuts to contribute its fair share to global GHG emission reductions.[77]

82.

As far as could be determined, the DSR does not provide any indication (or estimation) of how future GHG emissions (resulting from future exploitation of oil and gas that may be discovered

[75] Available online at: https://www.dffe.gov.za/sites/default/files/reports/draftnationalydeterminedcontributions_2021updated.pdf#:~:text=South%20Africa%E2%80%99s%20intended%20nationally%20determined%20contribution%20%28INDC%29%28RSA%2C%20n.d.%29,Agreement.%20The%20INDC%20and%20first%20NDC%20are%20identical.

[76] https://www.climatelinks.org/resources/greenhouse-gas-emissions-factsheet-south-africa

[77] South Africa's Low Emission Development Strategy 2050, pviii.

through the exploration drilling project) would impact on South Africa's ability to achieve its updated GHG emissions targets (as set out in South Africa's revised NDC). This is particularly relevant given that the emissions targets for the 2026-2030 period are lower than the targets for the 2021-2025 period, while offshore oil and gas developments could take at least a decade to reach the production stage. This could result in offshore oil and gas investments (as well as associated gas infrastructure developments) in the future becoming unneeded 'stranded assets' and a burden on future generations.

83.

(v) Ecological and Economic Risk of a Major Oil Spill

In addition, any catastrophic oil spills that could occur as a result of an uncontrolled wellhead blowout related to offshore oil and gas exploration and/or production drilling, pose a significant threat to functioning marine ecosystems (oceans play a critical role in regulating the climate and mitigating global warming by absorbing carbon dioxide), to living organisms in South Africa's coastal waters,[78] and to communities that depend upon the oceans for their livelihoods. Small-scale fishers and fishing-dependent communities are particularly vulnerable to the negative impacts of a large uncontrolled oil spill which could (among other things) lead to a depletion in the fish stocks upon which the livelihoods of these small-scale fishers and fishing communities depend.

84.

The Green Connection submits that it is not in the interests of the broader community (including from and intra- and inter-generational perspective) to expose our oceans and coasts to the increased risk of a potentially catastrophic major oil spill during exploration

[78] In terms of the National Environmental Management: Integrated Coastal Management Act 24 of 2008 (NEM:ICMA), the '**interests of the whole community**' is defined as meaning the collective interests of the community determined by:

(d) prioritising the collective interests in coastal public property of all persons living in the Republic over the interests of a particular group or sector of society;
(e) adopting a long-term perspective that takes into account the interests of future generations in inheriting coastal public property and a coastal environment characterised by healthy and productive ecosystems and economic activities that are ecologically and socially sustainable; and
(f) taking into account the interests of other living organisms that are dependent on the coastal environment**.**

drilling, or during subsequent production operations.

85.

G. NO-GO ALTERNATIVE

It is noted that the 'No-Go' alternative has been identified in the Summary of Project Alternatives.[79] In describing the 'No-Go' alternative, the DSR states as follows:

> The No-Go alternative represents the option not to proceed with exploration drilling and represents maintaining the status quo, except for variations from natural causes or other human activities. This leaves the project areas of influence (see Section 7.1) in their current state and precludes the opportunity of potential future oil and gas development and attendant economic and social benefits that may be derived.

86.

The Green Connection notes that the DSR indicates that the ESIA will consider the implications of the No-Go alternative.

87.

Given the DSR indicates that the No-Go alternative would leave the project areas of influence in their current state *'and precludes the opportunity of potential future oil and gas development and attendant economic and social benefits that may be derived'*, the Green Connection submits that the ESIA should also consider the negative implications of potential future oil and gas development and attendant economic and social costs that will or may result. This would necessarily include the economic and social costs of GHG emissions that would result from future oil and gas development, as well as the social and economic costs that would result from a major oil spill arising from an uncontrolled wellhead blow-out (during both exploration and subsequent production phases).

88.

The Green Connection is also of the view that the a proper assessment of the No-Go

[79] DSR, Table 6.1 item 3, at p 106.

alternative should identify and assess the potential ecological and socio-economic benefits of the No-Go option for small-scale fishers and fishing dependent communities. The assessment should also necessarily include a consideration of alternative means to generate energy and provide sustainable feedstocks for associated industrial applications, including renewable energy alternatives that do not pose a significant inter-generational ecological and socio-economic risk.

89.

H. CLIMATE CHANGE ASSESSMENT

While the DSR makes provision for a Climate Change and Air Emissions Impact Assessment, this assessment appears intended to assess the Climate Change impacts of the exploration phase only.

90.

TEEPSA's proposed exploration for offshore oil and gas resources would, if additional commercially viable resources are found and developed to production phase, inevitably add to the South Africa's overall GHG emissions. As a reasonably foreseeable future impact that may become more significant when added to the existing and reasonably foreseeable GHG impacts arising from similar offshore oil and gas exploration and production activities in South Africa's exclusive economic zone, it is submitted that the impacts (including cumulative impacts[80]) of such GHG emissions need to be identified in the DSR, and the impact thereof assessed in the next phase of the EIA process. It is submitted that it is relevant for the competent authority to consider these impacts at this stage in the EIA process, given that if the life-cycle climate change impacts are found to be unacceptable there is no reason for TEEPSA to be permitted to continue with the successive stages of exploration and production authorisation and permitting processes.

91.

[80] 'Cumulative impact' is defined in the NEMA EIA Regulations as follows: 'in relation to an activity, means the past, current and reasonably foreseeable future impact of an activity, considered together with the impact of activities associated with that activity, that in itself may not be significant, but may become significant when added to the existing and reasonably foreseeable impacts eventuating from similar or diverse activities.'

