BOSS
RESOURCES LTD

AUSTRALIA'S NEXT URANIUM PRODUCER

CORPORATE PRESENTATION

11 MAY 2020

ASX: BOE | @BOSS_RESOURCES

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The information in this document relating to the Feasibility Study is extracted from the announcement entitled 'Honeymoon FS confirms Boss Resources as Australia's next uranium producer' dated 21 January 2020. The Company confirms that all the material assumptions underpinning the production targets, or the forecast financial information derived from the production targets, continue to apply and have not materially changed. The information in this document relating to the Mineral Resources is extracted from the announcements released to the ASX on 20 January 2016, 8 April 2016, 14 June 2016, 15 March 2017 and 25 February 2019. The information relating to the Exploration Results for the Jasons Deposit is extracted from the Company's announcements dated 6 December 2016, 8 December 2016, 14 December 2016 and 3 February 2017. The information relating to the results from the Field Leach Trial and Ion Exchange Pilot Plant have been extracted from the announcements released to the ASX on 19 June 2017, 31 July 2017, 13 September 2017, 4 and 26 October 2017, 1 and 15 November 2017. The information in these announcements has been compiled and/or reviewed by Dr Marat Abzalov, who is a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting Mineral Resources and Ore Reserves". Dr Abzalov has consented to the inclusion of the information in this presentation in the form in which it appears and confirmed that the form and context in which the Competent Person's findings are presented have not materially changed since initial release to the ASX.

The information relating to the Exploration Target is extracted from the announcements released to the ASX 8 December 2015 and 25 March 2019. The Exploration Target is conceptual in nature as there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource under the JORC Code 2012. The Exploration Target is not being reported as part of any Mineral Resource or Ore Reserve.

CORPORATE OVERVIEW

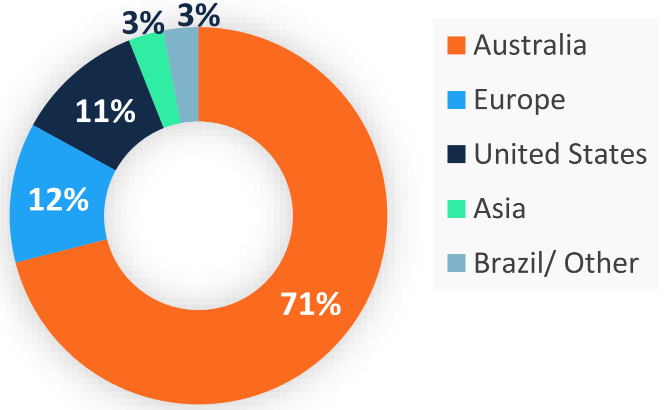
BOARD OF DIRECTORS

Non-Executive Chairman	Peter O'Connor
Managing Director/ CEO	Duncan Craib
Technical Director	Bryn Jones
Non-executive Director	Evan Cranston
Non-executive Director	Peter Williams

KEY METRICS (ASX:BOE)

Shares on issue	1,584 million
Share price	6.6 cents
Market cap	A$105m
Cash (+restricted)	A$ 4.3m (+A$ 8.8m)
Debt	Nil

SHAREHOLDER LOCATION



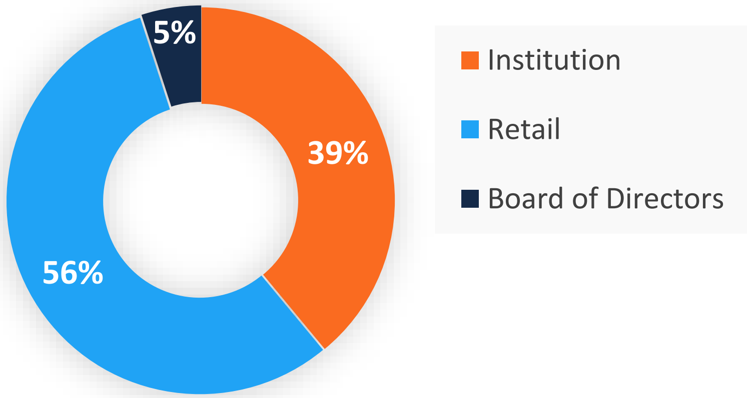
STRATEGIC & MARKET ADVISER

Strategic Adviser	Sashi Davies

ANALYST COVERAGE

Canaccord	Larry Hill
Euroz	Steven Clarke
Hartleys	Aiden Bradley

SHAREHOLDER SUMMARY



HONEYMOON
RESTART PROJECT

PROJECT OVERVIEW

1st WORLD JURISDICTION

- Located in South Australia, the premier and most advanced uranium state in Australia
- Tier 1 mining jurisdiction and destination of choice for utilities
- Port Adelaide has established uranium shipping routes for international markets

OPERATIONAL READINESS

- A proven restart operation in care & maintenance, can quickly respond to market conditions
- 2mlbs per annum base case production, which can be expanded
- 71.6Mlb U3O8 JORC Resource
- Significant Exploration Target. 2,600km^2 underexplored uranium province

