

11 APRIL 2016

MANAGEMENT MEETING

14h00-17h00

Secretariat Offices, Bryanston



AGENDA

Date: 11 April 2016 **Time:** 13:00 to 17:00 **Venue:** SAIPPA Offices, Bryanston

MEMBERS:

| Mr Sisa Njikelana | Chairman | Associate member | To attend |
|--------------------|---------------------|-----------------------|-----------|
| Mr Andrew Carr | Member | Sebenzana Consulting | To attend |
| Mr Dave Long | Member | Associate member | Apology |
| Mr Seelan Pillay | Member | Associate member | Apology |
| Mr Ian Langridge | Member | Associate member | To attend |
| Mr Wayne Glossop | Member | Wärtsilä South Africa | Apology |
| Mr Brian van Oerle | Member | Fieldstone Africa | Apology |
| Mr Yousuf Haffejee | Member | Associate member | To attend |
| Mr Jean Venter | Corporate Secretary | Secretariat | To attend |

- 1. WELCOME AND APOLOGIES
- 2. QUORUM PRESENT -fifty percent of the members plus one shall constitute a quorum.
- 3. READING AND CONFIRMATION OF THE AGENDA

4. COMPETITION ACT STATEMENT

The following competition law caution is to be read out at the start of each SAIPPA meeting. The competition law caution should also be recorded in the minutes of each meeting of SAIPPA. "Competition law caution:

In terms of SAIPPA's Constitution, SAIPPA members are required, at all times, to ensure that they are fully compliant with the Competition Act. In this regard, SAIPPA and its members will not engage in any discussion, activity or conduct that may contravene any provisions of the Competition Act. In particular, members shall not discuss, communicate or exchange any commercially sensitive information, including non-public information relating to prices, marketing and advertisement strategy, costs and revenues, trading terms and conditions, purchasing strategies, terms of supply, or distribution strategies. This applies not only to interactions in the context of formal SAIPPA meetings but also to discussions, communications or exchanges between members before, during or after SAIPPA meetings."

- 5. OPENING REMARKS AND BRIEF ORGANISATIONAL OVERVIEW BY THE CHAIRPERSON APPENDIX A
- 6. READING AND CONFIRMATION OF PREVIOUS MINUTES

APPENDIX B

• 15 February 2016

Secretaries: VdW& Co

7. MATTERS ARISING FROM PREVIOUS MINUTES

8. PROGRESS REPORT BY ACTING SECRETARY GENERAL

APPENDIX C

9. UPDATE ON WORK PROGRESS

APPENDIX D

- Working Group Reports
 - Co-generation (Brian van Oerle)
 - Embedded generation and Grid Access (lan Langridge)

10. STAKEHOLDER ENGAGEMENT

APPENDIX E

- GCAC
- SA Chamber of Mines
- ESKOM War Room
- IPP Office
- SALGA
- EWSETA
- BUSA Energy Sub-Committee

11. REPORT ON SAIPPA INDABA

APPENDIX F

12. PREPARATIONS FOR THE GENERAL MEMBERS MEETING

13. FINANCIALS

APPENDIX G

Financial Report

14. MEMBERSHIP MATTERS

APPENDIX H

- Membership Report
- Needs Survey Project
- Update on membership recruitment drive

15. SAIPPA BREAKFASTS AND SEMINARS

APPENDIX I

16. ANNOUNCEMENTS AND EVENTS - UPDATE AND FUTURE

UPDATE ON ANNOUNCEMENTS AND EVENTS:

- Africa Energy Indaba: 17 20 February 2016
- SADC 2nd Annual Competition and Economic Regulation (ACER) Conference: 11 12 March Livingstone, Zambia
- FFF Independent Power Generation One-day Conference 17 March 2016, Rosebank Johannesburg
- PBF Information Sharing Session: 3rd March 2016, Sunnyside Park Hotel, Parktown
- SANEA Lecture Cape Town: 16 March 2016
- Power & Electricity World Africa: 15 16 March 2016
- Launch of IPP Guidelines and Energy Market Reform Report at JSE 31 March 2016

FUTURE ANNOUNCEMENTS AND EVENTS:

• Seminar by Sir David King, the UK Foreign Secretary's Special Representative for Climate Change. TOPIC: Renewable Energy: Investment, Innovation and Opportunity in a Post-COP21 World

Secretaries: VdW& Co SAIPPA MANCOM Agenda 11 April 2016

DATES:

- 11 April 2016 CSIR International Convention Centre, Amethyst Room, 1 Meiring Naude Rd, Pretoria
- o 12 April 2016 -
- Geological sampling of coal during exploration with conventional and advanced analyses for increased conversion efficiency; Venue: Glen Hove Conferencing, Glenhove Road, Melrose, Johannesburg; Date: 13 April 2016
- 7th Ghana Summit Oil, Gas & Power Conference and Exhibition; Accra International Conference;
 20-21 April
- Planning for 21st Century Power Systems; Eskom Academy of Learning in Midrand; 21st April 2016
- 5th Mozambique Mining, Oil & Gas and Energy Conference and Exhibition; Maputo, Mozambique; Joaquim Chissano International Conference Centre; 27- 28 April, 2016
- Southern Africa Energy and Infrastructure Summit (SAEIS) in Maputo, Mozambique from 4th to 6th of May
- Renewable Energy Forum in Southern Africa; 10 & 11 May 2016, Johannesburg Stock Exchange,
 Sandton
- SADC High Level Workshop on energy crisis: Gaberone 16 May 2016
- Africa Utility Week & Clean Power Africa: CITCC 17 to 19 May 2016
- IPP Conference (an authorised side event by KPMG) Africa Utility Week & Clean Power Africa:
 CITCC 18 May 2016 contact person: Safiyya Dawood-Esakjee; safiyya.dawood-esakjee@kpmg.co.za
- Tshwane International Trade and Infrastructure Investment Conference (TITIIC): CSIR International Convention Centre; 17 19 May 2016
- Gas Africa 2016: Maslow Hotel; 31 May 1 June 2016
- Nigeria Power Forum, Abuja, Nigeria; 3-16 June
- 6th Zambia International Mining & Energy Conference & Exhibition, Zambia; 23-24 June
- 2016 IEEE PES PowerAfrica Conference; Livingstone, Zambia; 28th June 2nd July 2016
- POWER-GEN & DistribuTECH Africa: Sandton Convention Centre; 19-21 July 2016
- The Global African Investment Summit Kigali 5-6 September 2016 Partnership Enquiry
- 11th Southern African Energy Efficiency Convention (2016SAEEC) on 08 09 November 2016, at Emperors Palace, Johannesburg
- Mozambique Gas Summit & Exhibition; Joaquim Chissano International Centre, Maputo; 8-11
 November 2016

• _____

18. DATE OF NEXT MEETING

6th June 2016

17. ADDITIONAL ITEMS

19. CLOSURE

Secretaries: VdW& Co

APPENDIX B



MINUTES

Date: 15 February 2016 **Time:** 13:00 to 17:00 **Venue:** SAIPPA Offices, Bryanston

MEMBERS:

| Mr Sisa Njikelana | Chairman | Associate member | Present |
|--------------------|---------------------|-----------------------|---------|
| Mr Andrew Carr | Member | Sebenzana Consulting | Present |
| Mr Dave Long | Member | Associate member | Present |
| Mr Seelan Pillay | Member | Associate member | Present |
| Mr Ian Langridge | Member | Associate member | Present |
| Mr Wayne Glossop | Member | Wärtsilä South Africa | Present |
| Mr Brian van Oerle | Member | Fieldstone Africa | Present |
| Mr Yousuf Haffejee | Member | Associate member | Present |
| Mr Jean Venter | Corporate Secretary | Secretariat | Present |

1. WELCOME AND APOLOGIES

The chairman welcomed members present and noted that all members were present and that the meeting was quorate.

2. COMPETITION ACT STATEMENT

Secretaries: VdW& Co

The committee observed the competition act cautionary note in the agenda.

3. READING AND CONFIRMATION OF MINUTES

The committee confirmed the minutes of the meeting that was held on 7 December 2015.

