Australian Government
Department of Resources, Energy and Tourism

ENHANCING AUSTRALIA'S ECONOMIC PROSPERITY

NATIONAL ENERGY SECURITY ASSESSMENT (NESA) 2011

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National Energy Security Assessment (NESA)

- The Australian Government is committed to maintaining the nation's energy security.

- The inaugural NESA, released in March 2009, was a result of the Government's 2007 election commitment to prepare an assessment highlighting current energy security issues in the liquid fuels, natural gas and electricity sectors.

- The Minister for Resources and Energy, the Hon Martin Ferguson AM MP, has recently announced that the 2009 NESA will be updated this year.

Energy Security

• Energy security in the 2011 NESA will continue to be defined as the **adequate**, **reliable** and **affordable** supply of energy to support the effective functioning of the economy and social development where:

• **Adequacy** is the provision of sufficient energy to support economic and social activity;

• **Reliability** is the provision of energy with minimal disruptions to supply; and

• **Affordability** is the provision of energy at a price which does not adversely impact on the competitiveness of the economy and which supports continued investment in the energy sector.

• The Department is also undertaking work on energy security indicators to enhance the 2011 NESA and any future energy security assessments.

2009 National Energy Security Assessment

• The 2009 NESA's overall finding was that Australia's level of energy security had decreased in the face of mounting challenges including:

- tight supply/demand conditions in both electricity and gas markets which were impacting on reliability and affordability; and
- the need for continued market reforms to maximise investment and improve market flexibility.

• However, the 2009 NESA found that Australia's energy situation was more than adequately meeting the economic and social needs of ordinary Australians.

2011 National Energy Security Assessment

The 2011 NESA will use the inaugural NESA as the starting point for an updated assessment and will examine Australia's current energy security conditions, as well as providing a trend analysis of energy security conditions in the short, medium and long term.

The NESA will also look at key points of vulnerability (infrastructure and supply chains) in Australia's energy system and whether they have a material impact on overall energy security levels.

The 2011 NESA will examine the issues raised in 2009, as well as new emerging issues.

The NESA is intended to be made public and the Government has indicated that it will be released in the second half of 2011.

Summary of liquid fuels security to 2023

	Current	2013	2018	2023
Adequacy	High	High	High	Moderate
Reliability	High	High	High	Moderate
Affordability	Moderate	Moderate	Moderate	Moderate
Overall	**High**	**High**	**High**	**Moderate**
Comment	Domestic crude production declining. Tight global supply/demand balance outweighed by global economic downturn which weakens demand and depresses prices. Lower prices and uncertainty fed by high price volatility dampens exploration and development investment. Effective supply chain management and supply diversity drive reliability. LPG provides a minor contribution to transport fuels. Bio-fuels and CNG are niche providers of transport fuels. No contribution from CTL and GTL.	Domestic crude production increases as new fields start production. Tightening of global supply/ demand balance with demand growth recovery and mature field decline. Development of production capacity is more focused on difficult geological and geo-political regions. Crude prices rising as global economic growth recovers. Refining capacity increases in the Asian region. High reliability continues with minor refinery upgrades and increased investment in import infrastructure. LPG share remains constant if no change to current excise arrangements. Bio-fuels and CNG remain niche contributors. No contribution from CTL and GTL.	Domestic crude production plateaus and starts to decline without new discoveries. Tight global supply/ demand balance returns with ongoing demand growth and mature field decline. Development of more difficult geological and geo-political regions continues. Global refining capacity in Asian and Middle East regions makes up larger proportion of global capacity. Risk of domestic refining capacity reducing. Demand growth met by imports. Storage infrastructure supports imports. LPG share remains constant if no change to current excise arrangements. Bio-fuels and CNG remain niche contributors. CTL and GTL may start production, but are niche contributors.	Domestic crude production declines at a moderate rate in the absence of new discoveries. Ongoing demand growth and mature field decline continues to lead to a tight supply/ demand balance. Geological and geo-political cost pressures continue. Production is concentrated in less stable regions. Asian and Middle East regions become central to global refining capacity. Domestic refining may decline. Demand growth met by imports. Storage infrastructure supports imports. LPG share still constant if no change to current excise arrangements. Bio-fuels and CNG continue as niche contributors. CTL and GTL remain niche contributors.

Current liquid fuels security assessment

Issue Impact on:	Adequacy	Reliability	Affordability	Assessment
Crude oil supply				
Refined product supply				
Infrastructure resilience				
Carbon pricing				
Overall assessment	**High**	**High**	**Moderate**	**High**

Key: Negative impact, Slightly negative impact, No impact, Slightly positive impact, Positive impact

Five year liquid fuel security assessment

Issue Impact on:	Adequacy	Reliability	Affordability	Assessment
Crude oil supply				
Refined product supply				
Infrastructure resilience				
Carbon pricing				
Overall assessment	**High**	**High**	**Moderate**	**High**

Key: Negative impact, Slightly negative impact, No impact, Slightly positive impact, Positive impact

Ten year liquid fuel security assessment

Issue Impact on:	Adequacy	Reliability	Affordability	Assessment
Crude oil supply				
Refined product supply				
Infrastructure resilience				
Carbon pricing				
Overall assessment	**High**	**High**	**Moderate**	**High**

Key: Negative impact, Slightly negative impact, No impact, Slightly positive impact, Positive impact

Fifteen year liquid fuel security assessment

Issue Impact on:	Adequacy	Reliability	Affordability	Assessment
Crude oil supply				
Refined product supply				
Infrastructure resilience				
Carbon pricing				
Overall assessment	**Moderate**	**Moderate**	**Moderate**	**Moderate**

Key: Negative impact, Slightly negative impact, No impact, Slightly positive impact, Positive impact

Metrics Workshop

- Source of ideas and information for future NESA
- Quantitative evidence
- International experiences
- Academic and industry expertise

2011 Liquid Fuels Issues

- Impact of international and regional oil market factors
- Implications of increasing net oil imports
- The resilience of domestic supply chain
- Future challenges to viability of domestic refining
- Meeting Australia's stockholding obligations to the International Energy Agency.

2011 Electricity Issues

- Investment delays due to carbon policy uncertainty
- Impact on reliability and affordability from the expanded RET
- Market reforms
- Increased uptake of gas-fired generation
- Electricity prices.

2011 Gas Issues

- Tightening supply and demand balance
- Market reforms
- Impact of the developing east coast gas market
- International LNG demand