PROJECT ECONOMICS

- Global first mover advantage, production within 12 months
- All-in Cost in lowest quartiles of ~ US$32 /lb
- All-in Sustaining Cost in quartiles of ~ US$27 /lb
- Low CAPEX outlay of US$62m
- Question of WHEN not IF uranium prices will rise

FULLY PERMITTED

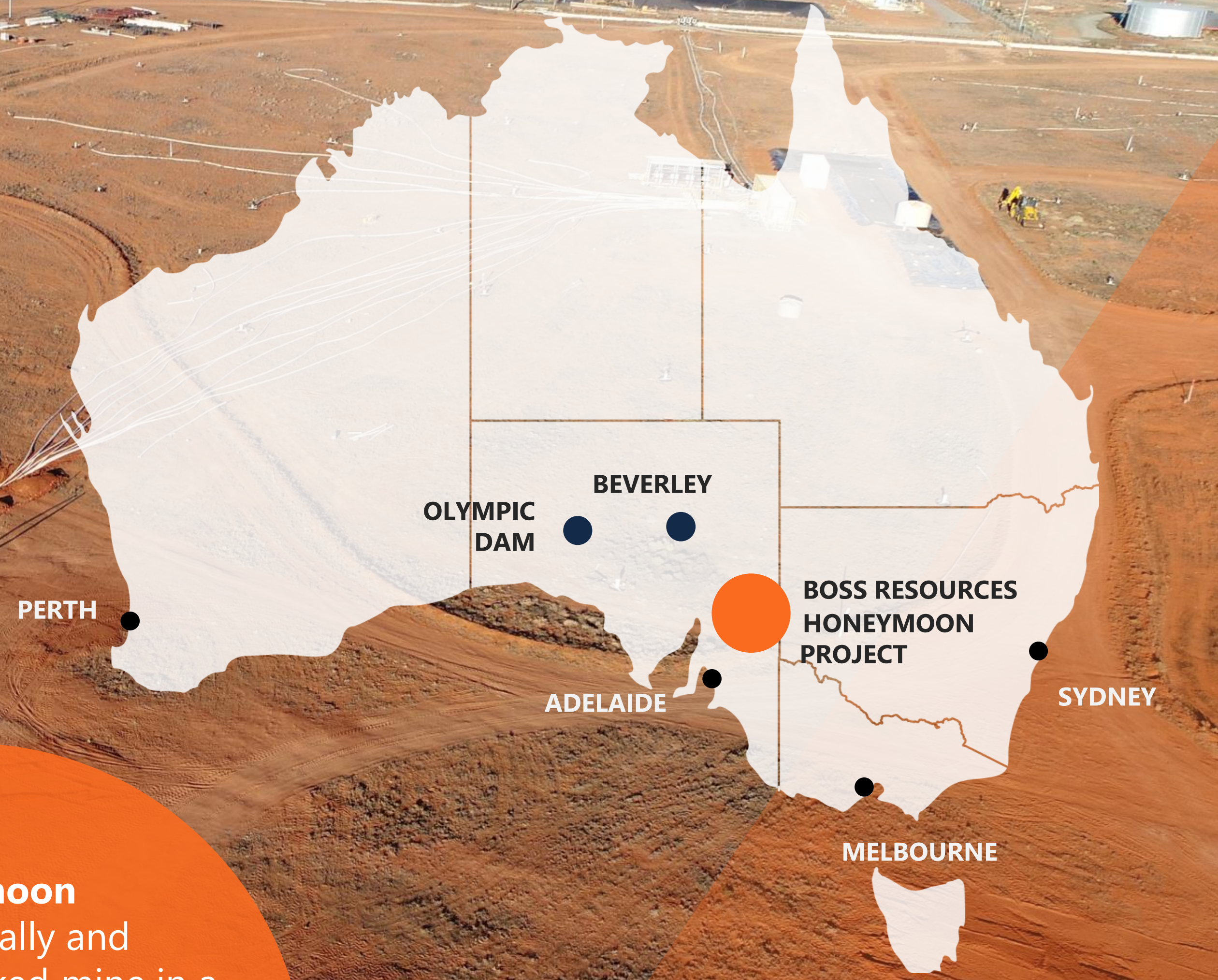
- 1 of only 4 fully permitted mines in Australia (3 reside in South Australia)
- Uranium export permit recently renewed
- Native Title agreements are all in place
- Operational permits and licences in place, lower risk on timing of start up

EXPERIENCED TEAM

- MD/ CEO / Market Adviser ex-Husab Mine (Extract Resources / Kalahari Minerals)
- Technical Director ex COO of Laramide & Heathgate
- Board & management experienced in constructing & operating uranium mines
- Enviable long term supply relationships with utilities world wide

HONEYMOON RESTART PROJECT

- Three of Australia's four fully permitted uranium mines are in South Australia, 2 of which are In-Situ Recovery (ISR) operations
- An international Tier 1 mining jurisdiction of choice for uranium supply, providing diversification for utilities
- Federal and State government support
- Established shipping routes from Port Adelaide of 30 years so no risk of delay
- 1st world mining jurisdictions attract Tier 1 investment and skilled workforce, specialising in ISR uranium mines



