



Department of Energy

South Africa's Integrated Resource Plan (Focus on Nuclear)

ROSATOM Technical Seminar

2 April 2012

Sandton Convention Centre, South Africa



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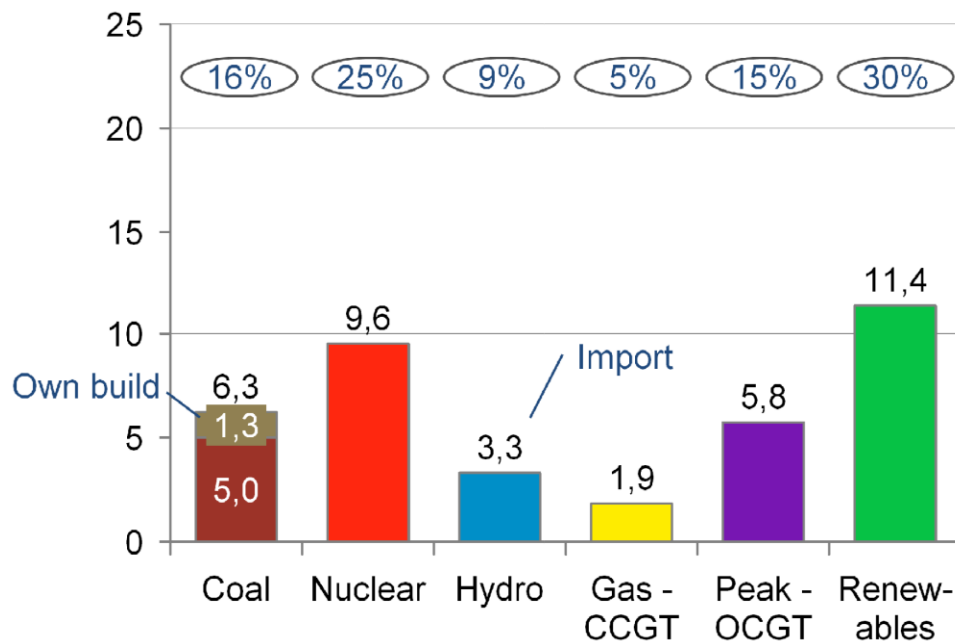
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Integrated Resource Plan

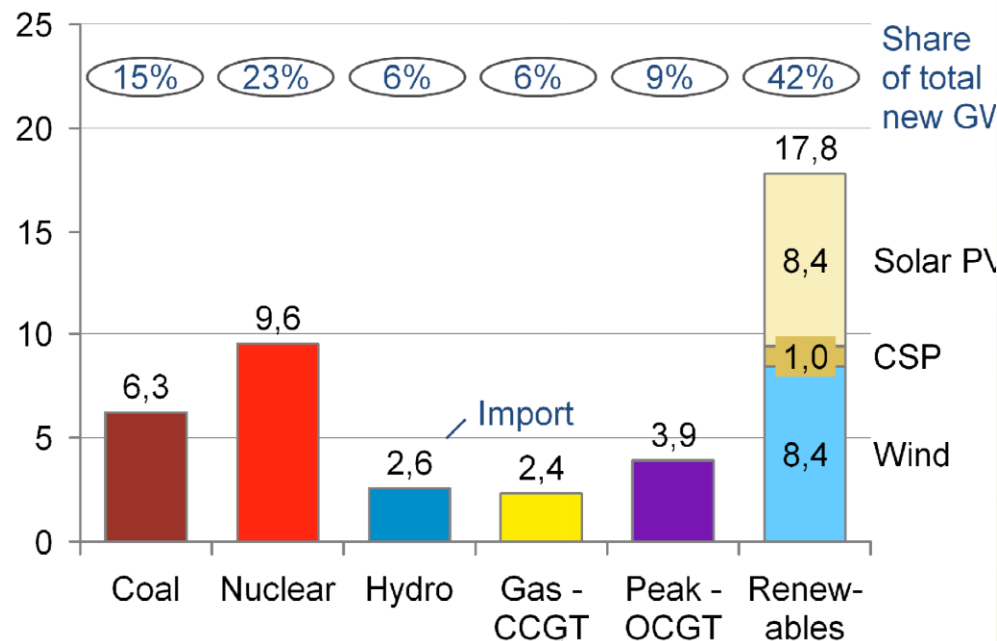
Before consultation process: Revised Balanced Scenario (RBS)

