

# The mythical country of Malsinthappines and some tough insights for energy policy

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**THE LANTAU GROUP**  
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# The country of Malsinthappines

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- Imaginary
- But not unrealistic
- No particular place, though probably in Asia
- But many places, many times

One day, the Malsinthappinian Minister asked a most curious question:

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What is the **best energy policy for Malsinthappines?**

## Challenges were emerging throughout the Malsinthappinian power sector

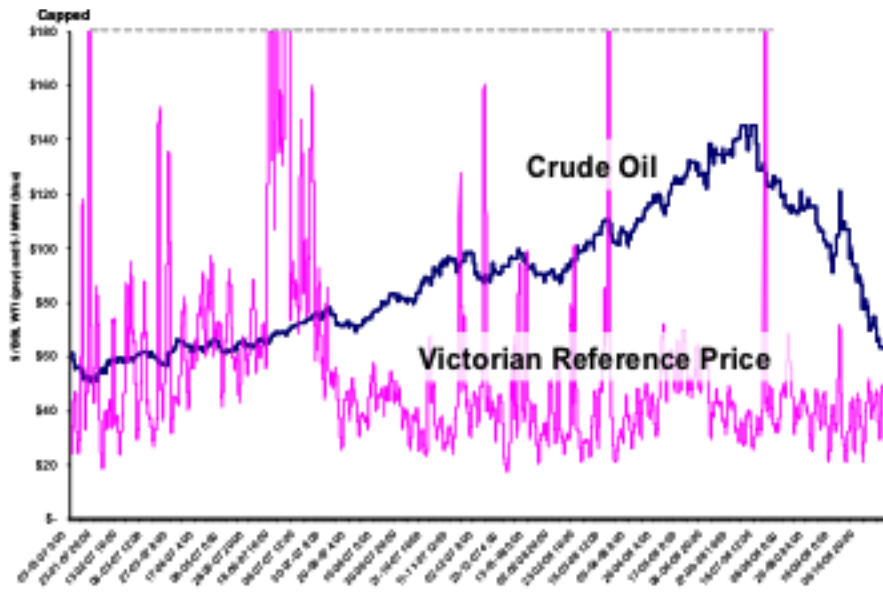
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- Indigenous gas is either depleting or globalising; costs are increasing rapidly
- Coal-fired generation seems to be most economic, but is it acceptable?
- Renewable energy technologies are rising, but everyone claims to deserve special treatment, but at what cost?
- Some older capacity is scheduled to retire, some of it on expiring PPAs, others are “inefficient” oil-fired units

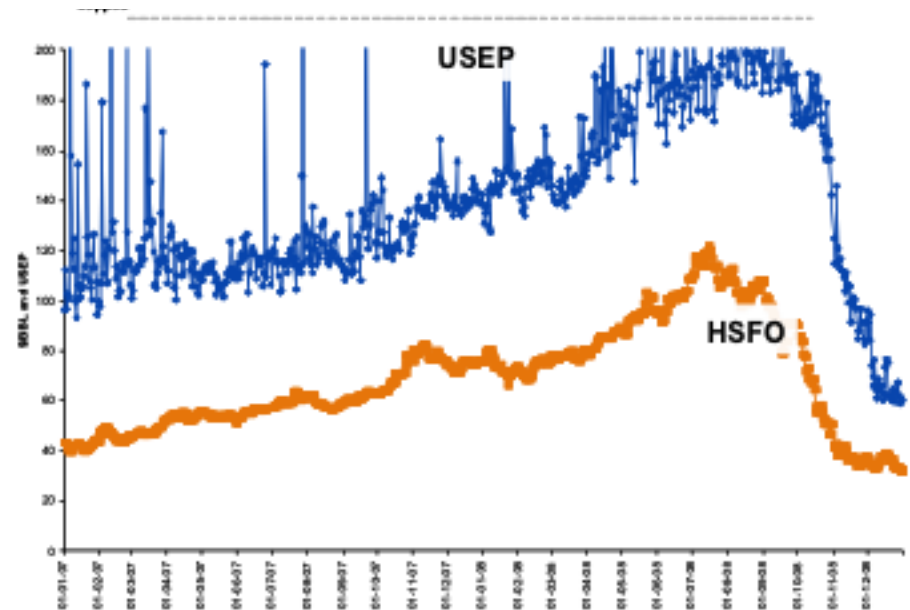
Are new big projects the answer to every challenge, the minister wondered?