AGREED to add "BUSA" and "ESKOM War Room" as standing items on the agenda under stakeholders.

[Cindy Maree]

Mr Pillay confirmed that SAIPPA comments on the regulatory clearance account were provided to NERSA early in December 2015. The committee thanked Heather from Prana Energy for compiling the comments into a report.

AGREED

- a. To list the RCA comments on the website with a note on the front page and offering credit to the members who contributed to the report. (BT)
- b. Copies of SAIPPA comments and position papers should be sent to members before or at the time of submission to the relevant external stakeholders. (ALL)
- c. The chairman to pursue conclusion of a collaborative MOU with the department of energy as agreed previously in a meeting with Dr Barnard. (SN)
- d. To follow up with NERSA on the wheeling regulatory framework progress. SP&SN
- e. To increase targeting gas companies with membership marketing at conferences. SN
- f. To investigate SAPP links and benefits for SAIPPA members, with the chairman of SAPP. SN
- g. To draft a short SAIPPA position on Eskom Budget Quotes for IPPs. IL&BvO
- h. To write to the Grid Code Advisory Committee to convert the alternate IPP vote to a full vote and to write to Kelvin Power Station to join SAIPPA. AC&SN

[Bruce Turner/Jean Venter/Chairman/Seelan Pillay, Ian Langridge/Brian van Oerle/Andrew Carr]

4. REPORT BY THE SECRETARY GENERAL

The committee **NOTED** a report that was pre-circulated from the secretary general.

Members mentioned that the banks did not currently have the needed liquidity to fund large energy projects in South Africa.

AGREED

Secretaries: VdW& Co

- a. To mandate the chairman to pursue relations and collaboration with SALGA. SN
- b. To invite lending institutions to SAIPPA membership. YH&SN

[Yousuf Haffejee & Sisa Njikelana]

5. CHAIRMAN'S REPORT

The meeting **NOTED** a written report from the chairman that was pre-circulated to members.

The chairman emphasised that all members should be involved in the workgroups.

6. WHEELING CHARGES WORKGROUP

Mr Pillay advised that NERSA did not, to date, convene the five sub-workgroups that was created last year to finalise various aspects of a wheeling charges framework. The NERSA wheeling charges advisory forum has also not met for some time due to lack of progress at NERSA. The chairman

suggested that SAIPPA develop a framework and present it to DoE for their comment. It was not clear why NERSA has been so reluctant for such a long time to complete this process.

AGREED

- a. To convene the advisory forum.
- b. To engage SALGA and AMEU on the wheeling charges framework.
- c. To convene some form of round table event around wheeling charges.
- d. To interact with the IPP Office on the wheeling charges framework, STPPP and cogeneration arrangement. SN

[Secretary General]

7. COGENERATION WORKGROUP

Members noted that the renewables programme was grinding to a halt and that the STPPP renewal process offered restrictive terms to poor performing participants. Unregulated roof-top photo voltaic installations have added some 130MW of energy to the nation to date, according to SAPVIA.

Mr van Oerle asked to be released as convenor of the cogeneration workgroup as he is not involved in the South African market any more.

AGREED to declare two vacancies on the committee and to co-op two new members, one specifically for the cogeneration workgroup convenorship. The constitution needs to be checked in this regard.

[Corporate Secretary]

8. GAS WORKGROUP

Secretaries: VdW& Co

A RFQ for gas supply is expected in March or April from the department of energy. Some of the IPP Office staff dealing with gas energy has resigned.

9. EMBEDDED GENERATION AND GRID ACCESS

No meetings of the workgroup since the previous executive committee meeting.

The work on a small scale embedded generation regulatory framework and licencing regime has been handed over to the department of energy. The department of energy appears to be doing a broad review of licencing arrangements. A paper from the department of energy on new licencing rules for generation of less than 1MW is expected soon.

AGREED that all workgroups should meet before the IPP Indaba in March.

[AII]

10. STAKEHOLDER ENGAGEMENT

Members noted that the Eskom "War Room" was no longer in operation. Members suggested that the five points that came out of the war room should still be pursued where ever possible.

Mr Long suggested that a strong SAIPPA team attend the upcoming BUSA Energy Sub-committee meeting.

AGREED that Messrs Njikelana, Pillay and van Oerle attend the BUSA Energy Sub-committee meeting. Matters of Wheeling, Licencing, small-scale embedded regulation and ISMO to be raised.

[Chairman, Seelan Pillay and Brian van Oerle]

11. FINANCIAL STATEMENTS AND MEMBERSHIP

The committee **NOTED** year to date management financial statements and a draft Budget. Mr Haffejee suggested that a membership class for consultants could generate substantial additional revenue.

AGREED to adopt the draft budget for the 2016/2017 financial year as tabled. Costs outside of the budget needs to come back to the committee after consolation with the finance committee.

[Adrie Da Silva]

AGREED that the secretary will negotiate free attendance for the chairman and Mr Hafejee to the upcoming meeting of the fossil fuel foundation. Can speak and also advertise event to our members.

[Jean Venter]

12. DATE OF THE NEXT MEETING

11 April 2016

13. CLOSURE

Secretaries: VdW& Co

| Thus read and confirmed: | | |
|--------------------------|------|--|
| CHAIRPERSON | DATE | |

APPENDIX C

Page 1 of 6

PROGRESS REPORT BY THE ACTING SECRETARY GENERAL

Period: February 2016 to March 2016

INTRODUCTION

The report covers operational issues for the period from the previous meeting of the Management Committee.

For now there will be overlap between this report and the organisational overview.

Issues covered are those related to the agenda.

UPDATE ON WORK PROGRESS

Working Group Reports – refer to appendices

STAKEHOLDER ENGAGEMENT

Below is an overview of the various key engagements:

| 9 | STAKEHOLDER | STATUS QUO | PROPOSED ACTION |
|-----|--|--|--|
| 1. | EWSETA | A collaboration agreement on training and development of members has been negotiated and concluded Joint initiative in imminent events currently explored e.g. Africa Utility Week, PowerGen Africa, etc. | A planning session to draft a joint programme Establishment of a Working Group on Training and Development – assign a non-ManCom member as a convenor i.e. Mr. Thembani Marhaneleⁱ |
| 2. | IPP Office | Submissions made on cogeneration CFB Commitment to future engagements An impromptu meeting held recently | Arrange a follow up meetingArrange a consultation with SASA on cogeneration tariffs |
| 3. | SA Chamber of Mines | Presentation made to the CC&EM Unit CC&EM Unit recommended presentation to be made to the CoM mother structure | N/A – await response for another presentation Make regular reminders |
| 4. | GCAC | Participation of SAIPPA has started | Draft a position paper on Grid Code Receive feedback from last GCAC meeting |
| 5. | BUSA Energy Sub-Committee | Refer to minutes of last meeting – 1 st March 2016 | |
| 6. | SALGA | Intention to discuss issues of mutual interest especially wheeling, embedded generation, etc. Presentation made to SALGA Gauteng SALGA facilitated referral to SALGA – national structure | Follow up to arrange meeting |
| 7. | NERSA | Submissions on various issues madeAwaiting response from NERSA | Follow up to get response |
| 8. | ESKOM | A few engagements with: 1. GAU 2. SBO Engagement with Mr Thava Govender regarding the budget quotes debacle | Arrange initial meetings with 1. GAU 2. SBO 3. Mr Thava Govender |
| 9. | SIP10 Electricity Transmission Sub-Committee | Invited to participate in the Sub-Committee | Request an introductory meeting |
| 10. | Strategic IPP Grid Forum | Invited to participate in the Forum | Request an introductory meeting |
| 11. | DoE | Revive engagement on formalisation of working relations | Follow up |

| 12. Energy Advisory | 5 submissions made in August 2015 | Convene a seminar on cogeneration |
|---------------------|-----------------------------------|-----------------------------------|
| Panel | | potential in SA |

SAIPPA INDABA

Refer to separate report.

PREPARATIONS FOR THE GENERAL MEMBERS MEETING (GMM)

The forthcoming GMM has to hold elections as well. Such implies and demands intensive preparations.