Such an approach would also be consistent with the approach taken by High Court *in Earthlife Africa Johannesburg v Minister of Environmental Affairs* 2017 (2) SA 519 GP, which - in relation to the issue of whether or not a climate change impact was necessary for a proposed coal-fired power station - stated that '*a climate change impact assessment is necessary and relevant to ensuring that the proposed coal-fired power station fits South Africa's peak, plateau and decline trajectory as outlined in the [NDC] and its commitment to build cleaner and more efficient than existing power stations*'. Following this reasoning, the Green Connection submits that is equally necessary and relevant to ensure that proposed exploration activities (including reasonably foreseeable future exploration well drilling and oil and gas production activities) do not negatively impact South Africa's ability to meet the reduced GHG emission targets contained in its revised NDC.

92.

The Green Connection submits further that the EIA should address the implications of climate change on oceans. The Intergovernmental Panel on Climate Change[81] has identified that coastal systems will experience climate change-related impacts due to sea level rise and associated storm swells. In addition, there is medium agreement that the Benguela system will experience changes in upwelling intensity as a result of climate change. The Green Connection submits that the EIA should therefore include a study on the potential impacts that changes in ocean currents, increased severity of storms etc. could have on future exploration and production activities (including the potential impacts of increased extreme weather conditions on the ability of future production activities to operate).

93.

I. PUBLIC PARTICIPATION

It is recorded that additional information was requested by the Green Connection (and other stakeholders) at the public meeting held at the Cape Town International Conference Centre on 9 June 2022. A list of issues setting out additional information requested was emailed by the TEEPSA Stakeholder Engagement Team to the Green Connection on 13 June 2022, which

[81] https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap22_FINAL.pdf

list included a query regarding whether such information was required to inform comment on the DSR. The Green Connection responded by email indicating which information was required for the purpose of commenting on the DSR, as well as which information was required to be included in the final Scoping Report so that it could be commented on in the assessment phase of the ESIA. The Green Connection reserves its right to comment during the assessment phase on the information that it indicated was required to be included in the final Scoping Report.

94.

Having regard to section 2(4)(f) of NEMA (which stipulates that the participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured), the Green Connection suggests that additional public meetings be advertised (including 'on-site' notices) and held at a local level with all potentially affected coastal groups (such as small-scale fishers and fishing dependent communities). The Green Connection also suggests that an additional public meeting in Muizenburg.

95.

The Green Connection also records its concern regarding 'public engagements' that TEEPSA has undertaken with selected I&APs relating to the project, outside of the EIA public consultation process. For example, on 8 April 2022 TEEPSA's Nelisiwe Vundla emailed WildOceans requesting an engagement with WildOceans and other I&APs to (among other things) '*facilitate process that enable fair public participation in all impact assessment studies*' and to learn more about WildOceans' views on TEEPSA's intended operations in South Africa. During the public meeting held in relation to TEEPSA's exploration EIA application, the Green Connection asked Ms. Vundla why TEEPSA was engaging in a consultation processes outside of the NEMA EIA process, and why only selected organisations had been approached. The response given was unsatisfactory (it was suggested by Ms Vundla that TEEPSA had not known how to contact the Green Connection, notwithstanding that the Green Connection's contact

details are readily available online), and the Green Connection remains concerned that this 'parallel' engagement process was inappropriate (public consultation should be undertaken by an independent EAP) and confusing to stakeholders given that a NEMA EIA was due to commence.

96.

J. KEY ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS

Green Connection submits that in addition to potential impacts discussed elsewhere in these comments, a number of key impacts have not been identified in the Table 8.2 Aspects and Impacts Register, including (but not necessarily limited to):

- Climate change impacts over the lifecycle of the proposed exploration drilling project, including climate change impacts associated with reasonably foreseeable future production activities (as well as end-use of any oil and gas produced) should commercially exploitable oil and gas reserves be identified;

- Impacts associated with the use of SSDI in the event of a worst-case scenario oil spill (the DSR indicates that, as part of the major oil spill response strategy, TEEPSA would also initiate the mobilisation of the Subsea Dispersant Injection (SSDI) kit from OSRL);'[82]

- Potential impacts of a worst case scenario oil spill due to a wellhead blowout on Marine Protected Areas (MPAs) and Critical Biodiversity Areas (CBAs) that straddle or are located in the vicinity of Block 567, and which could be impacted by the trajectory and fate of any surface or sub-surface plume; and

- The risk of hydrocarbon leaks from a plugged and abandoned well. It is noted that the DSR identifies the risk of hydrocarbon leaks from a plugged and abandoned well as an insignificant impact that has been screened out of the impact assessment, notwithstanding that a leak from an abandoned well *'could result in the release of large*

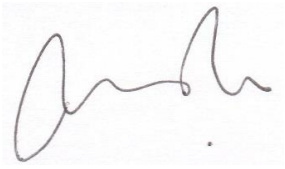
[82] TEEPSA DSR, Ch 6, p103-104.

quantities of oil or gas'.[83] No information has been provided in the DSR regarding the lifespan of a well plug (concrete can deteriorate over time), while monitoring gauges 'may' be installed on appraisal wells where TEEPSA plans to return in the future for well appraisal or production purposes. No provision appears to have been made for the long-term monitoring of a plugged and abandoned well. In addition, a comparison of the costs implications of the complete removal of the well infrastructure compared with the costs implications of plugging the well should be provided in the final DSR.

97.

It is submitted that the above should also be identified in the draft Scoping Report as key environmental and socio-economic impacts, and should be appropriately assessed during the environmental impact assessment phase of this EIA process.

Signed at Durban this 4th day of July 2022.



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Adrian Leonard Pole

[83] DSR, p273.