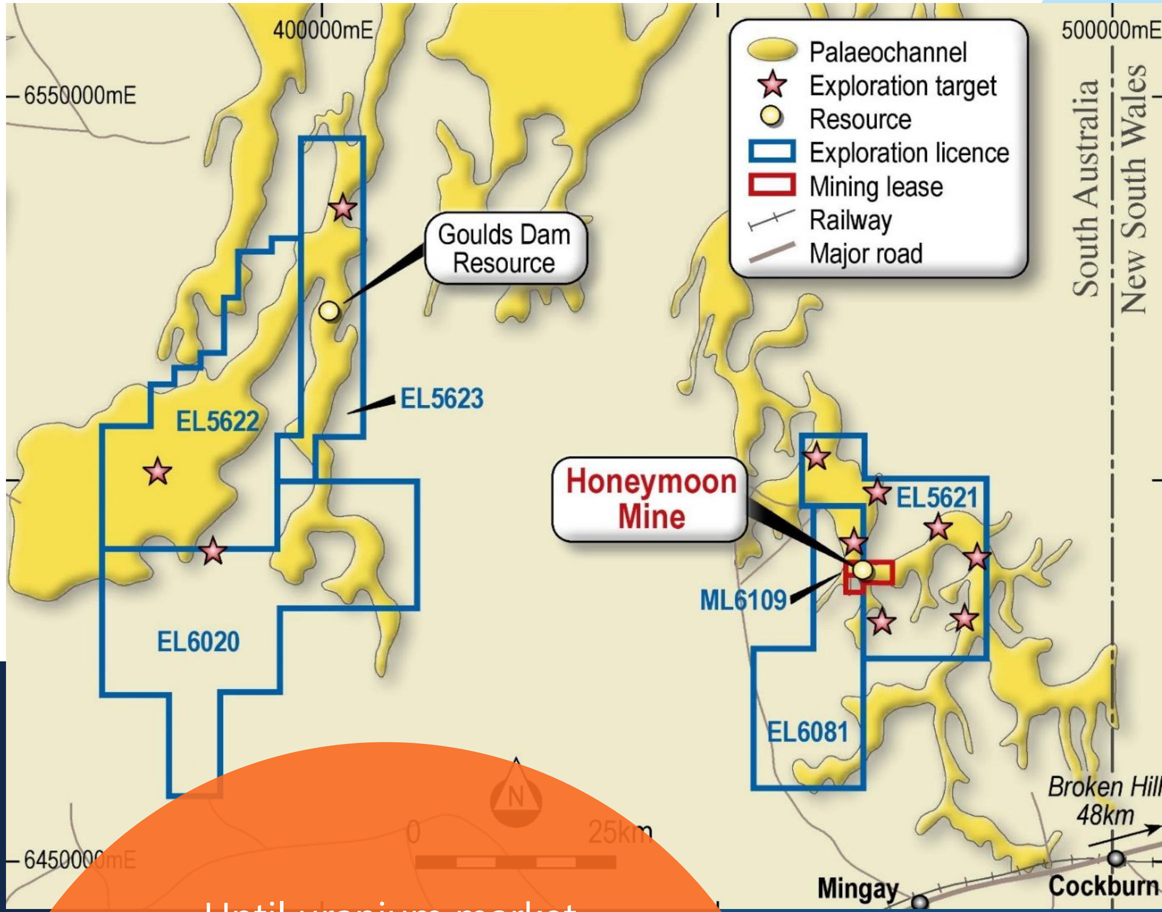
Honeymoon
Is a technically and financially de-risked mine in a geologically stable, uranium friendly environment.

RESOURCES AND EXPLORATION UPSIDE

- 71.6Mlb U3O8 JORC Resource*
- Mining License 6109 contains 34 Mlb U3O8
- Average grade 620 U3O8 ppm
- Shallow mineralisation at 90-120m depth
- In-Situ Recovery (ISR) cheapest method of resource extraction
- Significant Exploration Target in addition to JORC Resource

Classification	Million Tonnes	U_3O_8 ppm	Contained U_3O_8 (Mkg)	Contained U_3O_8 (Mlb)
Measured	3.1	1,100	3.4	7.6
Indicated	18.4	630	12.0	25.5
Inferred	30.9	570	18.0	38.5
Total	**52.4**	**620**	**32.5**	**71.6**

Refer ASX announcement dated 25 February 2019



Until uranium market conditions improve, exploration activities will **focus on low-cost and non-invasive geophysical techniques**, allowing for more focused drill ready programs.