# Malsinthappines was becoming more connected to the global fuel markets

## Malsinthappines of Yesterday

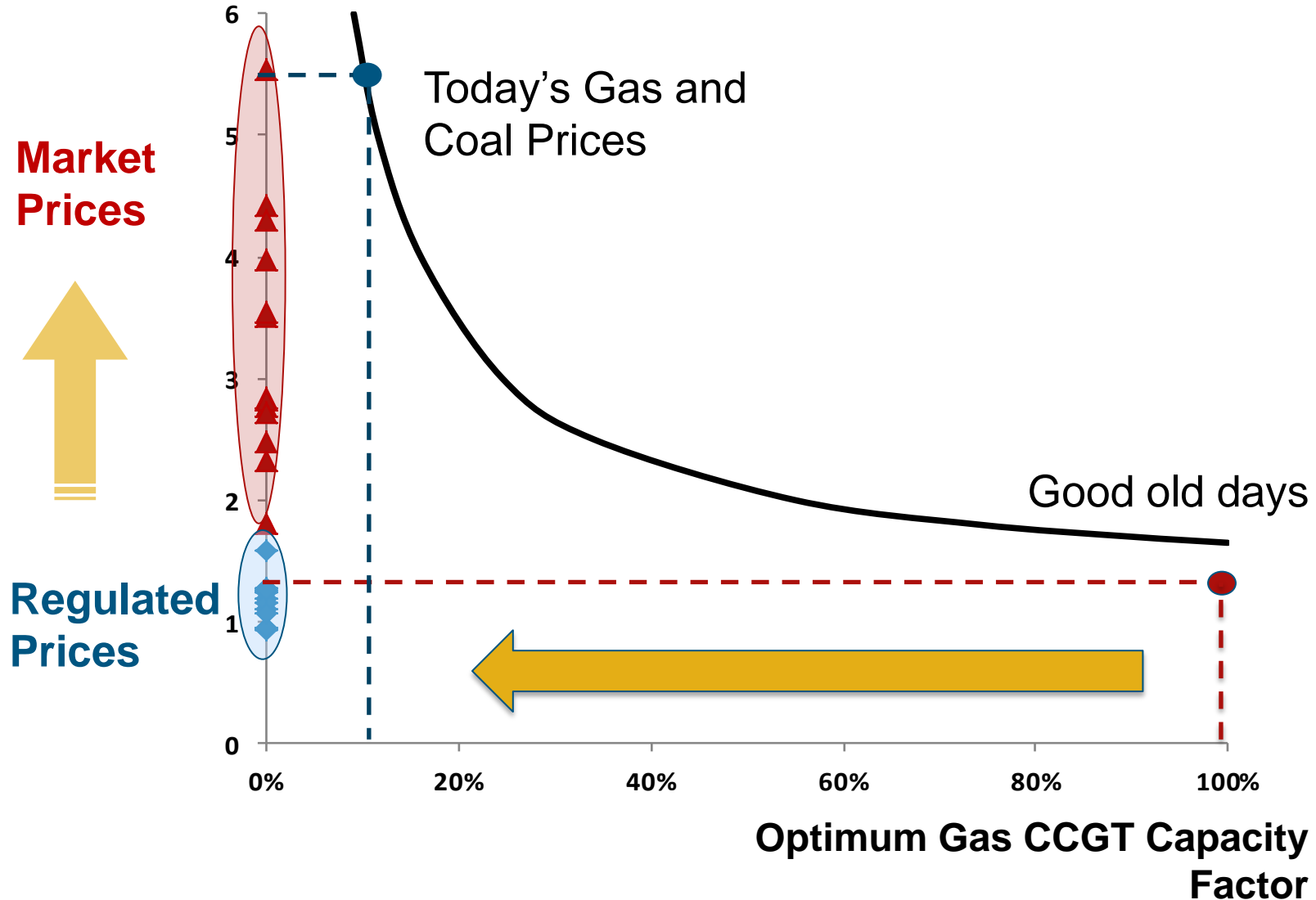


## Malsinthappines of Tomorrow

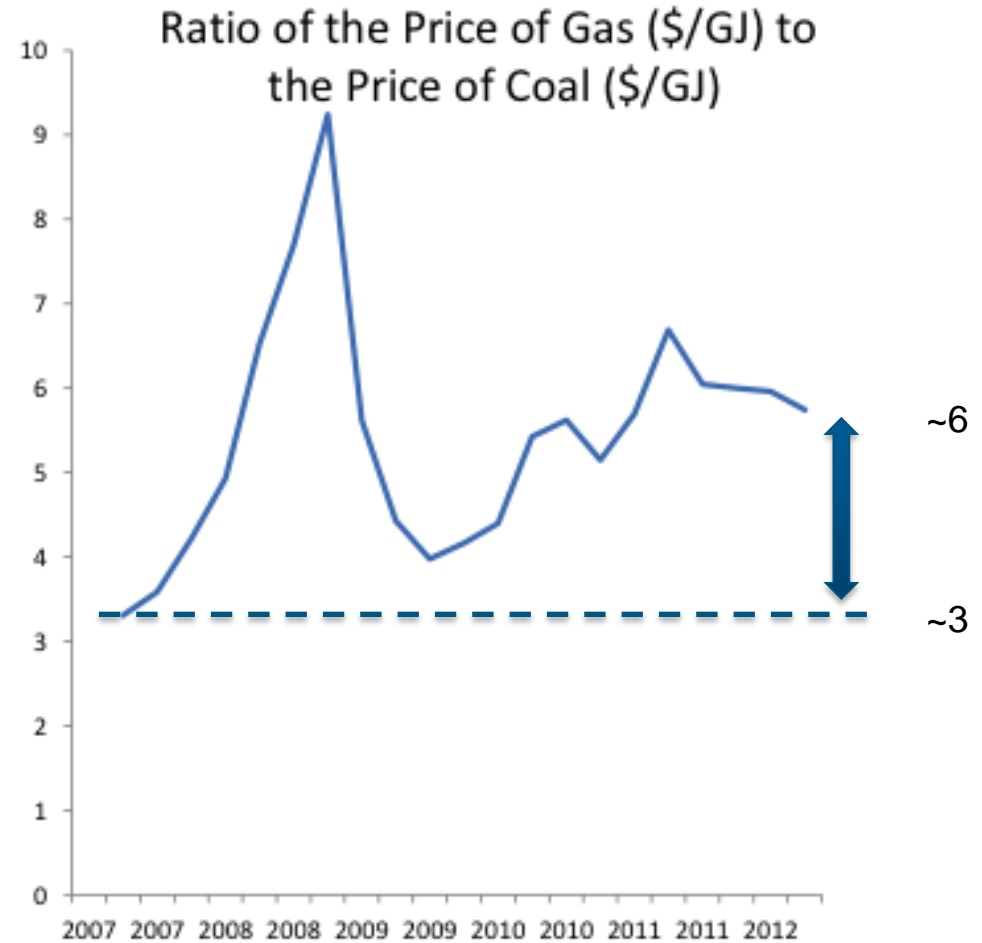
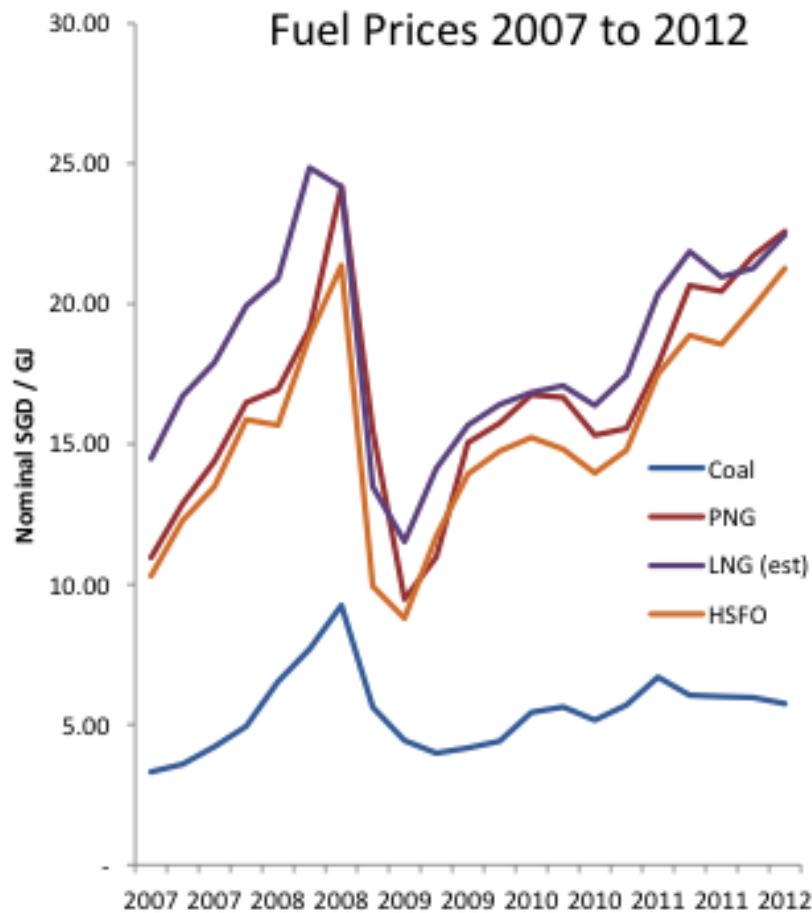