My proposals therefore are as follows:

A 6-person GMM Preparations Committee be setup to attend to the preparations for the GMM viz.:

Composition of the GMM Preparations Committee:

- 1. Sisa Njikelana
- Wayne Glossop
- 3. SASA delegate
- 4. Thembani Marhanele
- 5. Heather Griffiths
- 6. Keketso Mokoena

The GMM Preparations Committee will have to:

- 1. Work out a budget and other resource needs for the day
- 2. Explore JSE as a venue
- 3. Request JSE personnel to oversee elections
- 4. Arrange a keynote speaker who will help enhance attendance
- 5. Mobilise sponsorship for the event
- 6. Explore a fundraising dinner at IDC
- 7. Arrange video link for members in eThekwini and iKapa Metros

FINANCIALS

The Finance Sub-Committee did not hold a meeting as expected before the ManCom.

Such shall be ratified before the meeting of 6th of June.

SAIPPA BREAKFASTS AND SEMINARS

Below is a list of topics from which we need to choose for the year:

- 1. The evolution of the independent power production market in South Africa and Africa trends, prospects and challenges
- 2. The emergence of embedded power generation
- 3. Acknowledgement and accommodation of emerging power technologies
- 4. Support Programme for Small IPP's are prospects practical or idealistic?
- 5. Management and compliance to competition policy and legislation including exemption applications under the South African Competition Act
- 6. IPP INDABA
- 7. Regionalisation of the independent power production market in SADC a comprehensive approach
- 8. Role and contribution of IPP's in advancing cooperation between the power utility and municipalities

- 9. Development as well as gender, youth and disability affirmation in the independent power production market
- 10. Cooperation and coordination amongst IPP formations
- 11. The gas industry in South Africa from the perspective of independent power producers is the environment conducive?
- 12. The entry of the hydrogen power technology what are the prospects and implications?
- 13. Power technologies and systems for mitigating CO₂ emissions a myth or reality?
- 14. Future sources and ownership patterns of power generation in South Africa
- 15. Inclusion of energy in the WTO Agenda of negotiations
- 16. Presentation of flagship projects
- The content, nature and character of the topics is broad enough to accommodate as many diverse interests as is possible.
- Flagship projects will be presented in various seminars and breakfasts
- Inputs by international experts will be explored as well.
- It is unfortunate that no member ever submitted a topic for future seminars notwithstanding the call for such.
- It is also recommended that May, July, September and (early) December be the target months for the events

NEEDS SURVEY PROJECT

Report is still pending

MEMBERSHIP MATTERS

Membership trends - affiliations and cancellations

Regarding recruitment drive presentations have been made to Ernst and Young, PwC and Deloitte Consulting. Such was spurred by the affiliation of KPMG – a peer to the other companies. Responses are still awaited thereon. An appeal is made for any member of the ManCom to reinforce this drive.

REPORT FROM THE MEMBERSHIP AND RECRUITMENT TASK TEAM (MRTT) MEETING

No report submitted.

ANNOUNCEMENTS AND EVENTS - UPDATE AND FUTURE

Below are events that SAIPPA participated in:

| | EVENT | DATE AND VENUE | NATURE OF PARTICIPATION |
|----|------------------------------|---|---|
| 1. | Africa Energy Indaba | 16 th and 17 th February 2016 at Sandton Convention Centre | ◆ Invitation to SAIPPA members |
| 2. | SANEA - Action for Energy | Friday 19 February 2016 [A side event to the Africa Energy Indaba] | Invitation to SAIPPA members Input by Sisa Njikelana: What will the future sources and ownership of generation be? How will this play out in the future world and how people will adapt to it? |
| 3. | SANEA LECTURE | Tuesday, 23 February 2016 | Invitation to SAIPPA members Presentation of Bronkhorstspruit Biogas Project |

| 4. | The Information Sharing Session | Thursday 3 rd March 2016 | ◆ SAIPPA members were invited ◆ Refer PBF website |
|----|---|--|--|
| 5. | | 1st of March 2016 | Refer minutes in Information Store |
| 6. | FFF COAL IPP CONFERENCE | 17 March 2016; Glenhove Conference Centre, Glenhove Road, Rosebank | Inputs: ◆ Viability of power generation from coal in Africa - a political perspective – by Sisa Njikelana ◆ Successful coal IPPs for Africa: what is required – by Yousuf Haffejee |
| 7. | Launch of Promethium Carbon reports | 31st March 2016; The JSE, One Exchange Square, Gwen Lane, Sandown | Input by S. Njikelana: IPP's and electricity market reform – the context, trends and lessons |
| 9. | Power & Electricity World Africa 2016 | 2016 15-16 March 2016 Sandton Convention Centre Johannesburg | Invitation to SAIPPA members SAIPPA Chairperson moderated a session: Promotion of IPP in Africa Partnership arranged |

RECOMMENDATIONS

PROPOSED ACTIVITY PLANS FOR WORKING GROUPS

- 1. Wheeling
 - o Follow up with NERSA
 - o Explore a roundtable on wheeling with various stakeholders: consensus on a roadmap

2. Co-generation

Notwithstanding the slowing down in cogeneration the following have to be considered:

- The IPP office's response to written comments on the existing Cogen RFB. The subsequent two rounds were deferred to 2016.
- The "greenfield" programme that the Minister of DOE promised during the KZN Indaba with sugar and paper earlier this year.
- o An update on STPPP renewals by Eskom needs to be organized.
- It is also suggested that Brain van Oerle retains his position as the Convenor of the Cogeneration working Group until General Members Meeting this coming June.

3. Gas

- o Arrange a workshop to address how SAIPPA should prepare its members for entry into the gas industry
- o Precede the workshop by a desktop research on prospects in the gas industry

4. Coal-based load

- o An intensive assessment and planning session since the WG has never held a meeting
- o A roundtable on factoring utilisation of cleaner coal for power generation
- o Partnership with World Coal Association and International Energy Agency
- o Focus on:
 - ✓ Cleaner coal technologies
 - ✓ High Efficiency and Low Emissions (HELE) technology

- ✓ Coal-fuel cell hybrid technology by Massachausetts Institute of Technologyⁱⁱ
- 5. Embedded Generation and Grid Access
- Refer report
- o The delay on promulgation of regulations has to be raised when engaging the Department of Energy
- The issue of budget quotes has to be finalised with both ESKOM and NERSA/DoE
- 6. BUSA-BBC
- o Restructuring of the composition of the WG since, apparently, there is no interest from current members
- o An intensive assessment and planning session since the WG has never held a meeting
- JOINT COLLABORATION WITH INDIVIDUAL MEMBERS ON AREAS APPROVED BY MANCOM e.g.
 - 1. IDC additional assistance to SG and Chairperson Office
 - 2. KPMG -website evaluation and upgrading
 - 3. Powerx joint engagement with SALGA KZN and SASAⁱⁱⁱ
 - 4. Deloitte Consulting SAIPPA Portal; NOTE: Depending
- PROVINCIAL OUTREACH MEETINGS:
- 1. WESTERN CAPE MAY during the AUW Conference
- 2. KZN April/May
- 3. EASTERN CAPE MAY however it will be done through Skype
- 4. MPUMALANGA it has to ascertained whether the members are located in Mpumalanga
- Roundtables to address
 - Investment and trading on current and emerging technologies prospects, challenges and projections
 - Investment in grid rehabilitation
 - Presentation of the DFIC-GIZ research report on cogeneration

Possible partners:

- 1. JSE
- OSISA
- THRIPS
- 4. TIPS
- 5. CCRED
- Joint brainstorming with SEIFSA on the collaboration with other players in the IPP value chain with special focus on manufacturing
- Joint workshop with EWSETA on skills training and development in electricity sector
- Propose an invitation to NHC Health Centre to present rooftop solar power supply

Dr. JC (Johan) van Dyk (PhD Minerals Eng) - Technology Manager, African Carbon Energy Mobile: <u>+27 (82) 550 0473;</u> Email: <u>johan.vandyk@africary.com</u> Website: <u>www.africary.com</u>

COMBINING GASIFICATION WITH FUEL-CELL TECHNOLOGY COULD BOOST EFFICIENCY OF COAL-POWERED PLANTS. David L. Chandler | MIT News Office - April 4, 2016

Most of the world's nations have agreed to make substantial reductions in their greenhouse gas emissions, but achieving these goals is still a considerable technological, economic, and political challenge. The International Energy Agency has projected that, even with the new agreements in place, global coal-fired power generation will increase over the next few decades. Finding a cleaner way of using that coal could be a significant step toward achieving carbon-emissions reductions while meeting the needs of a growing and increasingly industrialized world population.