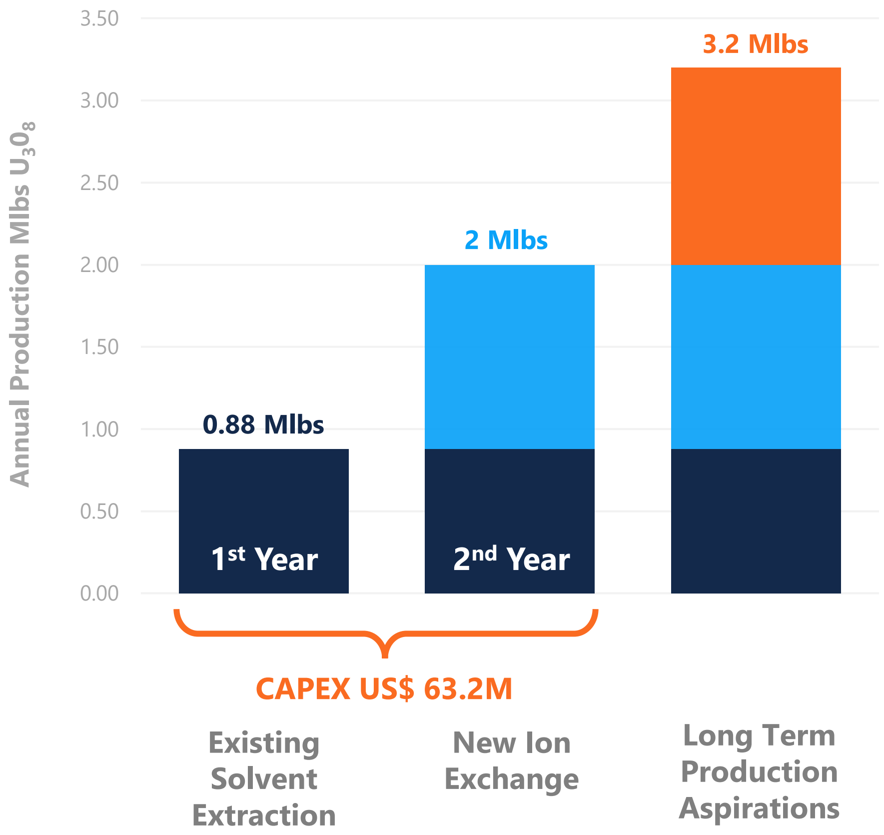
EXPLORATION UPSIDE

- **Exploration Target up to 190Mlbs**. In addition to the global Mineral Resource, the Exploration Target estimate for Honeymoon stands at 28Mt to 133Mt of mineralisation at a grade of 340ppm to 1,080ppm U3O8 for a contained 58Mlbs to 190Mlbs U3O8 (26,300 to 86,160 tonnes of contained U3O8), using a cut-off of 250ppm. The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain whether future exploration will result in the definition of a Mineral Resource.
- **5,000 Historic Drill Holes**. Much of the data used in the Exploration Target estimation process came from historical work undertaken around the project area between 1972 and 2003 by many different companies, comprising over 5,000 historic drill holes for analysis
- **Advanced but Cost Effective Exploration**. Boss Resources seeks to employ the most advanced and cost-effective multi-disciplinary exploration alternatives to conduct large-scale exploration while increasing project value for shareholders
- **Potential for Future Large Scale Discoveries**. We look forward to unlocking additional large-scale uranium mineralisation

A$170m SITE INFRASTRUCTURE

STAGED PRODUCTION APPROACH

Fully permitted to export 3.3Mlbs/ annum U3O8 equivalent



Fast-tracked production, within 12-months, with low capital outlay, to seize upon a rising uranium market

CURRENT WORK PROGRAMS

Current market conditions are moving toward Honeymoon's restart, as we have first mover advantage and will be Australia's next uranium producer when desired price is achieved.

- Continued engagement with utilities to be included in off-market requests and more formal requests for supply proposals (RFP)
- Assessment of financing options
- Operational readiness to accelerate execution schedule
- Technical optimisation and cost reduction initiatives
- Continued brownfield exploration program
- Planning for Stage 3 expansion (3.2Mlbs/annum)
- Care & Maintenance activities to ensure the plant remains in excellent good condition
- Consideration of merger & acquisition opportunities