# Breakeven Analysis of Gas and Coal New Build & Dispatch

## Gas/Coal Price Ratio



Over the past five years, the *relative* cost of natural gas has almost doubled in Asia....compared to coal



The Minister studied the global energy sector – to better understand the forces that were making her life so difficult

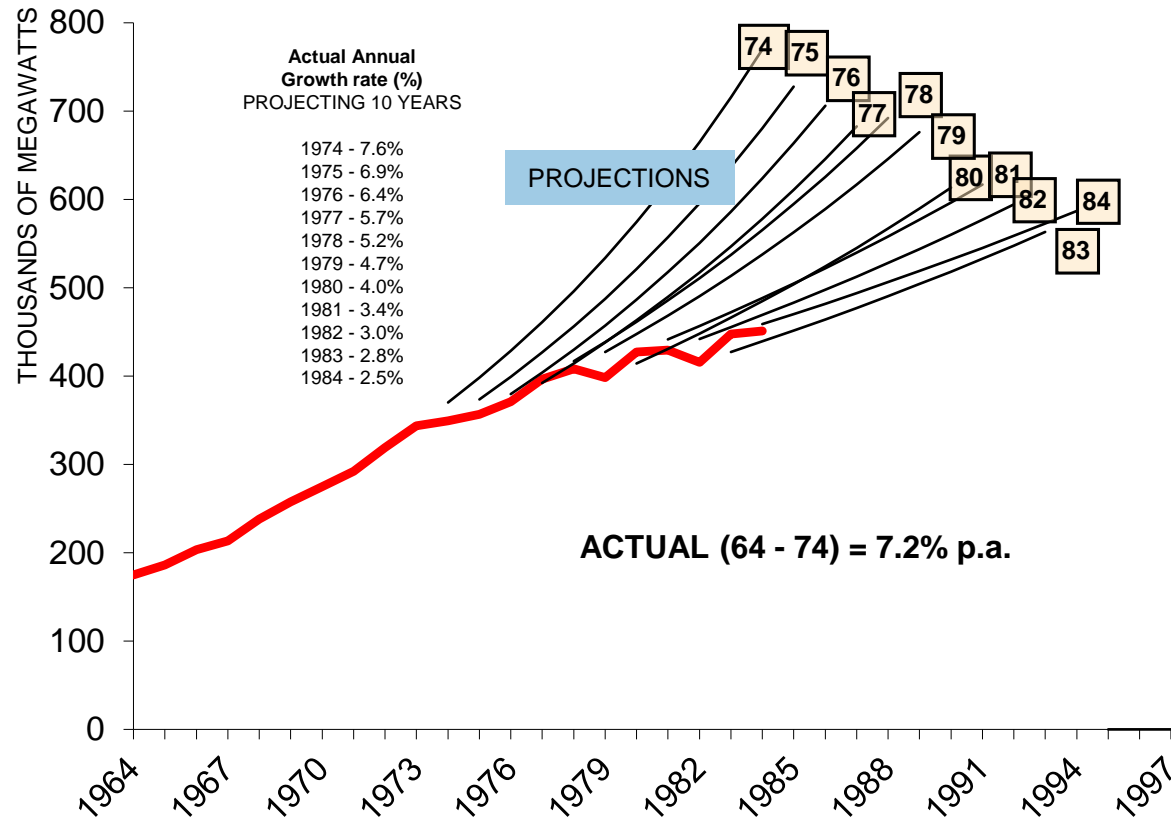
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- She studied demand growth rate forecasting in Asia and in the USA
- She studied gas in the USA
- She studied fuel markets – paying particular attention to price ratios rather than just the price of any single fuel
- She studied the natural resources sector in Australia