ⁱ Another recommendation for the Working group:

ii Hybrid System could cut coal-plant emissions in half

Now, researchers at MIT have come up with a plan that could contribute to that effort by making it possible to generate electricity from coal with much greater efficiency — possibly reaching as much as twice the fuel-to-electricity efficiency of today's conventional coal plants. This would mean, all things being equal, a 50 percent reduction in carbon dioxide emissions for a given amount of power produced.

The concept, proposed by MIT doctoral student Katherine Ong and Ronald C. Crane (1972) Professor Ahmed Ghoniem, is described in their paper in the *Journal of Power Sources*. The key is combining into a single system two well-known technologies: coal gasification and fuel cells.

Coal gasification is a way of extracting burnable gaseous fuel from pulverized coal, rather than burning the coal itself. The technique is widely used in chemical processing plants as a way of producing hydrogen gas. Fuel cells produce electricity from a gaseous fuel by passing it through a battery-like system where the fuel reacts electrochemically with oxygen from the air.

The attraction of combining these two systems, Ong explains, is that both processes operate at similarly high temperatures of 800 degrees Celsius or more. Combining them in a single plant would thus allow the two components to exchange heat with minimal energy losses. In fact, the fuel cell would generate enough heat to sustain the gasification part of the process, she says, eliminating the need for a separate heating system, which is usually provided by burning a portion of the coal. Coal gasification, by itself, works at a lower temperature than combustion and "is more efficient than burning," Ong says. First, the coal is pulverized to a powder, which is then heated in a flow of hot steam, somewhat like popcorn kernels heated in an air-popper. The heat leads to chemical reactions that release gases from the coal particles — mainly carbon monoxide and hydrogen, both of which can produce electricity in a solid oxide fuel cell.

In the combined system, these gases would then be piped from the gasifier to a separate fuel cell stack, or ultimately, the fuel cell system could be installed in the same chamber as the gasifier so that the hot gas flows straight into the cell. In the fuel cell, a membrane separates the carbon monoxide and hydrogen from the oxygen, promoting an electrochemical reaction that generates electricity without burning the fuel.

Because there is no burning involved, the system produces less ash and other air pollutants than would be generated by combustion. It does produce carbon dioxide, but this is in a pure, uncontaminated stream and not mixed with air as in a conventional coal-burning plant. That would make it much easier to carry out carbon capture and sequestration (CCS) — that is, capturing the output gas and burying it underground or disposing of it some other way — to eliminate or drastically reduce the greenhouse gas emissions. In conventional plants, nitrogen from the air must be removed from the stream of gas in order to carry out CCS.

One of the big questions answered by this new research, which used simulations rather than lab experiments, was whether the process would work more efficiently using steam or carbon dioxide to react with the particles of coal. Both methods have been widely used, but most previous attempts to study gasification in combination with fuel cells chose the carbon dioxide option. This new study demonstrates that the system produces two to three times as much power output when steam is used instead.

Conventional coal-burning power plants typically have very low efficiency; only 30 percent of the energy contained in the fuel is actually converted to electricity. In comparison, the proposed combined gasification and fuel cell system could achieve efficiencies as high as 55 to 60 percent, Ong says, according to the simulations.

The next step would be to build a small, pilot-scale plant to measure the performance of the hybrid system in real-world conditions, Ong says. Because the individual component technologies are all well developed, a full-scale operational system could plausibly be built within a few years, she says. "This system requires no new technologies" that need more time to develop, she says. "It's just a matter of coupling these existing technologies together well."

The system would be more expensive than existing plants, she says, but the initial capital investment could be paid off within several years due to the system's state-of-the-art efficiency. And given the importance of reducing emissions, that initial capital expense may be easy to justify, especially if new fees are attached to the carbon dioxide emitted by fossil fuels. "If we're going to cut down on carbon dioxide emissions in the near term, the only way to realistically do that is to increase the efficiency of our fossil fuel plants," she says.

"The exploration of unconventional hybrid cycles" undertaken by Ong and Ghoniem "represents the future of clean energy production in this country," says David Tucker, a research scientist at the U.S. Department of Energy's National Energy Technology Laboratory in West Virginia, who was not involved in this research. "Many technologies that may seem unfeasible at first glance hold the greatest promise as solutions to difficult problems. The first step is always to evaluate the potential of these cycles," as the MIT team has done, he says.

iii KEY POINTS FOR ENGAGEMENTS WITH POWERX: A SUBSIDIARY OF CLEAN ENERGY AFRICA INVESTMENT

[Clean Energy Africa Investment-CEAI is a member of SAIPPA and Powerx is 100% owned by CEAI] Areas of collaboration:

1. Presentation to SALGA KZN in $1^{1}/_{2}$ or 2 weeks' time

NOTE: Focus on wheeling and SAIPPA's work with NERSA

- 2. Possibility of joint discussion with SASA on cogeneration challenges especially price
- 3. Possibility of inviting Dr Emil Nognagel to present Green LED Strategy plus role of IPP's
- 4. Explore joint effort by SAIPPA and Powerx to affiliate to SAPP

Meeting Notes:

| Meeting | Embedded Generation and Network Access Group |
|----------|--|
| Date | 20160407 |
| Location | Sebenzana Consulting |

Attendees

| Name | Affiliation | Initials |
|-----------------|-------------|----------|
| Francios Retief | | FR |
| Andrew Carr | | AC |
| Seelan Pillay | | SP |
| lan Langridge | | IRL |
| Wynand Venter | via SKYPE | |

Apologies:

| Raoul Goosen | RG |
|-------------------|----|
| Heather Griffiths | HG |
| Brian van Oerle | |
| Sean Thomas | |
| Linda Cele | |
| Medwyn Jacobs | |
| Sydney Zeederburg | |
| Elmar Roeberg | |

Absent:

Notes:

| Ref | Action | Whom | Ву |
|-----|---|------|---------|
| 1 | The appended page from the Treasury Workshop was defined as a | info | |
| | good starting point to unwrap difficulties in developing the embedded | | |
| | generation market for IPP's | | |
| 2 | FUNDING | IRL | next |
| | The team defined to meet with funders and potential IPP | SP | meeting |
| | subgroupings to identify limitations and issues in small scale | RG | |
| | embedded IPP funding. | | |
| | To this end IRL to engage with SAPVIA, and Raoul Goosen with IDC and | | |
| | Seelan to have CRESCO meet with us at the next meeting to discuss | | |
| | issues | | |
| 3 | TECHNICAL | AC | next |
| | Sebenzana was to obtain the status on the wiring regulations relating | | meeting |
| | to embedded generation | | |
| | Wynand was to obtain a copy of the renewable connection code for | WV | |
| | the group | | |

| | Agreements, regulations, codes, standards were defined as being is | info | |
|---|--|------|---------|
| | some disarray | | |
| 4 | REGULATORY | | next |
| | Each party present was allocated a metro to define the various | | meeting |
| | requirements, limitations, risk, etc., imposed by the various metros for | | |
| | amalgamation into a knowledge schedule. | | |
| | Ethekweni – Wynand | WV | |
| | Ekurhuleni – Heather | HG | |
| | Nelson Mandela Bay – Ian | IRL | |
| | Cape Town – Francois | FR | |
| | City Power – Seelan | SP | |
| | Bloemfontein - Andrew | AC | |
| 5 | Generation Connections | IRL | |
| | It was defined that there are some anti-competitive behaviours being | | |
| | determined by various IPP developers regarding the ESKOM | | |
| | interpretations of Deep and Shallow connections and high pricing for | | |
| | quotations but that developers are wary of individual action. This was | | |
| | defined as a low for SAIPPA and IRL to draft a note to engage with | | |
| | those SAIPPA members affected and potentially the EIUG on the | | |
| | consumption side to open up the issue for national benefit | | |
| 6 | Schedule of <1 MVA Embedded Generation requirements | | |
| | IRI to draft a flow chart – or series of defining the various metro | | |
| | requirements as a consequence of the work done in 4 for ease of | | |
| | reference | | |
| | | | |
| | | | |
| | | | |