HOW BOSS RESOURCES ADVANCED HONEYMOON

EXECUTION
2Mlb / ANNUM –
3.2Mlb U3O8
AIC < $32/lb

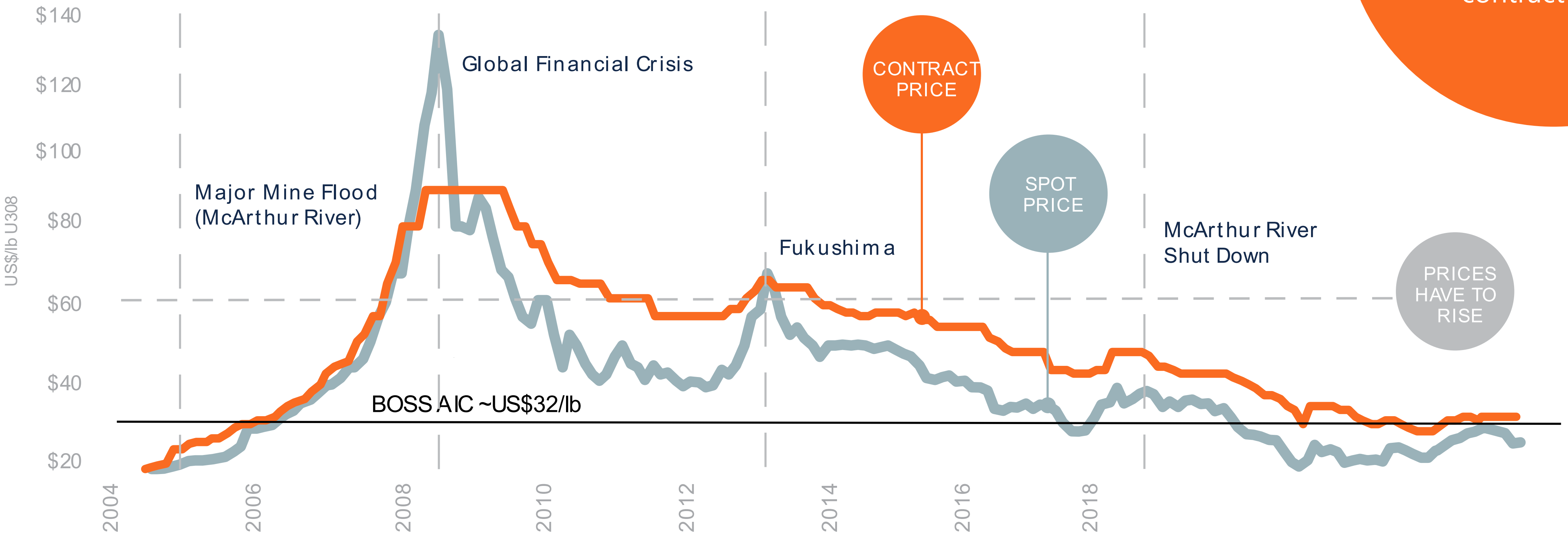
Project Acquisition	Scoping Study	Pre-Feasibility Study	Field Leach Trial	Resource Upgrade & Optimisation	Feasibility Study	Operational Readiness & Planning	Quick Restart • Solvent extraction • 0.88Mlbs	Expansion • Ion exchange • 2Mlbs +
2015	2016	2017	2017	2018/19	2020	CURRENT	YEAR 1	YEAR 2

HONEYMOON ECONOMICS

CONTRACT PREMIUM TO SPOT PRICES

US$60lb incentive price required for majority of new uranium production to be economically viable

Honeymoon AIC
~ US$ 32lb
is lower than current spot and term contract prices



Source: Cameco

FINANCIAL SENSITIVIES

Key financial summary with contract uranium price range of US$40/lb to US$60/lb at an exchange rate of A$1: US$0.68

Financial Metric	Unit	US$40/lb	US$45/lb	US$50/lb	US$55/lb	US$60/lb
Revenue	$M	813	910	1,006	1,103	1,200
EBITDA	$M	324	414	504	594	685
Free Cash flow (Pre-tax)	$M	154	244	334	424	514
Free Cash flow (Post-tax)	$M	119	185	248	311	375
EBITDA margin (avg over LOM)	%	39.86%	45.53%	50.11%	53.89%	57.06%
IRR (Pre-tax)	%	22.10%	32.80%	42.90%	52.63%	62.11%
IRR (Post-tax)	%	17.25%	25.57%	33.29%	40.67%	47.97%
NPV 8% (Pre-tax)	$M	60	112	163	215	266
NPV 8% (Post-tax)	$M	39	77	113	149	185
Capital Cost	$M	63.2	63.2	63.2	63.2	63.2
AISC[1]	$/lb U_3O_8	26.7	27	27.3	27.7	27.9
AIC[2]	$/lb U_3O_8	31.7	32	32.3	32.6	32.9
Total Project Payback post tax	years	9.3	6	4.5	3.8	3

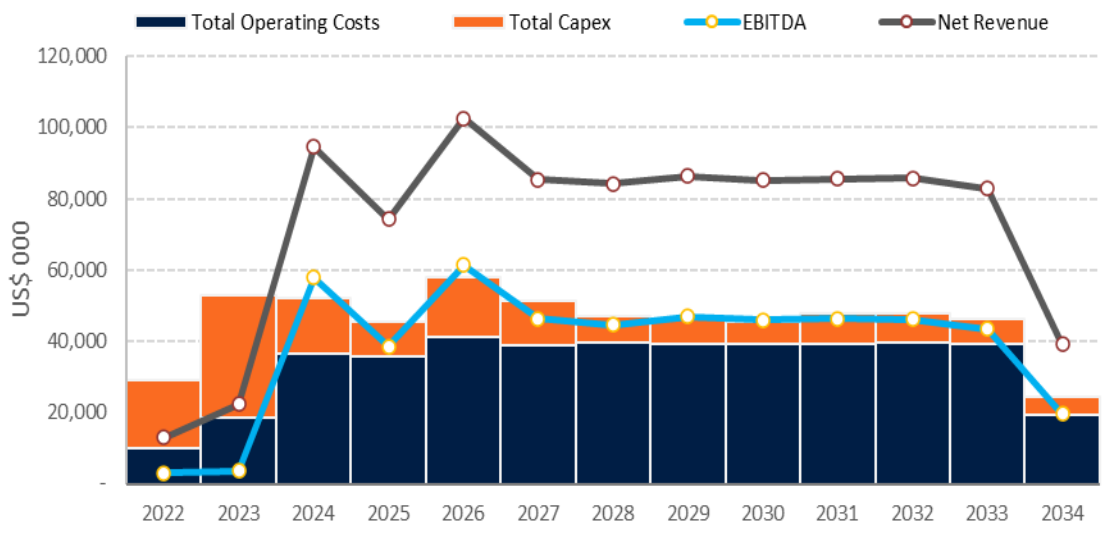
1 AISC = wellfield operating, processing, site G&A, freight, marketing, royalties and sustaining capital expenditure