Far from bringing her peace and clarity, what she found initially brought her further dismay and discomfort



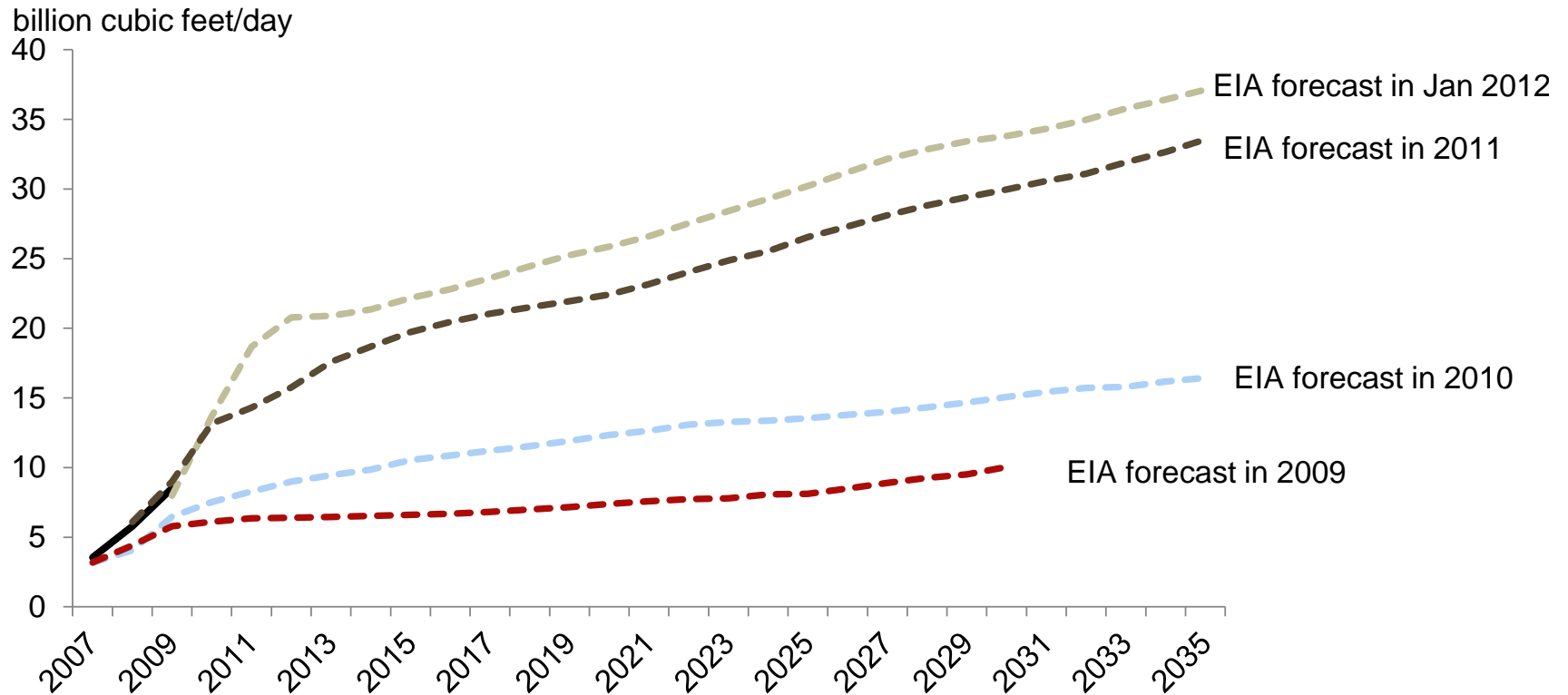
# The USA completely missed the impact of the oil embargo and rising energy prices on electricity demand – for a decade!



Source: North American Electric Reliability Council  
*Electric Power Supply & Demand 1984, p.5*

Hmmm, she thought. forecasting is easy until something unexpected happens --- she thought the pattern looked like a old paper Chinese Fan

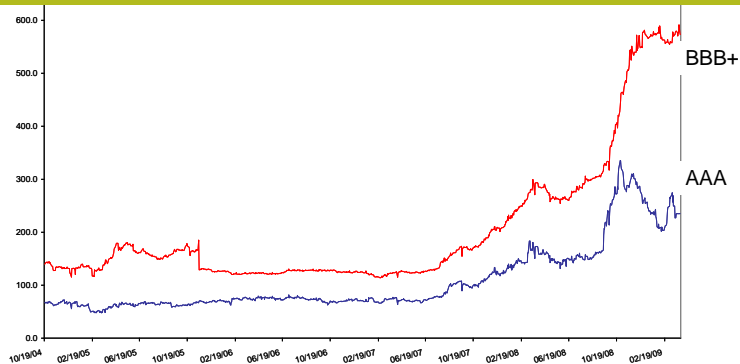
# The USA completely underestimated its gas resources