Total additional new capacity
(without committed) until 2030 in GW



After consultation process: Policy-Adjusted IRP

Total additional new capacity
(without committed) until 2030 in GW



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Integrated Resource Plan

Table 5. Commitments before next IRP

	New build options							
	Coal (PF, FBC, imports, own build)	Nuclear	Import hydro	Gas – CCGT	Peak – OCGT	Wind	CSP	Solar PV
	MW	MW	MW	MW	MW	MW	MW	MW
2010	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	300
2013	0	0	0	0	0	0	0	300
2014	500 ¹	0	0	0	0	400	0	300
2015	500 ¹	0	0	0	0	400	0	300
2016	0	0	0	0	0	400	100	300
2017	0	0	0	0	0	400	100	300
2018	0	0	0	0	0	400 ⁴	100 ⁴	300 ⁴
2019	250	0	0	237 ³	0	400 ⁴	100 ⁴	300 ⁴
2020	250	0	0	237 ³	0	400	100	300
2021	250	0	0	237 ³	0	400	100	300
2022	250	0	1 143 ²	0	805	400	100	300
2023	250	1 600	1 183 ²	0	805	400	100	300
2024	250	1 600	283 ²	0	0	800	100	300
2025	250	1 600					100	1 000
2026	1 000	1 600					0	500
2027	250	0					0	500
2028	1 000	1 600					0	500
2029	250	1 600					0	1 000
2030	1 000	0					0	1 000
Total	6 250	9 600					1 000	8 400

The increments of 1600MW are indicative. 1000-1600MW increments could have the same effect.

- Firm commitment necessary now
- Final commitment in IRP 2012



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Strategic Plan For Nuclear

Legislative review and strategy

- Identify improvements needed
- International experts review (IAEA)
- Implementable action plan to address these

Industrialization and localization

- Determine industry requirements
- Assess local capabilities
- Develop interventions
- Technology Transfer



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Strategic Plan For Nuclear

Skills development

- Determine type and quantity of skills
 - Construction Skills
 - Plant Operation Skills
 - Skills for Government Departments
 - Regulatory skills
 - Supporting industry skills
 - Decommissioning and Rehabilitation Skills
- Skills development and retention plans



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Strategic Plan For Nuclear

Corporate, funding, and procurement

- Analysis of different corporate structures
- Develop a financial model
- Develop financing strategies
- Develop procurement strategy

Communication and stakeholder engagement

- Community outreach interventions
- Industry engagement

Risk management framework

- Determine a key risk matrix
- Allocate risks appropriately
- Ensure monitoring of risks & mitigation



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Phased Decision Making

Definition

Breaking up a large decision (high cost and risk) into smaller decisions phased over time, with the aim of not compromising on cost and schedule



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Phased Decision Making

Advantages:

- Reduces risk as smaller decision success can be monitored, influencing more efficient further decisions
- Avoids duplication of roles of stakeholders at early stage of projects due to confusion at large decisions
- Quicker start-up and rollout due to less dependencies requiring full evaluation before project start
- Change of approach on long term projects will have minimal impact.