Strategy

& clustering

standards technical 2. Fix

3. Address

Finance

Smart meters

Embedded gen connections

Grid standards

New distribution

business model

regulate surplus

disclosure &

Financial

4. Improve regulation Economic

Performance disclosure

investments

Financing

Efficient cost determination Cost disclosure

Tariff design

revenue sources

Alternative

generation

& local

1. Promote embedded Mandates, legislation, regulations & incentives

13

APPENDIX E

Notes from 3th March GCAC Meeting

- Practical implementation of Regulation 773 has been an Agenda item for a number of years and has been awaiting response from DOE for all this time. Recommendation was to remove it from the Agenda as it is not progressing
- 2. Chair introduced a Malawian Delegation Chair of Escom Malawi, Chair of Grid Authority and 12 senior members of Malawian Escom and Malawian Nersa
- 3. GCAC presentation shared with Malawian delegation
- 4. 2 arbitration battles between SBO and REIPPs lessons learnt to come to GCAC
- 5. 2200 MW of renewable installed capacity now active [up to 1500MW PV peak and average of 800MW wind]
- 6. REIPP Round 1 all certified and compliant
- 7. REIPP Round 2 4 projects still not compliant
- 8. REIPP Round 3 starting
- 9. 174 exemptions have been closed accordingly to date
- 10. SAIPPA need to have off-line discussion with GCAC on <1MW PV plants and requirements.
 - IET to discuss size
 - · To discuss monitoring

For own use not required to be licenced

For commercial use licencing required

DOE Policy still required [licencing and regulation] NERSA reported that DOE intend a Municipal and Eskom briefing to occur at end of March before public comment.

<1MW to be registered with distributor – fair connection policy required

Some PV projects are completed but disallowed to switch into network. – No regulation so this is not legal. Some debate ensued on municipal input

Ethekweni have no legal grounds to prevent connection. Eskom is trying to prevent connection

GCAC have the connection requirements but no regulations.

NB. If for own use – no licencing requirements.

- 11. One project handed its transformer over to Distributor and now can't achieve voltage criteria
 - Recommended solution was to base decision on RIO of solution based on licenced size of plant.
- 12. NRS 097-2 guideline changes were approved this was change no 25 and considered to be the last for some time as PV IPPs are chasing *and paying for* a moving target
- 13. NERSA is developing a new grid code, encompassing smart metering. Eskom is requesting a combined metering code to simplify metering.

Meeting length extended over the meeting time limit such that IPP's had not been heard by scheduled close at 13h00



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SUB-COMMITTEE ON ENERGY Meeting Minutes

Prepared by Legal Best (Pty) Ltd

Business Unity South Africa, Registration Number 2014/042417/08

Meeting Number 1, Tuesday 01 March 2016, from 13h00 to 15h00, at BUSA Offices, Rivonia

ATTENDANCE AND APOLOGIES 1.

| Chairman | L. Lotter | BLSA | Present |
|------------------|----------------|-----------------------------|---------|
| Attendees | | | |
| | S .Njikelwa | SAIIA | Present |
| | J. Morris | Consultant | Present |
| | S.Nel | Eton | Present |
| | R .Roytowski | AMSA | Present |
| | P.Theron | AMSA | Present |
| | I. Morrison | EIUG | Present |
| | C .Teffo | CoM | Present |
| | J .Van Zyl | BLSA | Present |
| | K. Baard | SAPIA | Present |
| | S. Raghabi | Nestlé | Present |
| | D. Penfold | CAIA | Present |
| | M .Levington | SAPIA | Present |
| | J .Molony | PAMSA | Present |
| | J .Yawitch | NBI | Present |
| | P. Fakude | BUSA | Present |
| | O. Serrão | BUSA | Present |
| In Attendance | O. Mbatha (OM) | Secretariat (Legal Best) | Present |
| | | | |

APOLOGIES

| Director(s) | J. Thyse | Sasol | Absent |
|-------------|----------------|---------|--------|
| | D. Dykes | Nedbank | Absent |
| | K. Nyatsumba | SEIFSA | Absent |
| | J.Purchase | AGBIZ | Absent |
| | S. Nicolaou | Aspen | Absent |
| | A. Naidoo | RA | Absent |
| | P. van Staden | Sasol | Absent |
| | R. Pillay | Nestlé | Absent |
| | H. Lengenhoven | SEIFSA | Absent |
| | | | |

ATTENDANCE REGISTER

2. The attendance register was circulated and signed by all present at the meeting. DIRECTORS' INTERESTS REGISTER

| Name of Director | Date of Entry | Name and Extent of Interest | Monetary Value of Interest |
|---------------------|---------------|--|----------------------------------|
| None | 01.03.2016 | No directors' interests were declared. | None |

3. APPROVAL OF THE AGENDA

The agenda was adopted with the following amendments:

a) Item 12 which was about the War Room was moved to an earlier slot after REIPP

4. MINUTES OF THE LAST MEETING

It was unanimously agreed that the minutes of the meeting of the committee held on 04 September 2015 be adopted as a true and correct record of that meeting.

5. Matters Arising

It was highlighted that there were no matters arising from the previous meeting

6. Mr Ian Morrison presented the feedback from Nersa public hearings on Eskom's MYPD3 Application for the year 1 and the following were noted:

- a) It was reported that there will be a 9.4% average electricity price increase from the 1st of April 2016;and
- b) It was highlighted that it was worth it to make an effort on submissions when opportunity arises, the chairperson highlighted that this is a positive message for standing together and making submissions.

7. Mr Shaun Nel did a presentation of IRP and the following were noted in the presentation:

- a) It was highlighted that the first IRP was published in 2009 and that it coursed a massive outcry hence the second round which was IRP 2010 was developed;
- b) It was highlighted that there were policy adjustments and refinements done in 2011;
- c) In was reported that the IRP 2013 was to provide scenarios and decision trees for which government could make the least regret choices;
- d) It was highlighted that the IRP needs to be updated more regularly in a cycle of two years;
- e) It was reported that the 2015 IRP residential sector was the only one with the positive growth and that there is negative growth from electricity demand;
- f) It was highlighted that the committee will have to wait until 2018 to get a clearer view from a demand perspective;
- g) From a solar perspective it was recommended that the solar be put into place and that still remains
- h) From a gas perspective it was reported that there are no expectations with regards to any development by 2018, and that there are no plans are awaiting;
- i) It was highlighted that there were documents missing in the presentation and that the presentation will be circulated to the committee members;
- j) It was highlighted that storage is something to be looked at in the future but also that right now the main concern is the residential peak,
- k) It was highlighted that the committee is hoping to see a revised IRP this year to avoid regulatory challenge;
- I) All members were requested to participate in any processes of developing an IRP.

8. War Room was presented and the following were noted in the presentation:

- a) It was reported that the war room no longer exists;
- b) It was reported that Mike Levington met with Ms Nelly Magubane and his understating is that the war was moved from Presedency to DPME

c) It was suggested that at the moment there is only one conclusion that can come out of this process and that there should be an investigation and plans to make sure that the right questions are asked.

9. Status Report for discussion

9.1 Cogeneration was presented and the following were noted:

- a) It was reported that contractors were approached by Eskom and some refused due to fact that the offer was two years renewal without an increase;
- b) It was reported that Eskom has not yet signed;
- c) It was highlighted that during the first two rounds there were only two responses;
- d) It was highlighted that if there is any policy uncertainty the committee has to stand against it:
- e) It was reported that the end of March should be a deadline for the finalisation of the Cogeneration.

9.2 REIPP was presented and the following were noted:

- a) It was reported that there were projects announced by the minister and should have been closed by last year
- b) It was highlighted that Eskom did not want to hand out final budget quotes;
- c) It was requested that the REIPP report should be taken seriously;
- d) In was reported that BUSA will be sending the letters concerning the areas of policy uncertainty and that a consultant will be employed to interview areas of uncertainty, as there cannot be more situations of not having a concrete answer to the minister;
- e) The Chairperson requested that the problems with the state institution should not be dealt with internally and that they should be taken up with a political leadership.