2 AIC = AISC + development and deferred capital expenditure

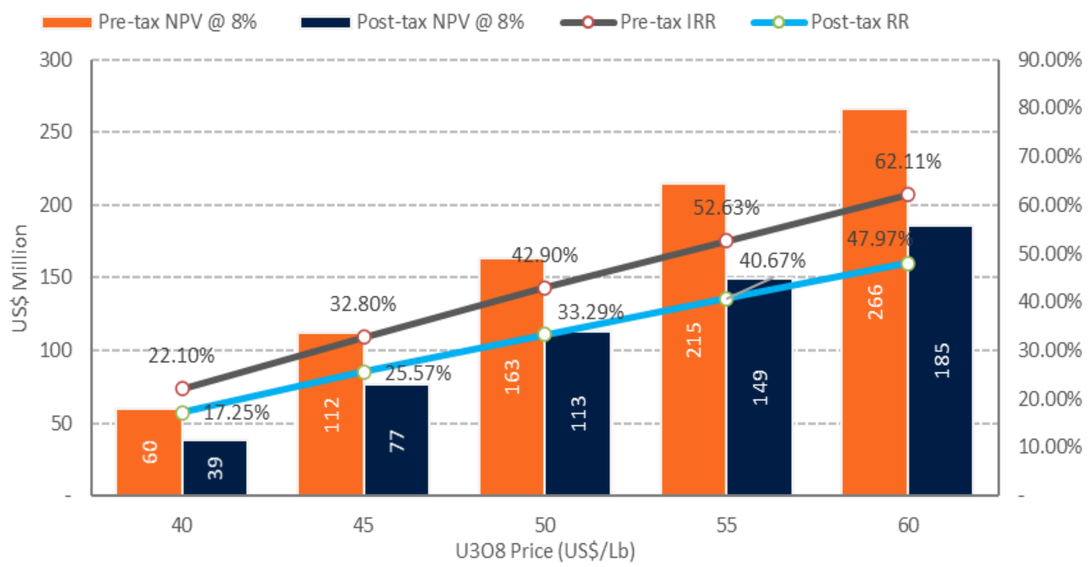
HONEYMOON
FINANCIAL RETURNS

January 2020 Feasibility Study assumes a base case uranium price of only US$50/lb

Revenue, EBITDA, OPEX and CAPEX (US$ 000)

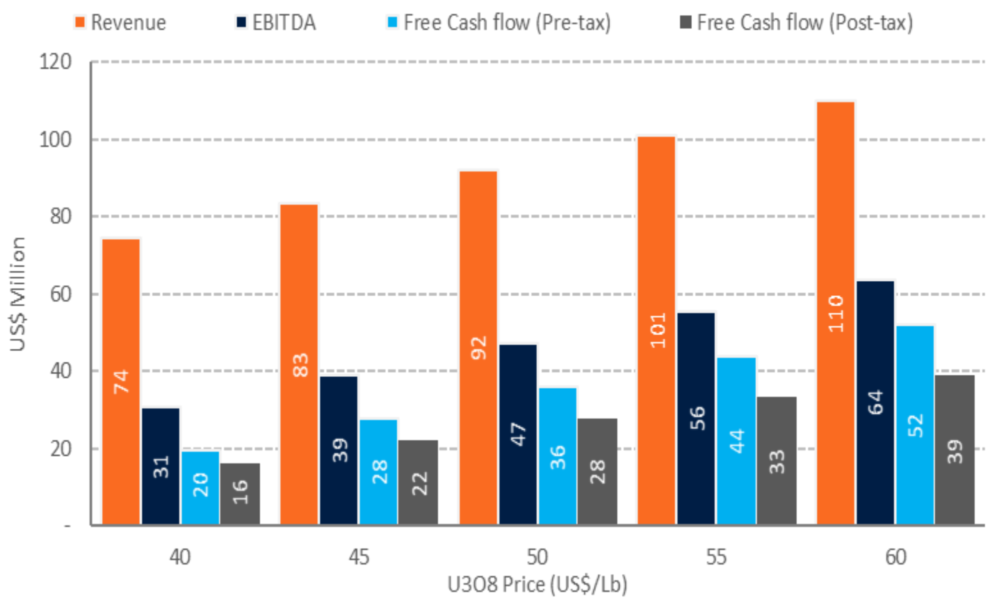


Key Financial Return Metrics (US$ M)

