SUSTAINABLE UTILISATION OF COAL

A pathway forward.....
COAL - A DRIVER OF PROSPERITY

• Fossil fuels drove industrial modernisation over the past 2 centuries and ....

• The world still has vast reserves of fossil fuels especially coal and gas

BUT

• CO₂ induced climate change presents an extreme risk

• Driving energy conservation and the transition to renewables ... esp. in the developed world
BUT THERE ARE TWO WORLDS

ENERGY POVERTY still effects many in developing countries (a moral issue)

- 1 in 5 people in the world still without access to electricity
- World population to grow from 7 Billion to >9 Billion by 2050

The Grand Challenge

Reliable Affordable and Sustainable energy for all
In the year to August 2012, installed power capacity was up 8.1%.

In the latest **5 year plan (2011 – 2015):**

- 63GW of new hydroelectric capacity,
- 48GW of new wind power (more than doubling)
- Solar capacity is expected to 10 fold to 5GW
- A four-fold growth in nuclear power to 40 GW
  - 22GW in new gas-fired generation
  - 260 GW of new coal-fired generation

And India is also advancing on a similar track with over 400 new coal plants planned

115 GW Renewable
150 GW Low Emissions
COAL (AND GAS) FIRED POWER REMAINS AND GROWS IN THE COMING DECADES an inconvenient reality?
Addressing carbon emissions requires a portfolio of technology solutions… including CCS.

- Is it doable at that scale?
- Where?
- Is it cost-effective & what will it take?

None of these technologies are on track, despite subsidies, to achieve the required abatement of more than 2000 Mtpa of CO₂ abatement by 2035.
CCS technology is not on track to deliver deep cuts in CO$_2$ emissions from fossil fuel use (or any other sector).

LEADERSHIP is required .... Urgently, from...

- Government
- Industry
- The University sector