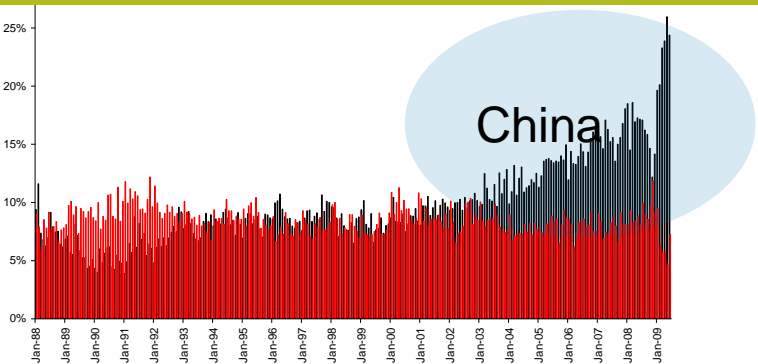
Another “fan”, she noted

# Resource industries in Australia plan based on what they think will happen in the world far away from them....

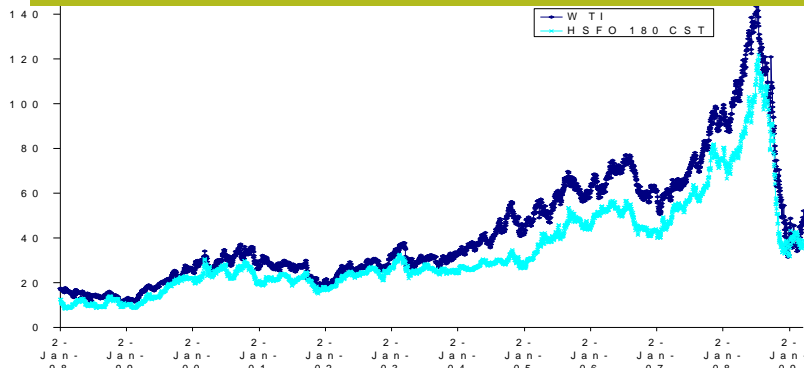
## Spreads relative to US Treasuries



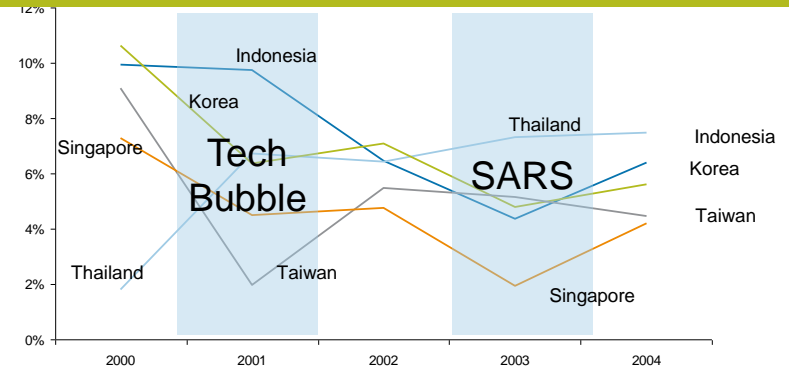
## Share of Australian Exports: USA+Japan vs. China



## Oil Prices



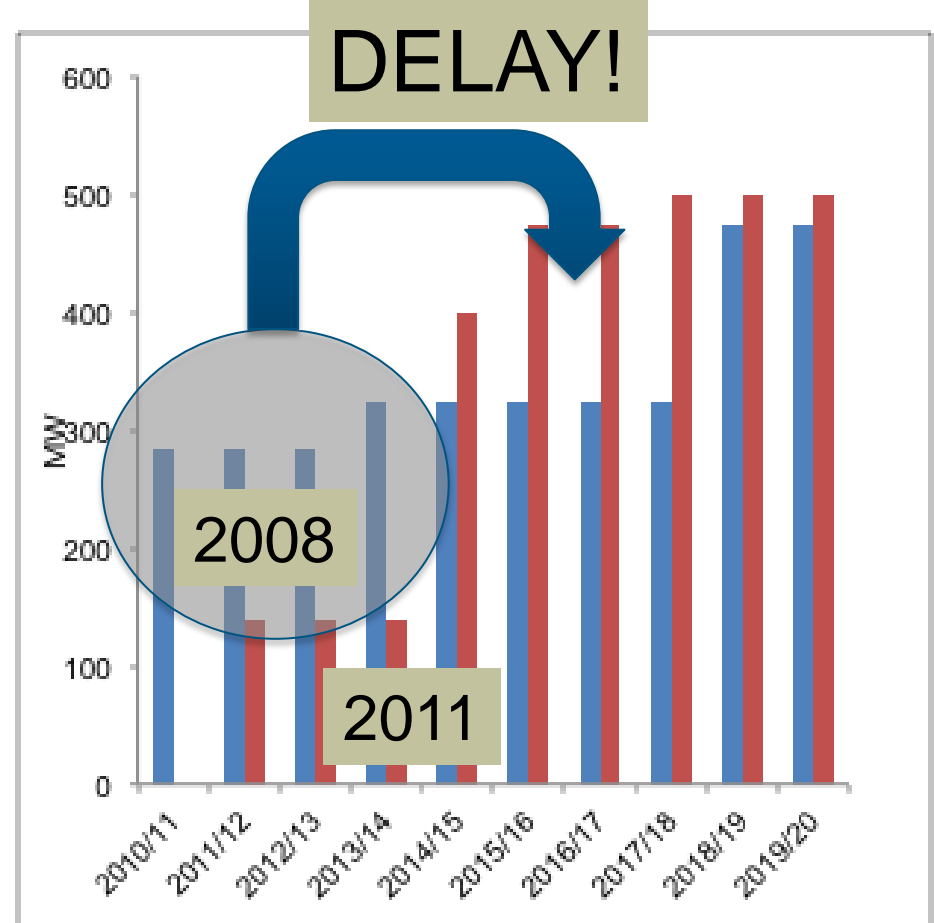
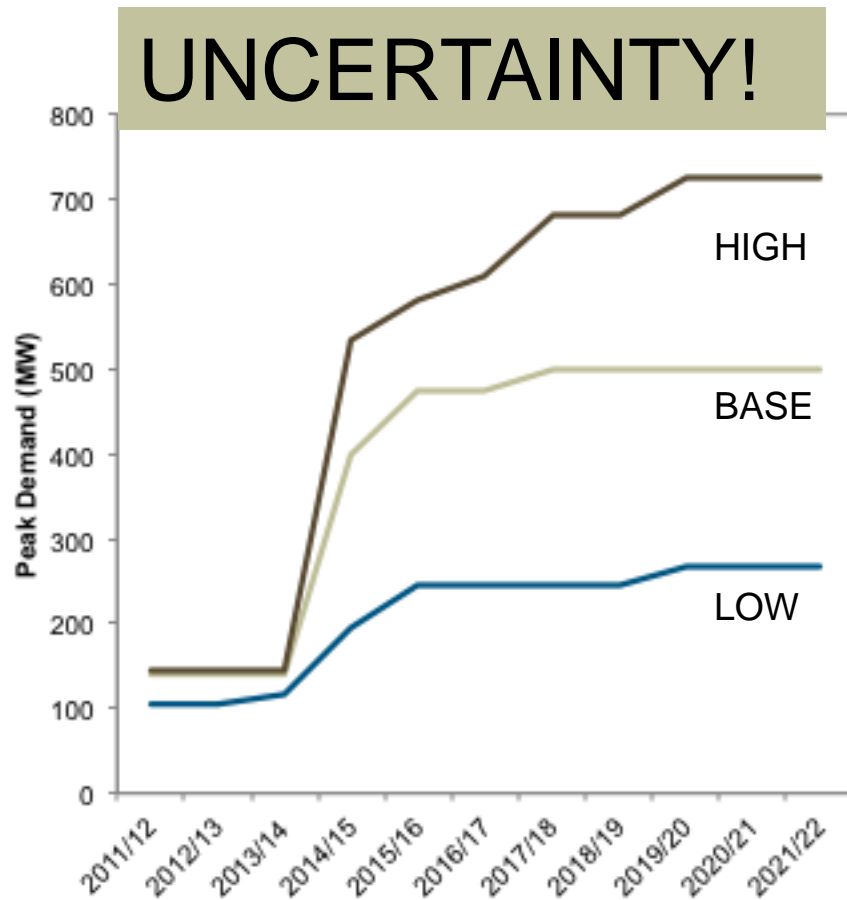
## Asian Market Demand for Electricity