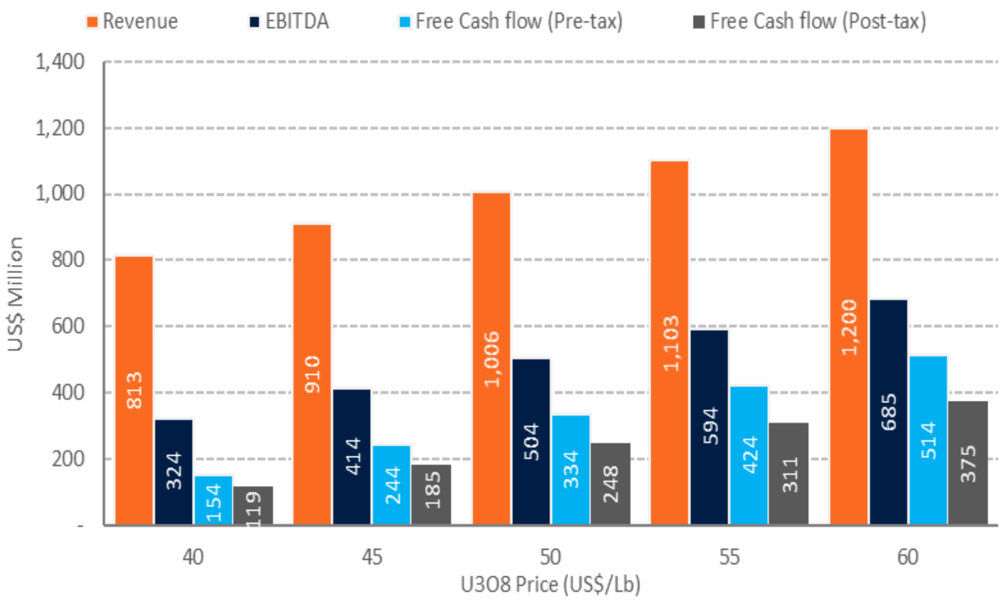


HONEYMOON
FINANCIAL RETURNS

Key Financial Summary (US$ M) – Steady State Annual Average

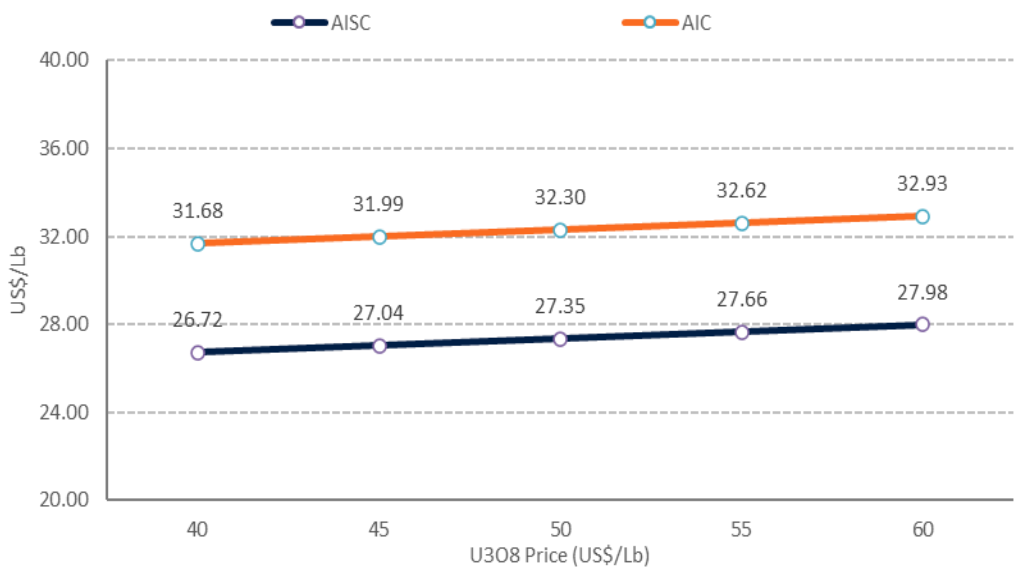


Key Financial Summary (US$ M) – Life of Mine

