FEEDBACK FROM PUBLIC CONSULTATION

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1. PROCEDURAL OBJECTION

• All nuclear-related public consultations follow identical pattern – hundreds or thousands of pages of technical documentation released with derisory time to permit after-hours analysis, reflection, & comments

• This indicates planned strategy to thwart meaningful public consultations by providing form but not substance for legal minimum for public consultation – need to be redone from start
2. SUBSTANTIVE OBJECTIONS

- Objection to the rigging of comparative prices of nuclear power with other options for generating electricity

- Source Business Day 8 December 2016

<table>
<thead>
<tr>
<th>Source</th>
<th>Cost / kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIND</td>
<td>81 cents</td>
</tr>
<tr>
<td>SOLAR</td>
<td>86</td>
</tr>
<tr>
<td>COAL</td>
<td>93</td>
</tr>
</tbody>
</table>

IRP alleges: LATEST cost / kWh:

<table>
<thead>
<tr>
<th>Source</th>
<th>Cost / kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIND</td>
<td>62 c / kWh</td>
</tr>
<tr>
<td>SOLAR</td>
<td>82</td>
</tr>
<tr>
<td>COAL</td>
<td>R1-03</td>
</tr>
</tbody>
</table>
IRP POWER GENERATION, TECHNICAL PLAN Update August 2015

• Uses self-contradicting unit of measurement:
  “Total Plant Costs Overnight costs”

• overnight costs exclude compound interest & finance

• Nuclear power stations take twice as long to build as renewable or gas options, so have vastly higher interest charges & total plant costs

• Effect of unit chosen is to conceal cost gap between nuclear and other options
Also note:

- Gauteng power market is shorter distance from average renewable power site than long haul from coastal nuclear plants
- So less renewable power lost in transmission than from nuclear power stations
- This affects relative costs of renewable vs. nuclear power
• “local energy resources are favoured because imported energy impacts not only on the national balance of trade but also on energy security due to geopolitical risks”

• Negative view of Southern African Power Pool – which Eskom founded!

• Balance of trade 9:1 in South Africa’s favour, so some room for energy imports

• Diversified sources of electricity, imported from diversified transmission routes, enhance security

• Boosts SA relations with SADC
IEP 2016 SECTION 3 KEY ASSUMPTIONS

TABLE 0-1 GDP GROWTH PROJECTIONS

- GDP growth stats for 2016
  - low: 2.3 – 2.9%
  - moderate: 3.2% - 3.5%
  - high: 3.7% - 4%
- Reality check – actually 0.8%
- Consequence – lower future electricity demand - no need for nuclear options
The Lowest Cost scenario is ignored in favour of an artificial constraints scenario

• There is no Nuclear-Free scenario. This needs to be provided.
The DoE Website proudly provides a section on a 5 000 MW Solar Park at Upington

- 6 yrs later IEP page 53 barely mentions Govt “is considering” it
- Overdue for Govt to implement own policy
- Pp.54-55 barely mentions 1300 MW imported from Cahora Bassa; Inga 2 200 MW not mentioned
Inga 3 barely mentioned 2 500 MW by 2035

• Treaty on the Grand Inga Project signed in Kinshasa 29 October 2013

• Article 9(4) South Africa commits to purchase a minimum of between 20%-30% of all further developments, ie Inga 4-8 which is at least 10 000 MW

• Why is this omitted from IEP & IRP?

• Why no mention of Mphanda Nkuwa and other imported hydro projects?
RECOMMENDATIONS

• DoE IEP 232 November 2016 slide 16 mentions that two or three oil refineries will close in future

• Priority should be closing Cape Town & Durban refineries because adjacent suburbs have SA’s highest rates of respiratory sicknesses
IEP section 8.3.5

• “Solar should play a much more significant role”

• page 165 “Large-scale CSP projects should be incentivised”

• But Eskom Executives refuse to sign contract with biggest CSP project
Incentivizing CSP projects

• It is responsibility of relevant minister to declare that such refusals constitute an irretrievable breakdown in the employment relationship, dismiss the executive, and appoint a new executive who will sign contracts with new CSP projects
IEP section 8.2

• “New electrical generation should be brought on line through a competitive bidding process” ... “Low cost is a key criterion”

• support a level playing field between gas, renewable, and nuclear generation options: only buy power for a contractually enforceable price. All cost overruns are for vendor to pay.
IEP section 8.2

- oppose the clause in the MOU with Rosatom which states that Rosatom will only sell its nuclear reactors *voetstoots* – repairing any cracks & other crises will be paid for by the purchaser
Eskom should study how the German and other grids are able to manage high proportions of renewable electricity

• priority to give our national grid significant augmentation and deepening
• priority to give the Southern African Power Pool backbone significant augmentation and deepening
• “Western power corridor” should be constructed to enhance energy security from both Inga 2 & 3