With so many disruptions and volatility, how do THEY make decision?

....They value flexibility, preferring not to commit to the dates or extent of power demand associated with mine expansion plans....

### FORECAST OF EIGHT POTENTIAL NEW LARGE LOADS IN WESTERN AUSTRALIA



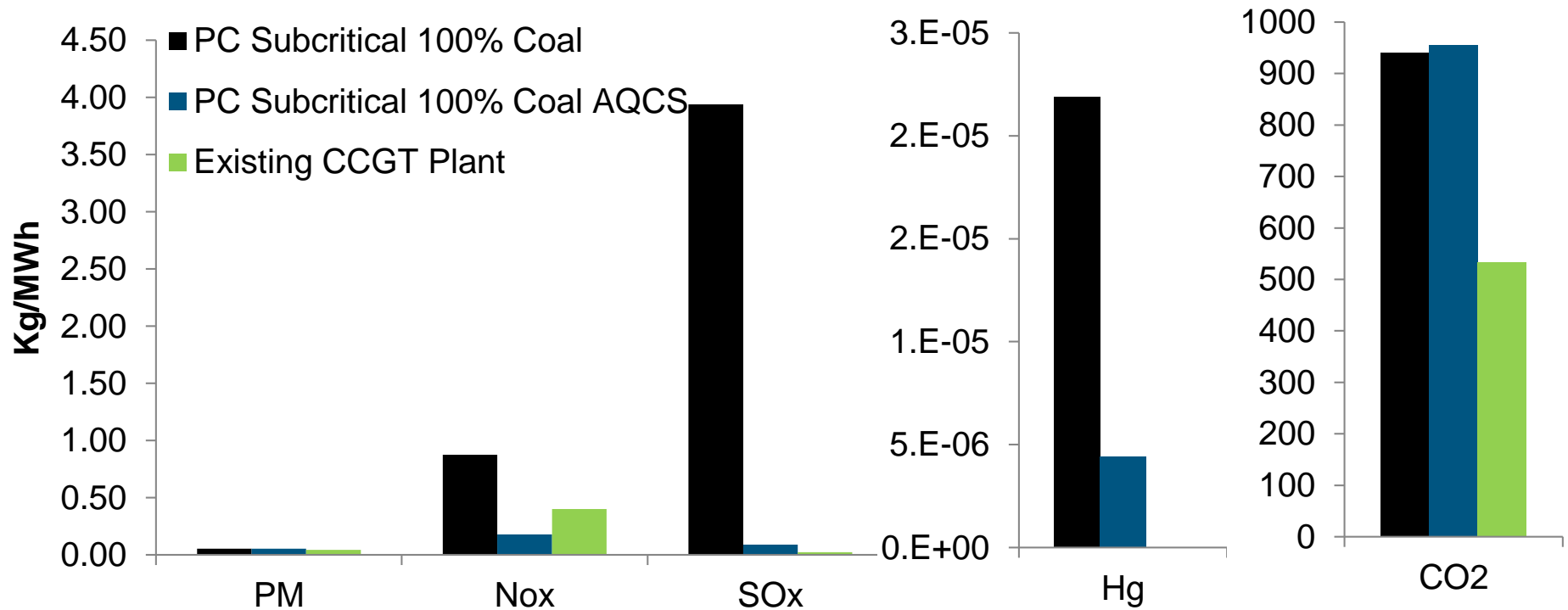
We want flexibility in the Malsinthappines, she said, firmly.

