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Truth in Energy Campaign

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Portfolio Committee
Submission on
Draft 2018 IRP

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Outline

1. The energy imperative
2. Energy agnosticism – Truth in Energy
3. SA's unique resource endowment
4. Global long-term energy realities
5. 'Renewable energy' myths
6. Rational energy costing
7. SA 2018 IRP proposals.

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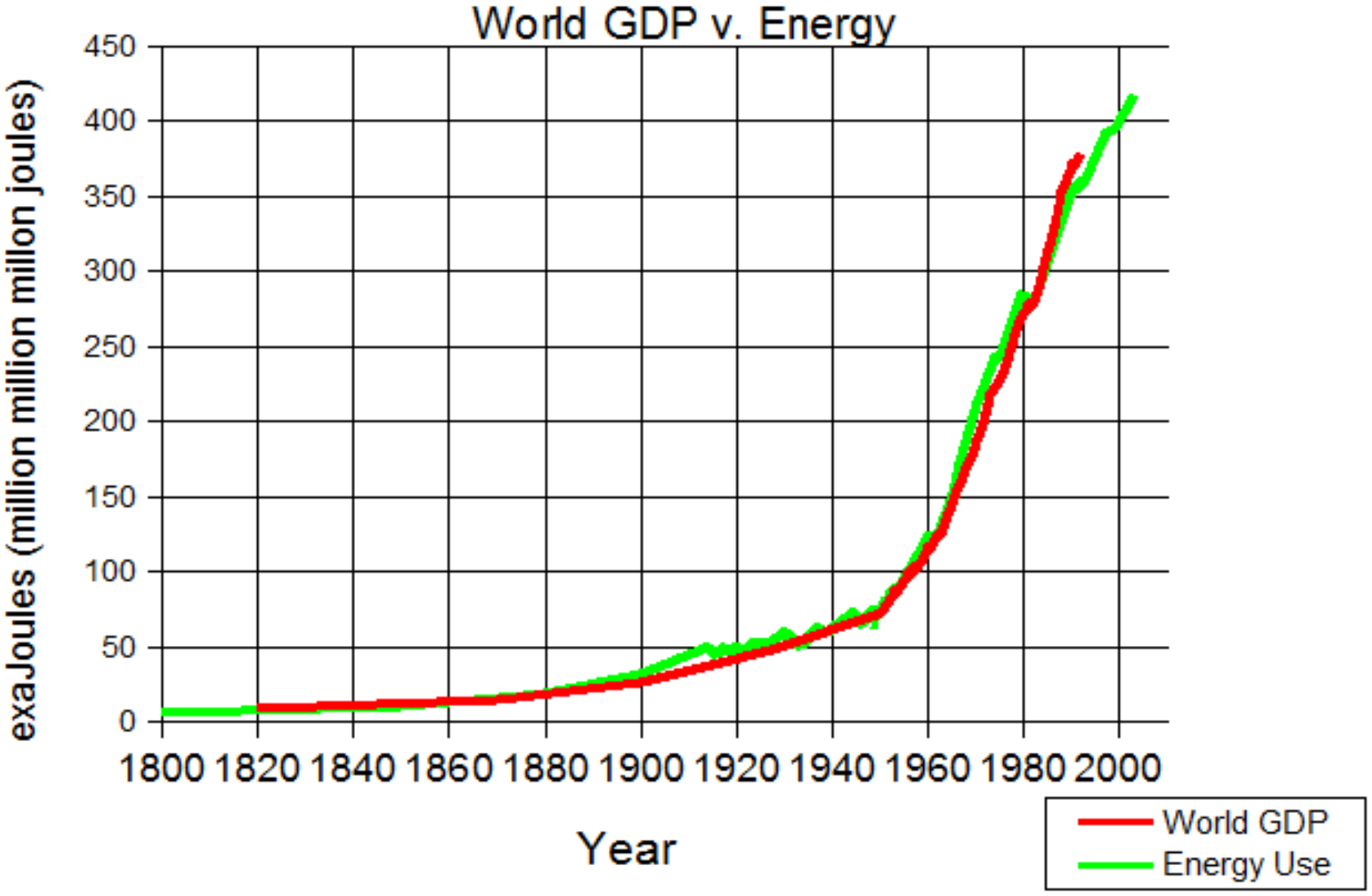
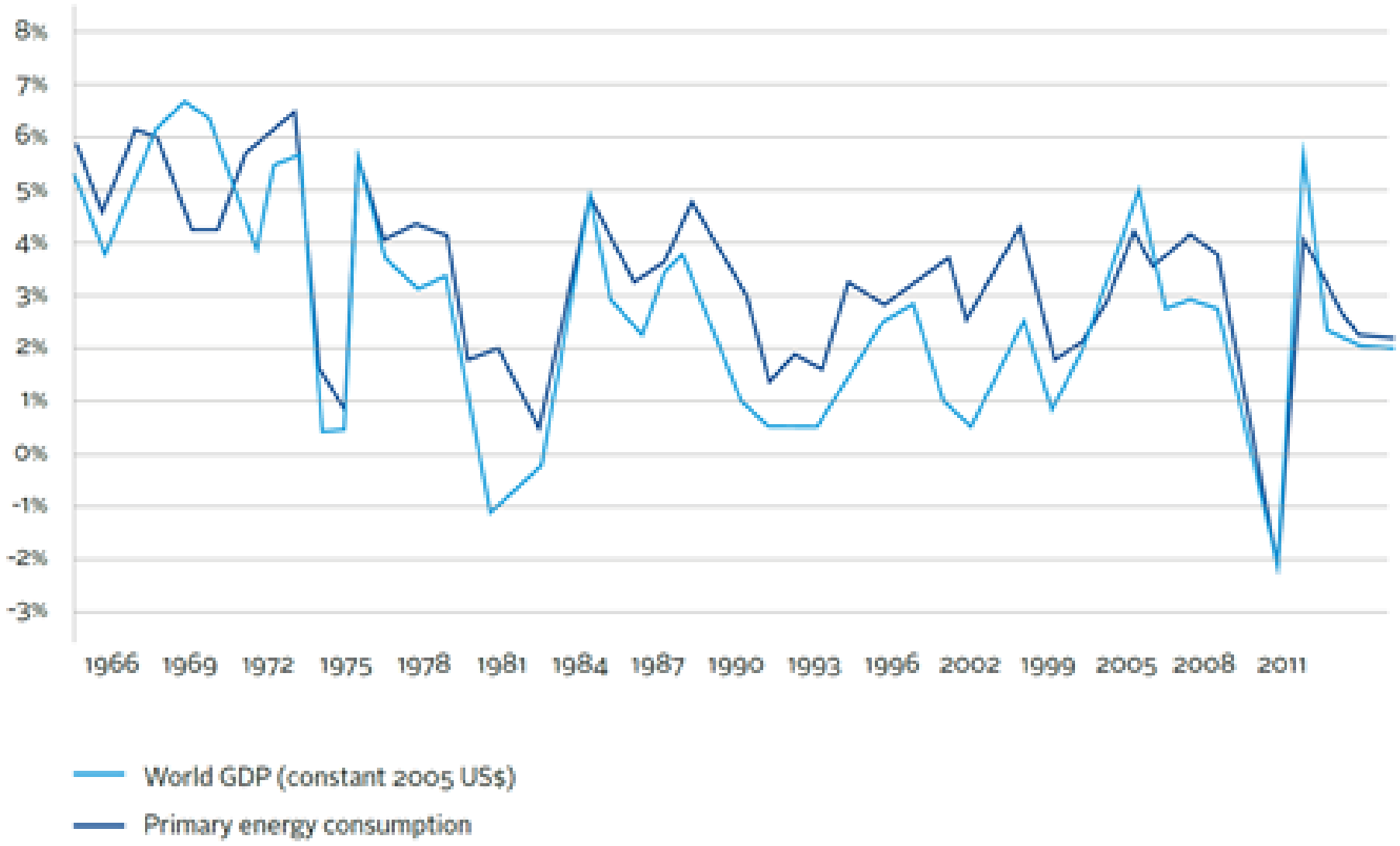
Preliminary

- Draft IRP envisages economic sabotage
  - **abandoning what we have**
    (coal, uranium, thorium)
  - **importing what we don't**
    (technology, minerals, hydro)
- Could be called 'criminal';
  certainly unpatriotic.