9.3 Rooftop Solar was presented and the following were noted:

- a) It was reported that CSIR is running a programme aimed at putting up rooftop solars;
- b) It was highlighted that the programme has to start running before end of this year.

9.4 REDZs were presented and the following were noted:

- a) It was highlighted that there were zones created around South Africa;
- b) It was also highlighted that the zones will reduce the onerous requirements of Environmental Impact Assessments.
- c) It was reported that there will be a development of 5 zones around Gauteng.

9.5 Budget Review and recommendations report to the portfolio committee of energy: 2014 – 2015 was presented and the following were noted:

- a) It was highlighted that the finalisation of IRP and IEP should be expedited;
- b) It was reported that there were recommendations that came from the portfolio committees and nothing was done about them:
- c) It was highlighted that recommendations were given to the Department of energy in 2014
- d) It was further highlighted that the document on recommendations is now a year out of date;

- e) It was reported that there was suppose to be a meeting for answers regarding the recommendation given to the Department of energy but the meeting was never called;
- f) The chairperson suggested that a call for nominations in the group as for the members who will be able to assist with the NEDLAC matters;
- g) It was then requested that the committee members should prepare consolidated priorities and that the elected team will be tasked to go talk about them.

9.6 Post -2015 National Energy Efficiency Strategy (NEES) was presented and the following were noted:

- a) It was announced that there will be a BUSA DOE workshop on the 11th of March 2016;
- b) There will be consultants who will be using information they have to revise the energy efficiency;
- c) It was highlighted that it is imperative that the committee members participate as this can cost a lot of money; and
- d) It was highlighted that the invitation will be sent out to the committee members.

10. Long term electricity price trajectory was presented and the following were noted :

a) The Chairperson reported that she will have to follow up with treasury to come and give a presentation on the long term electricity price trajectory.

11. Electricity supply policy was presented and the following were noted:

a) It was highlighted that this section was covered under the IRP presentation.

12. Request from Necsa to address BUSA on the Nuclear Build Programme was presented and the following were noted:

- a) It was reported that there is a letter from Necsa to address BUSA about south Africa's build nuclear programme;
- b) It was explained that the programme is about nuclear opportunities within the nuclear Build Programme; and
- c) The committee members agreed that it was quite important to participate in the programme

13. GENERAL

a) It was requested that a register for the declaration of interest should be circulated in the meeting in future.

14. CLOSING

| 14.1 | Meeting Closed |
|-------|---|
| There | being no further business to come before the committee, the meeting adjourned at 15h00. |

14.2 Next Meeting

The schedule will be sent out to the committee members

| 14.3 | Approval of Meeting Minutes | | |
|--------|-----------------------------|------|---|
| | | | |
| | | | |
| | | | |
| | | | _ |
| Chairr | man: | Date | |

REPORT ON SAIPPA INDABA – 18 MARCH 2016

BACKGROUND

The SAIPPA Indaba was aimed to be a broad and general engagement by SAIPPA members to:

- △ Assess the association comprehensively
- △ Review current services for members and how to improve them
- Δ Review the association's systems, structures and policies as well as how to improve them
- **△** Compile a Programme of Action for the association.

In generally, the INDABA was supposed to be repositioning SAIPPA in view of the visible growth and remarkable developments in the independent power production industry.

In essence the programme was a FULL day session will included the following:

- 1. ENVIRONMENTAL SCAN which focused on overview of local IPP industries and related matters
- 2. FOCUS ON SAIPPA including assessment of SAIPPA and how to improve the association in a comprehensive manner
- 3. WAY FORWARD that integrated possible solutions, restructuring of SAIPPA as well as programme and projects into the future

The Indaba was postponed twice in 2015 but ultimately held in March 2016.

The venue was sponsored by the IDC.

Given the low response earlier, attempts were made to motivate memebers to attend the Indaba.

RECORD OF THE PROCEEDINGS ON THE 18TH OF MARCH 2016

The following presentations were made:

- Brief history of SAIPPA by Seelan Pillay
- Review of current services for members and the association's systems, structures and policies by Sisa Njikelana
- Current achievements by Andrew Carr
- Challenges experienced by SAIPPA by Ian Langridge

NOTE: The above presentations are attached to the report.

Unfortunately the report on Survey 2015 was not presented and will be presented in due course.

Below are some of the key issues raised during deliberations:

 With regards to the national perspective a pilot cogeneration project was initiated in 2007 – some years after the 1998 Energy Policy was adopted.

- Diverse technologies emerged and special reference is emerging technologies and systems including gasification especially underground coal gasification, hydrogen fuel cell and embedded generation
- The entry, development and growth of the independent power production industry was and is still mainly driven by government bids
- Currently focus is on promotion of the IPP industry
- With regards to the history of SAIPPA the main goal for establishment of SAIPPA is to promote
 the collective interests of IPP's whilst taking into account the changes in the electricity supply
 industry as well as ensuring fair competition therein.
- Activities of SAIPPA from2011 to 2013 were narrated.
- The Working Group System was highlighted as a crucial and significant development that enhanced SAIPPA's activities and also its profile.
- Additional challenges, to those presented, were highlighted viz.:
 - There was lack of leadership for promotion of the IPP industry
 - o Relations between government and IPP's were not optimised
 - o Policy development lags behind development of the IPP market
 - Embedded generation was most concerning given that a guestimate of 130MW embedded power is generated without any regulations thereon
 - o Technology rivalry is rife and poses a threat to prosperity of the industry

WAY FORWARD

- SAIPPA members who hold multiple memberships should be ambassadors for SAIPPA on other platforms e.g. IPP platform and such should include promotion of the work of the IPP platform
- Get SAIPPA members to review constitution through a 3-person task team
- With regards to Johannesburg-based meetings link out-of-Gauteng members via Skype /conference call
- Pursue Ernst & Young in Cape Town and Bosch Projects and SASA in KZN as a venue for video links during meetings – these could be linked up to events in Johannesburg; such will extend to willing companies in other provinces as well.
- SAIPPA to extend beyond national footprint and engage with IPP's in the SADC region.
- Mobilise for a National Treasury initiative to assist municipalities for rolling out renewable energy programme. Focus will be on Municipal Energy Efficiency DSM Programme. SAIPPA to:
 - Request IPP Office to provide guidance on National Treasury-Municipal Renewable Energy Initiative on bidding
 - Engage SALGA on the same issue
 - Set up task team through the Thembani Marhanele (Jeka Resources) and Acting Secretary General
- Draw lessons from IFC model on Power Supply Initiative to:
 - o Develop a Model for Power Supply Initiative that will suit the local industry,

- Search for potential partners, including the IPP Platform as well as a collective approach with IPP Office and SALGA.
- Structured engagement with the Department of Energy to be rescusitated
- Get IDC assistance wherever possible
- Research partnership with IDC to be proposed
- IPP Office to assist in the promotion of the IPP industry
- Membership participation to be enhanced through assuming custody or responsibility on specific tasks/projects including publicity drive. The following were suggested as pilots
- Promotion of embedded generation: ADC Projects (Pty) Ltd-led cluster including Jeka Resources for engagement with municipalities
- 2. Training and development: partnership with the Energy and Water SETA
- 3. Focus on underground coal gasification: Africary

NOTE:

- Emphasis was on a cluster approach rather than individual companies driving a project and such projects be integrated with Working Groups.
- Create exposure for volunteers in working groups i.e. give one action point and allow exposure on website and other publicity drive???
- Terms of Reference for such projects ought to be developed as part of the report on the Indaba.
- Host a SAIPPA-organised IPP conference i.e. IPP INDABA with technology-focused themes with IPP platform as a supporter
 - IPP INDABA was considered as an annual conference that would be a trademark as well.