## And then, she realised ...

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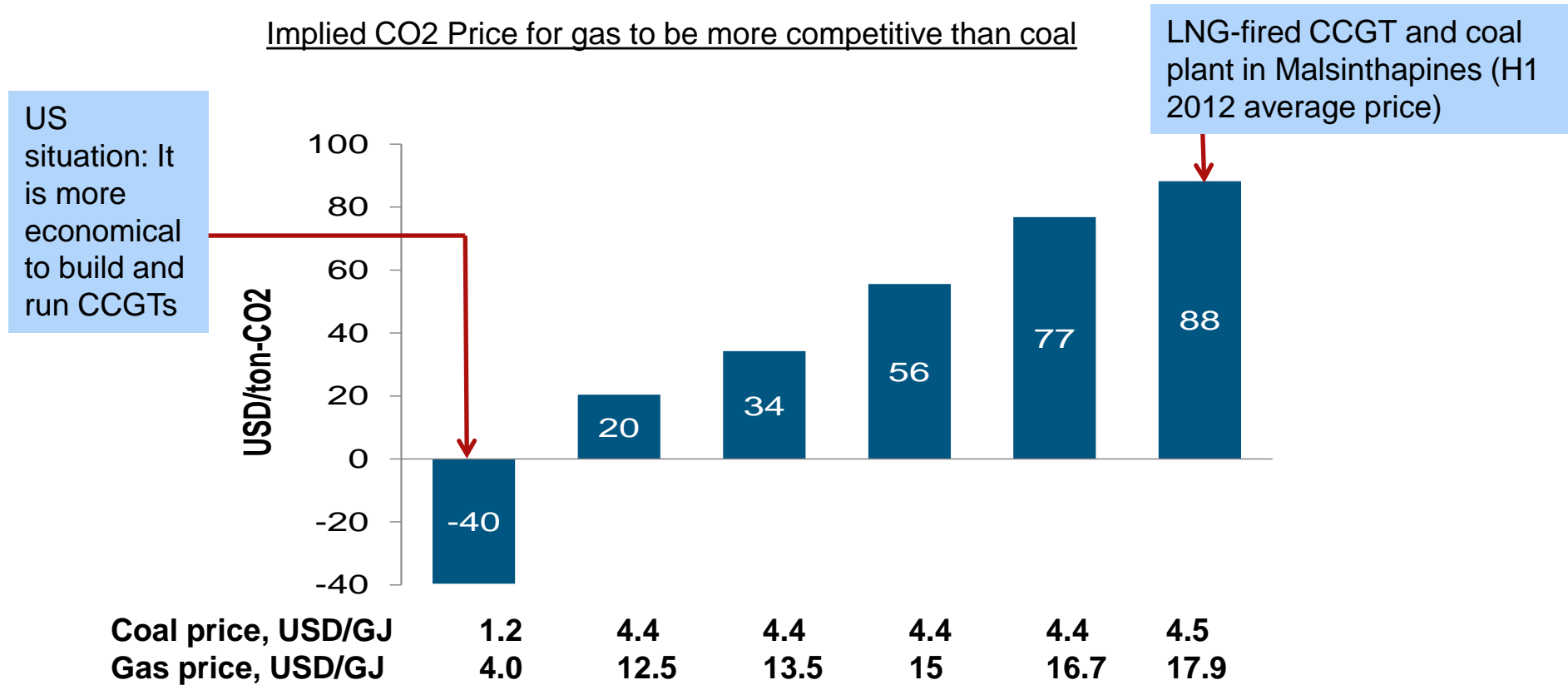
- Why are we focussing on the “fuel mix” at all?
- What matters is whether all the costs and benefits of each decision are accounted for
  - Are we entering into the right types of long-term commitments?
  - And the right methodologies are used to evaluate the value of flexibility?
  - And the right incentives are in place so that the right options are identified?
- Suddenly Malsinthippian energy policy was going in a whole new direction!

When she looked at other emissions, she realised that emission control technology was remarkable – except for that pesky carbon problem



She new this would be a tough sell – but she also knew what Malsinthappines could do, environmentally, with the money it saved