1. The energy imperative



1. The energy imperative



2. Energy agnosticism – Truth in Energy

- Truth in Energy is:
  - *For* a rationally balanced energy mix
  - *Against* a pre-conceived bias
- 'Perfect' energy mix?

  No one knows – uncertainty principle
- Context specific / relevant
- Simplistic cost *vs* real cost
- Need for properly conducted SEIA

  (Social-Economic Impact Assessment):
  - Independent
  - Per fixed formula
  - All aspects (finance, environment, integration etc).

3. SA's unique resource endowment

- Enough coal, uranium, thorium for centuries.
- No gas, oil, hydro, thermal
- Minimal 'renewables' tech, resources
- Minimal wind, hydro
- Substantial sunlight
- Draft IRP envisages economic sabotage
  - **abandoning what we have** (coal, uranium, thorium)
  - **importing what we don't** (tech, minerals, hydro)
- Long-term implications
- Could be called 'criminal'; certainly unpatriotic.

4. Global long-term energy realities

- Nuclear dominance inevitable
- Cleanest, greenest, safest, most unlimited and reliable, cheapest
- Must rationally be substantial in long-term mix
- Safe:
  - Fukushima 'nuclear **triumph**' (not 'disaster')
  - Highest value of life (100s > 0).

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4. Global long-term energy realities

- Anti-nuclear sentiment:
  - Government must not believe fake news
  - Nuclear must be delinked from corruption
  - South Africans deserve truth
  - Nuclear has bad press
    - Nuclear industry: terrible PR
    - Anti-nuclear propaganda: funded by vested interests.

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4. Global long-term energy realities

Energy Source	Deaths per 1,000 TWh	% Global Primary Energy Supply (2015)
Coal	**100,000**	2. 28.1%
Oil	**36,000**	1. 31.7%
Natural Gas	**4,000**	3. 21.6%
Hydro	**1,400**	5. 2.5%
Solar	**440**	7. <1%
Wind	**150**	6. <1%
Nuclear	**90**	4. 6.9%

4. Global long-term energy realities

- Comprehending nuclear safety myth:
  - SA: 15,000 road fatalities
    - Easily eliminated
    - 1kmh speed limit
    - Society *chooses* speed-death trade-off
  - Fatalities accepted with all options except nuclear!

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4. Global long-term energy realities

- **Safety: LNT** myths:
  - Cut nuclear safety dramatically to same as:
    - Other contexts
    - Other energy (nuclear 50% to 90% cheaper)
    - Create developing world standards.

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5. ‘Renewable energy’ myths

- **Environmentally benign**:
  - Nuclear: zero land, zero CO2
  - Fossil fuels: mining, land, CO2
  - Wind conundrum (30% less wind; pristine+farmland)
- **Clean**:
  - Small waste *vs* substantial waste
  - Dangerous waste *vs* safe waste
- **Cheapest**:
  - Cut safety cost *dramatically*
  - Leave it to ‘the market’:
    - Full levelised cost
    - Escalating land, environmental etc cost.

6. Rational energy costing

- **SEIA** (Cost benefit analysis - CBA):
  - Economic (TANSTAAFL)
  - Financial
  - Environmental
  - Social
  - Political
  - Health
  - Safety.

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6. Rational energy costing

- Additional considerations
  - Growth & jobs
  - Short-medium-long term
  - Political realities
  - International realities.

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6. Rational energy costing

- **Climate change** debate
  - If AGW (IPCC): nuclear is best
  - If not: coal is best
  - Given uncertainty SA should have both
  - Either way, wind/gas/hydro should be supplementary
  - Gas cannot be decided now.

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7. SA 2018 IRP proposals

- Renewables bias (pre-conceptions)
- SEIA (CBA):
  - Economic (TANSTAAFL) ??
  - Financial
  - Environmental
  - Social
  - Political
  - Health
  - Safety
- Other:
  - RFQs/RFPs
  - Terms crucial (fully costed; reliable; sustainable).

Conclusions

- Draft 2018 IRP:
  - Flawed assumptions (eg NIASA)
  - Renewables integration not fully costed
  - Relies on preconceived conclusions
  - No level playing field – all options should be:
    - Fully internalised costs
      (*vs* imposed externalities)
    - Continuous predictable supply
  - Environmental impacts not quantified.

End

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