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Phased Decision Making

Disadvantages:

- Perceived as lack of commitment to stakeholders and participants – withholding interest in project
- Administration burden on decision makers increased

Summary:

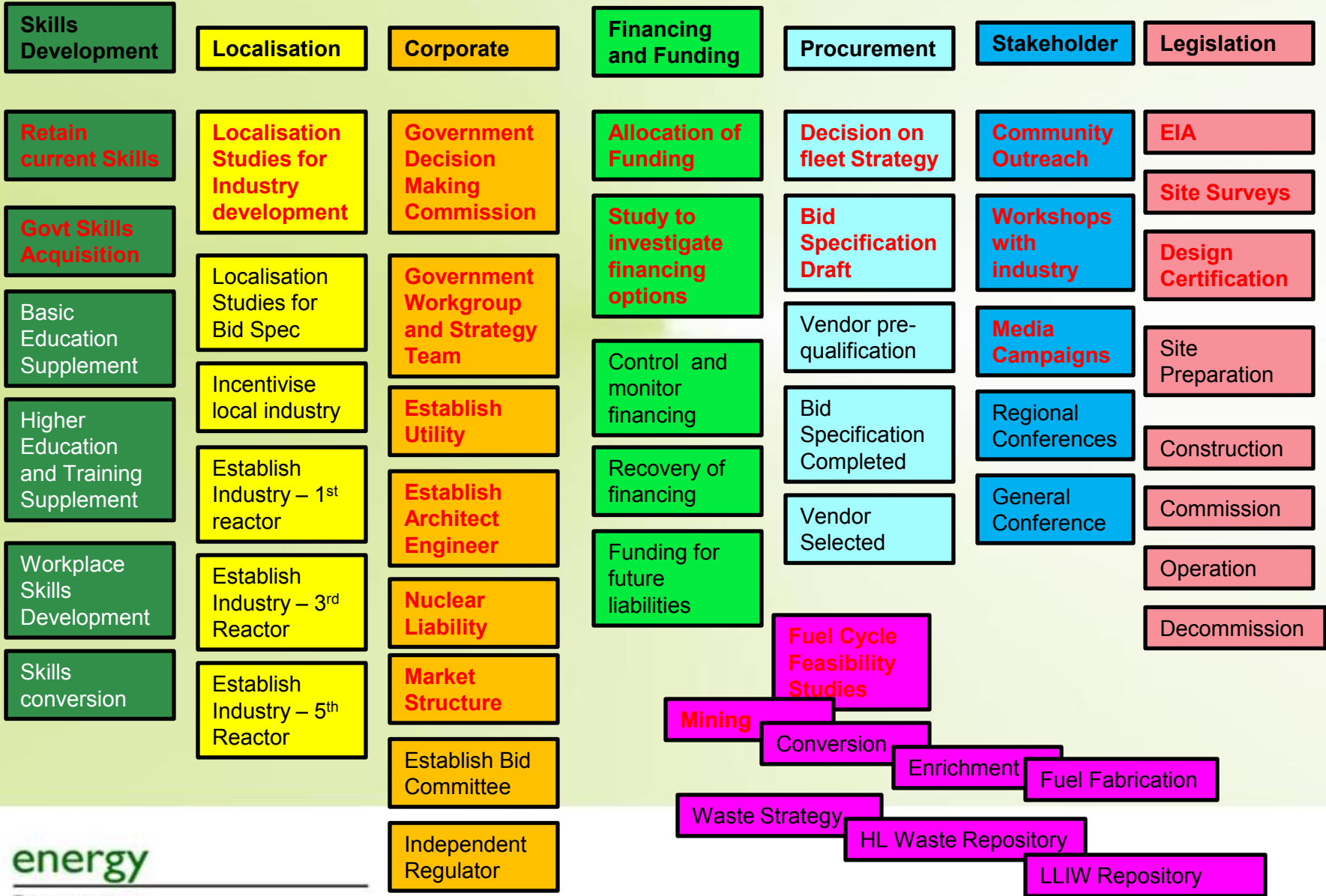
- Phased Decision Making is less risky and faster, but more administrative burdensome.
- Nuclear Projects carry great risk, are extremely administrative in any case, and therefore Phased Decisions are preferable to reduce risk and increase success.



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Some Important Decisions





THANK YOU

Спасибо

(Spahseeboh)



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