NOTE: The IPP INDABA is supposed to be SAIPPA-ESKOM joint initiative

- A commercialisation initiative, through e.g. SAIPPA Incorporated, to be considered as an income-generating initiative for SAIPPA. Mr. Butch Carr to draft a proposal that will be considered for June General Members Meeting.
- Mobilise sponsorship for upgrading the SAIPPA website and give them exposure

CONCLUSION

Whilst the attendance was not as optimal as expected - about 25 participants – a few crucial decisions were taken.

Opportunities and weakenesses within SAIPPA were not exhaustively addressed.

The expected detailed assessment of SAIPPA still needs more refinement including factoring in various activities of SAIPPA for members to internalise.

It is also fundamental that SAIPPA makes effort to understand industries or sectors which our members directly belong to. Such refers to various technologies, consulting – whether engineering or otherwise, finance, etc. Such will go a distance enhancing synergies

between SAIPPA and the various industries especially on how we articulate responses to the needs of the members. Businesses and individuals join SAIPPA with certain expectations that are also informed and influenced by their immediate environments – their industries in particular! If there are ways to harness such an assortment of needs and expectations such that efficiencies are realised that will be an achievement.

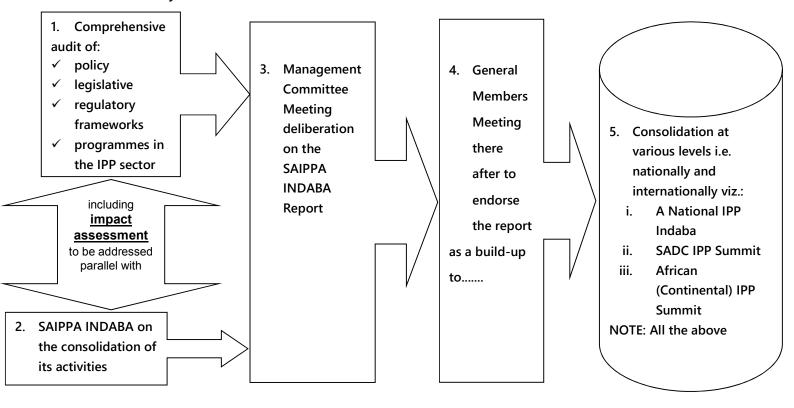
RECOMMENDATIONS

The way forward as indicated above, with appropriate amendments, be submitted to the General Members Meeting for adoption.

A follow up survey be considered in the near future whereby such survey will be more focused on assessing which services benefit which members.

Proposed CONSOLIDATED IPP STRATEGY BY SAIPPA 2016:

Below is a proposal of how we may remedy the concept, policy and programme challenges that affect the IPP industry:





Revenue Statement year to date February 2016

agreement with the bank records at our disposal, We confirm that the values reflected are in

Professional Accountant SA Pr:3348 JEAN VENTER - VdW&Co



| | Last Year | March | April | May | June | Vlul | August | Sentember | Ortoher | Movember | Doggmbor | | L |
|------------------------|-----------|----------|--|----------|----------|----------|----------|-----------|----------|-----------|-----------|-----------|-----------|
| A۱ | | | The transfer of the state of th | | | | | | Cotoboo | NOVCHIDGE | Decelline | January | repruary |
| 8 Bank Balance 1 | 14,787 | 14,787 | 14,787 | 14,787 | 14,787 | 14,787 | 14,787 | 14,787 | 14,787 | 14,787 | 14,787 | 14,787 | 14,787 |
| Bank Balance 2 | 27,042 | 221,661 | 325,633 | 328,672 | 341,301 | 319,217 | 300,429 | 312,532 | 296,326 | 261,500 | 371,560 | 486,954 | 600,304 |
| Debtors | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 5,550 |
| Total Assets | 41,829 | 236,448 | 340,420 | 343,459 | 356,088 | 334,004 | 315,216 | 327,319 | 311,113 | 276,287 | 386,347 | 501,741 | 620,641 |
| Creditors initidali | (11,050) | (10,000) | (10,000) | (10,000) | (10,000) | (10,000) | (10,000) | (10,000) | (10,000) | (880) | (116,080) | (256,780) | (400,320) |
| " Total Liabilities | (11,050) | (10,000) | (10,000) | (10,000) | (10,000) | (10,000) | (10,000) | (10,000) | (10,000) | (880) | (116,080) | (256,780) | (400,320) |
| | 30,779 | 226,448 | 330,420 | 333,459 | 346,088 | 324,004 | 305,216 | 317,319 | 301,113 | 275,407 | 270,267 | 244.961 | 220.321 |

APPENDIX H

Membership Report - March 2016

| Percent Associated Aso |
|--|
| SOUTH AFRICAN INDI |

| Company Name | Mombarchin Class | Fees Received | Fees Received | a to N | Membershin Female | Disabled |
|---|--|---|---------------|--|-------------------|----------|
| August Augustion | | 2015 | 2016 | | | % |
| Barloworld Power | Corporate Membership - Large Company | | | | | |
| Cennergi | Corporate Membership - Large Company | 31 500,00 | 35 000,00 | | | |
| Industrial Development Corporation | Corporate Membership - Large Company | 21 000,00 | 35 000,00 | | | |
| KPMG | Corporate Membership - Large Company | 13 125,00 | 35 000,00 | | | |
| | Corporate Membership - Large Company | 44 000,00 | | ** 2014 fees (R12 500) only recv'd in 2015 | | |
| Pretoria Portland Cement Co. Ltd | Corporate Membership - Large Company | 31 500,00 | 35 000,00 | | | |
| a Ltd | Corporate Membership - Large Company | 31 500,00 | 35 000,00 | | | |
| Tongaat Hulett (Ltd) | Corporate Membership - Large Company | 31 500,00 | 35 000,00 | | | |
| Ailling (Pty) Ltd (prev. TSB Sugar) | Corporate Membership - Large Company | 31 500,00 | 35 000,00 | | 16% | |
| | | | | | | |
| Bosch Projects (Pty) Ltd | Corporate Membership - Medium size Company | 21 000,00 | 22 600,00 | | 2% | |
| | | 0 | 00 000 | | | |
| Abc Projects (Pty) Ltd | Compare Mambarbia Small Company | 10 500,00 | 11 300,00 | | | |
| vices Ptv Itd | Corporate Membership - Small Company | 10,000,00 | 11 300,00 | | | |
| | Corporate Membership - Small Company | 10 500.00 | 11 300.00 | | | |
| h Africa (Ptv) Ltd | Corporate Membership - Small Company | 10 500,00 | 11 300,00 | | | |
| | Corporate Membership - Small Company | 2 000,000 | 11 300,00 | | | |
| | Corporate Membership - Small Company | | 11 300,00 | 11 300,00 New member joined in Feb 2016 | | |
| Vfrica | Corporate Membership - Small Company | 10 500,00 | 11 300,00 | | | |
| Hamon SA (Pty) Ltd | Corporate Membership - Small Company | 10 500,00 | 11 300,00 | | | |
| ion | Corporate Membership - Small Company | - | | New member joined in Mar 2016 | | |
| | Corporate Membership - Small Company | | | | | |
| ons (Pty) Ltd | Corporate Membership - Small Company | | | | | |
| · Pty Ltd | Corporate Membership - Small Company | 10 500,00 | | | | |
| | Corporate Membership - Small Company | 5 250,00 | 5 000,00 | **part payments being made | | |
| eers (Pty) Ltd | Corporate Membership - Small Company | 10 500,00 | 11 300,00 | | | |
| Power Alt | Corporate Membership - Small Company | 1 750,00 | 11 300,00 | | | |
| Prana Energy (Pty) Ltd | Corporate Membership - Small Company | 10 500,00 | | | | |
| Sebenzana Consulting (Pty) Ltd | Corporate Membership - Small Company | 10 500,00 | 11 300,00 | | | |
| Sembcorp Silulumanzi | Corporate Membership - Small Company | 10 500,00 | | | | |
| Solek | Corporate Membership - Small Company | 10 500,00 | 11 300,00 | _ | | |
| Sunelex Energy | Corporate Membership - Small Company | | | New member joined in Jan 2016 | | |
| Vula Green Energy | Corporate Membership - Small Company | | | | | |
| Wärtsilä South Africa | Corporate Membership - Small Company | 10 500,00 | 11 300,00 | | 40% | |
| | | | | | | |
| South African Sugar Association | Associations/NPO's | 12 000,000 | 12 000,00 | | %7 | |
| Mr Dave Long | Individual Memberchin - Drofessional | 1 050 00 | | | | |
| May 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | maryidada Mambarbia Dagasasa | 171,00 | | T 500 M -: L: -: M | | Ī |
| Mr Donald Mcgillivary | Individual Membership - Professional | 1/5,00 | | New member joined in Nov 2015 | | |
| Mir Doug Kuni | Individual Membership - Professional | | 7 | | | |
| Mr Edmund JL Cele | Individual Membership - Protessional | 700,007 | 1 100,00 | | | |
| Mr Francois Retief | Individual Membership - Professional | 1 050,00 | 1 100,00 | | | |
| Mr Ian Langridge | Individual Membership - Professional | 1 050,00 | 1 100,00 | | | |
| Mr Ike Maboe | Individual Membership - Professional | - | | New member joined in Mar 2016 | | |
| Mr Letsitsi Machela | Individual Membership - Professional | 767,50 | | | | |
| | | | | | | |

