IRP 2010

MamaEarth submission to DoE

Problems we address:

- Energy Capacity and Security
- Energy Finance
- Job Creation
- Carbon factor and Climate change
- NEED clarity decentralized transparent cost effective solutions implemented soon

How have they been addressed?

IRP suggests:

- Continue with current plans for Kusile and Medupi; develop a nuclear program; implement PPPs with anyone who can produce power in any way; use lots of diesel in the meantime for backup in peak time; lean heavily on the Solar Water Geyser program removing approx 3000MW from grid requirements.

Outside the IRP suggests:

- Solar Park 5000 MW by 2020 and 1000MW within 2 to 3 years.

REFIT

1. Includes first phase in terms if IRP 1: 1000MW wind; 100MW gas; 20 hydro; 300 CSP and PV. 1420 MW
2. IRP2 states 1025 MW wind CSP landfill and small hydro
3. Budgeted R12.3 b in the MYPD with R2b already put aside for first year IPP's.
4. Prices fixed could be reduced particularly in CSP field to incentivize storage and dry cooling which according to industry insiders would still be manageable with current tariff.

OTHER

- MTPPP Eskom pricing own new build
- Solar Park R200 B over 10 years to provide 5000 MW
- Municipalities
- INEP
- DSM
- Climate change
- Infrastructure development
- Green Economy Initiatives.

INTERNATIONAL EXAMPLE

- Clear Sky survey for Ontario Green Energy Act and FIT
- Solar PV Creates 12 Times More Jobs than Nuclear--15 Times More Than Coal
  Ontario Solar PV Attracting $8 Billion in Private Investment
  Clean Generation Saves Ratepayers 20%
- by 2015 Ontario's solar PV industry will have created 72,000 person-years of jobs. Ontario plans to close all its coal-fired power plants by 2014. Generation by renewable sources, including solar PV, will be used to offset the coal-fired generation lost.
- Cost of electricity in the province will increase slightly to a maximum of about 1% of a typical household's bill, then decline steadily as the initial contracts work their way through the system.
- Ontario will install 3,000 MW of solar PV in the next five years. 6,000 MW of solar PV by 2021. California is expected to have a total installed capacity of 800 MW and the US 1,700 MW of solar PV by the end of 2010.

contd

- A substantial portion of any solar system installed in Ontario must be manufactured in the province.

  Solar PV creates 12 times more jobs than nuclear per kilowatt-hour of electricity generated and 15 times more than coal.
- Investment in solar PV creates 2.4 to 6.4 times more jobs than a similar investment in conventional sources.
- New renewable generation under the Green Energy Act's feed-in tariffs saves rate payers the equivalent of 20% on their electricity bills.

CSP POTENTIAL

- WORLD has
- 900 MW CSP installed;
- 770 MW UNDER CONSRUCTION
- 14700 MW in PLANNING STAGES
- SA has R 10 b committed in equity funding implies

  R33 b investment which would come from private investors, pension funds, banks insurance co's and international entities e.g. World Bank and Climate Fund.
- Could immediately install 500 MW building to 5000 MW; takes three years to get operational.
- PPA-SBO-FUNDING MECHANISM

PV POTENTIAL

PV capacity in SA already with 100MW panels produced and approx 300 employees could have 100 to 150 MW installed within 6 months.

Treat as separate from CSP

PPA-SBO-FUNDING MECHANISM