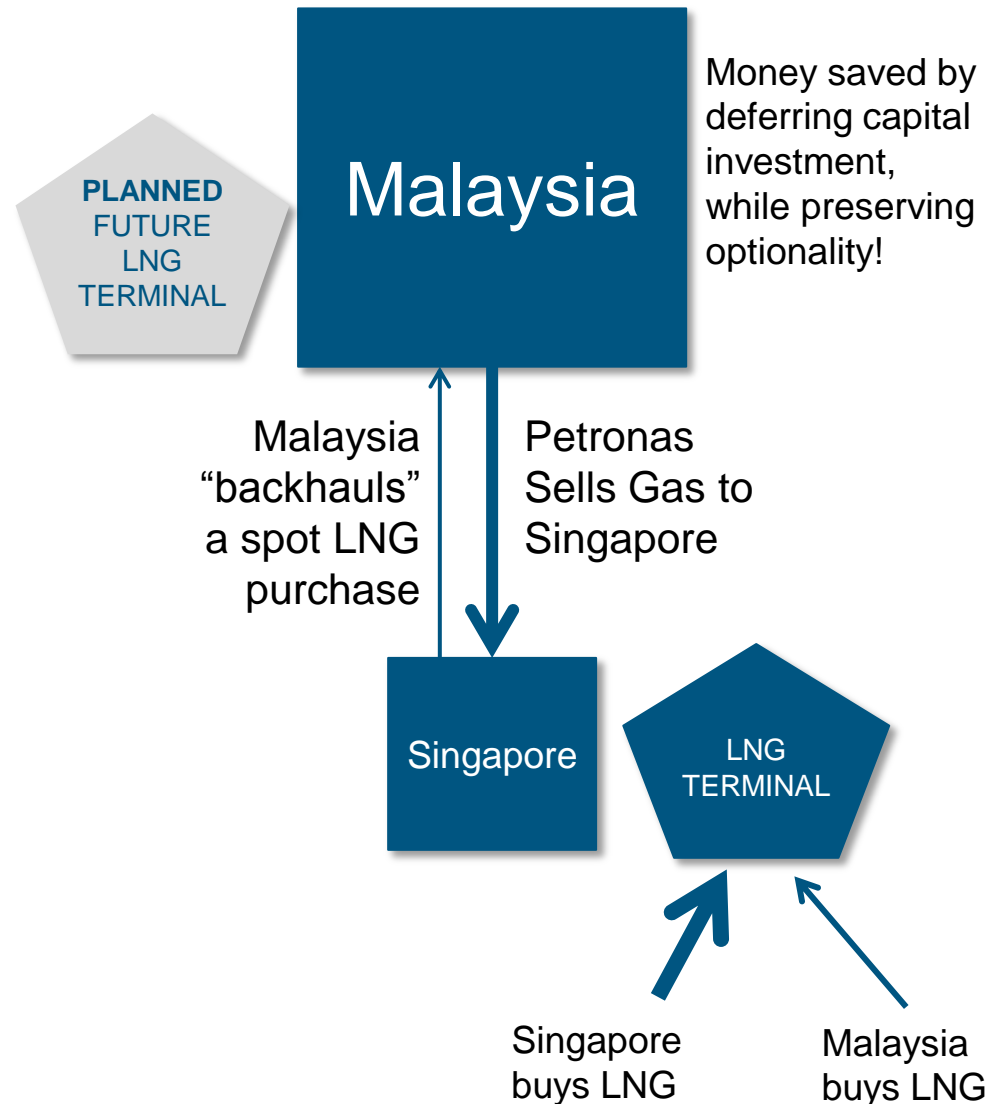
She calculated that staying with LNG in Asia rather than coal was like paying US\$50 to \$88 per tonne of carbon – *more than anyone else in the world pays*



Oh my goodness, she exclaimed. The people need to know!  
She realised she was quickly becoming an energy economist....

With her new-found energy economics skills, she could see that Asia has the potential to innovate substantially throughout the energy value chain

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## The future energy policy of Malsinthappines was decidedly simple

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- Target good decisions, not fuel mix;
- Focus on underlying value, and pay attention to externalities
- Account for uncertainty and the value of flexibility;
- Beware contractual commitments that limit physical flexibility
- Pursue appropriate risk reduction, not fuel diversity
- Implement policies to correct market failures and redistribute benefits as required
- Where possible, look for ways to use markets for opportunity and risk mitigation

And while it would be harder to do these things than it would be to target a fuel mix or a technology, the Minister knew it would be worth it

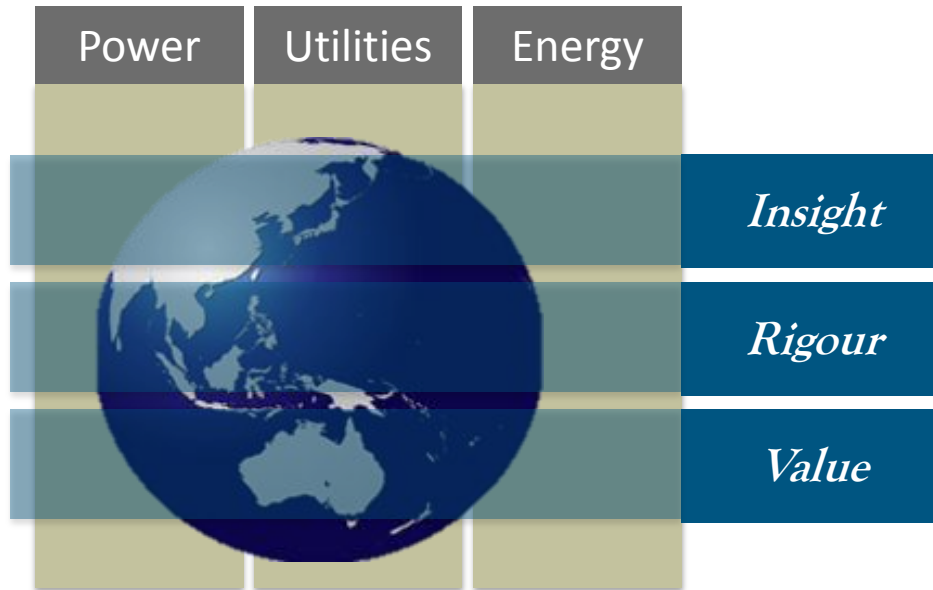
# Epilogue

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- The US shale gas revolution was the result of a complex, supportive framework in which tens of thousands of companies felt it was worth their equity to try something new
- Energy policy is:
  - A legal framework of rights and access
  - An economic framework that identifies and mitigates externalities and sources of market failure
  - An information framework that makes unbiased data widely available
  - Transparent processes
  - The ability to sue and be sued, and to contest and appeal decisions
  - It's the triumph of decentralised decision-making over monopoly
- Energy policy is not about fuel mix targets or diversifying for the sake of diversity, it's about economics



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