| Mr Lulama Gaga | Individual Membership - Professional | | | |
|---------------------------|--------------------------------------|-------------|--|---|
| Mr Marshall Koopman | Individual Membership - Professional | | | |
| Mr Mohau Thage | Individual Membership - Professional | | New member joined in Feb 2016 | |
| Mr Motseki Vincent Letaba | Individual Membership - Professional | | | |
| Mr Oliver Barker | Individual Membership - Professional | 1 10 | 1 100,00 New member joined in Feb 2016 | |
| Mr Phumelele Madala | Individual Membership - Professional | 1 10 | 1 100,00 New member joined in Feb 2016 | |
| Mr Pieter Van Dam | Individual Membership - Professional | 1 050,00 | 1 100,00 | |
| Mr Seelan Pillay | Individual Membership - Professional | 1 050,00 | 1 100,00 | |
| Mr Sisa Njikelana | Individual Membership - Professional | 1 050,00 1 | 1 100,00 | |
| Mr Sydney Zeederberg | Individual Membership - Professional | 1 050,00 | 1 100,00 | |
| Mr Yousuf Haffejee | Individual Membership - Professional | 1 050,00 | 1 100,00 | |
| Mrs Jane Molony | Individual Membership - Professional | 1 050,00 | 1 100,00 | |
| Ms Keketso Mokoena | Individual Membership - Professional | | New member joined in Mar 2016 | |
| Ms Kholekile Mbanga | Individual Membership - Professional | 525,00 1 10 | 1 100,000 | |
| Ms Sue Rohrs | Individual Membership - Professional | 1 050,00 | | |
| Ms Thandazile Mazibuko | Individual Membership - Professional | | 1 40% 34% 2% | % |

 Gauteng
 %

 Gauteng
 75%

 Kwa-Zulu Natal
 13%

 Western Cape
 5%

 Eastern Cape
 5%

 Mpumalanga
 5%

TOTAL MEMBERS - 58

| Abeinsa Business Development (Abengoa) | Corporate Membership - Small Company | 7 875,00 | Cancelled membership - Apr 2016 (comp restructure) |
|---|--|------------|---|
| African Renewables (Pty) Ltd | Corporate Membership - Small Company | | Cancelled membership - Sept 2015 (Financial contraints) |
| Bergwind Energy (Pty) Ltd | Corporate Membership - Small Company | 5 250,00 | Cancelled membership - June 2015 (Comp is very small & cannot keep up with membership payments) |
| Cresco Project Finance | Corporate Membership - Small Company | | Cancelled membership - April 2015 (Financial constraints) |
| Dr Danisa Eileen Baloyi | Individual Membership - Professional | 525,00 | Cancelled membership - Dec 2015 - no value received |
| Exxaro Resources | Sustaining Membership | | Cancelled membership - Sept 2015 (replaced by subsidiary, Cennergi) |
| Mooi Hydro (Pty) Ltd | Corporate Membership - Small Company | 10 500,00 | Cancelled membership Mar2016 - financial constraints |
| Mr Brian Day | Individual Membership - Professional | 350,00 | Only required membership for Jan - Apr 2015 |
| Mr Julian Eslait | Individual Membership - Professional | | Cancelled membership - Dec 2015 (moved to another BU, not involved in IPP |
| Mr Wiehann van Zyl | Individual Membership - Professional | | Cancelled individual membership, converted to small corporate for Solek |
| Orion Engineered Carbons (Pty) Ltd | Corporate Membership - Medium size Company | 21 000,000 | Cancelled membership - Dec 2015 (Not required any longer) |
| SUZLON Wind Energy South Africa (Pty) Ltd | Corporate Membership - Small Company | | Cancelled membership - April 2015 (left South Africa) |
| Umfolozi Sugar Mill (Pty) Ltd | Corporate Membership - Large Company | 31 500,00 | Cancelled membership in Dec 2015, drought caused cutback in expenditure |

| 444 700,00 | |
|--------------------------------|--|
| 508 287,50 | |
| Total Membership Fees received | |

SAIPPA BREAKFASTS AND SEMINARS

Below is a list of topics from which we need to choose for the year:

- 1. The evolution of the independent power production market in South Africa and Africa trends, prospects and challenges
- 2. The emergence of embedded power generation
- 3. Acknowledgement and accommodation of emerging power technologies
- 4. Support Programme for Small IPP's are prospects practical or idealistic?
- 5. Management and compliance to competition policy and legislation including exemption applications under the South African Competition Act
- 6. IPP INDABA
- 7. Regionalisation of the independent power production market in SADC a comprehensive approach
- 8. Role and contribution of IPP's in advancing cooperation between the power utility and municipalities
- 9. Development as well as gender, youth and disability affirmation in the independent power production market
- 10. Cooperation and coordination amongst IPP formations
- 11. The gas industry in South Africa from the perspective of independent power producers is the environment conducive?
- 12. The entry of the hydrogen power technology what are the prospects and implications?
- 13. Power technologies and systems for mitigating CO₂ emissions a myth or reality?
- 14. Future sources and ownership patterns of power generation in South Africa
- 15. Inclusion of energy in the WTO Agenda of negotiations
- 16. Presentation of flagship projects
- The content, nature and character of the topics is broad enough to accommodate as many diverse interests as is possible.
- Flagship projects will be presented in various seminars and breakfasts
- Inputs by international experts will be explored as well.
- It is unfortunate that no member ever submitted a topic for future seminars notwithstanding the call for such.
- It is also recommended that May, July, September and (early) December be the target months for the events.

SUGGESTED FORMAT OF THE EVENTS

| 1. | The evolution of the independent power production market in | Panel discussion |
|----|--|------------------|
| | South Africa and Africa - trends, prospects and challenges | |
| 2. | The emergence of embedded power generation | Panel discussion |
| 3. | Acknowledgement and accommodation of emerging power technologies | Expert input |
| 4. | Support Programme for Small IPP's – are prospects practical or idealistic? | Panel discussion |
| 5. | Management and compliance to competition policy and legislation - including exemption applications under the South African Competition Act | Expert input |

| 6. IPP INDABA | N/A |
|---|------------------|
| 7. Regionalisation of the independent power production market – a | Expert input |
| comprehensive approach | |
| 8. Role and contribution of IPP's in advancing cooperation between | Panel discussion |
| the power utility and municipalities | |
| 9. Development as well as gender, youth and disability affirmation in | Panel discussion |
| the independent power production market | |
| 10. Cooperation and coordination amongst IPP formations | Panel discussion |
| 11. The gas industry in South Africa from the perspective of | Expert input |
| independent power producers – is the environment conducive? | |
| 12. The entry of the hydrogen power technology – what are the | Expert input |
| prospects and implications? | |
| 13. Power technologies and systems for mitigating co ₂ emissions – a | Panel discussion |
| myth or reality? | |
| 14. Future sources and ownership patterns of power generation in | Expert input |
| South Africa | |
| 15. Inclusion of energy in the WTO Agenda of negotiations | Panel discussion |
| 16. Presentation of flagship projects | |