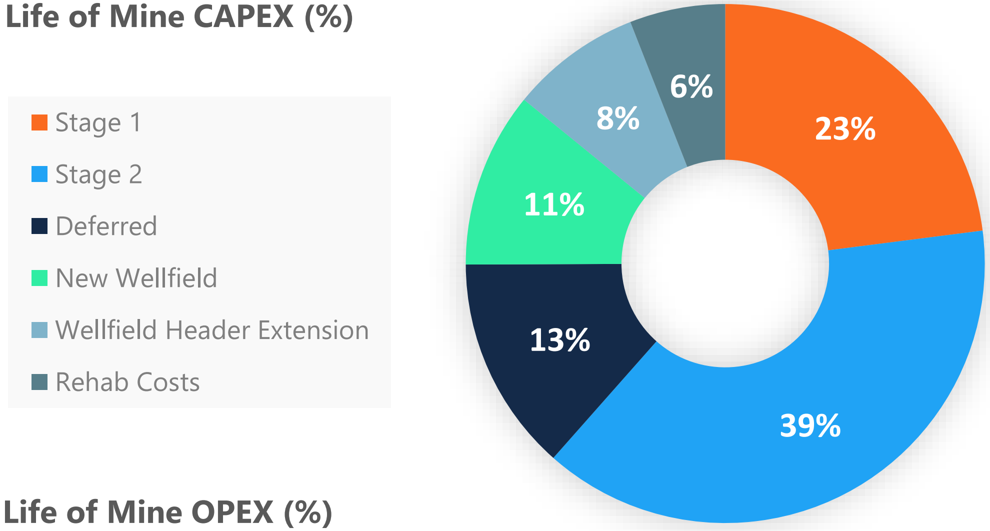


HONEYMOON COSTINGS

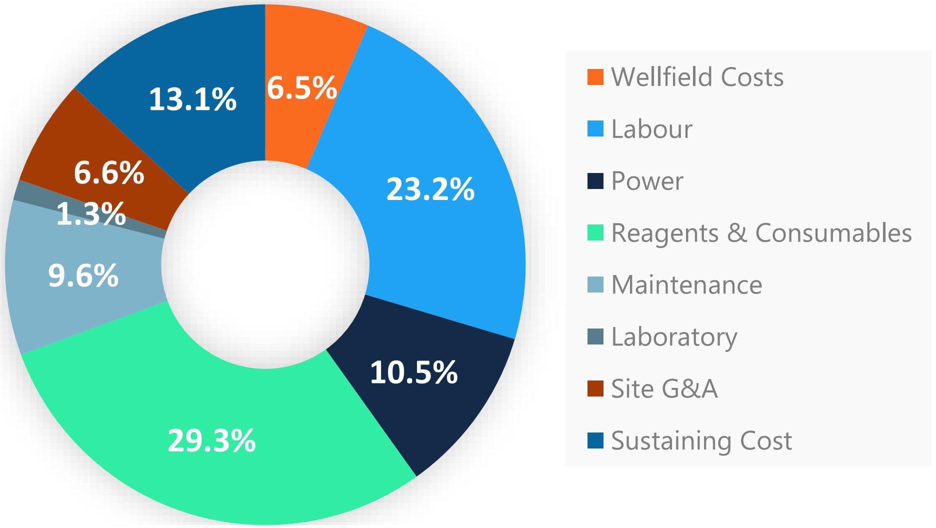
Cost Metrics (US$/Lb)



Life of Mine CAPEX (%)

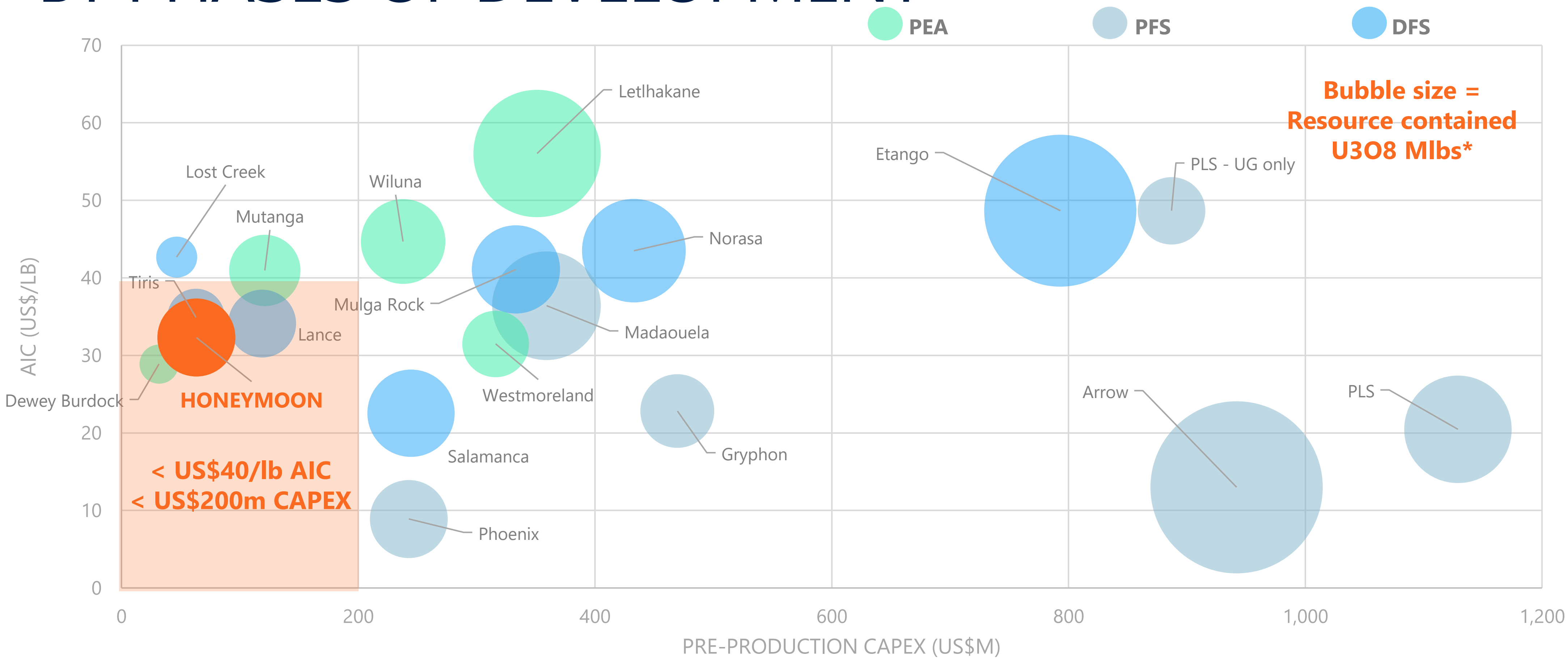


Life of Mine OPEX (%)



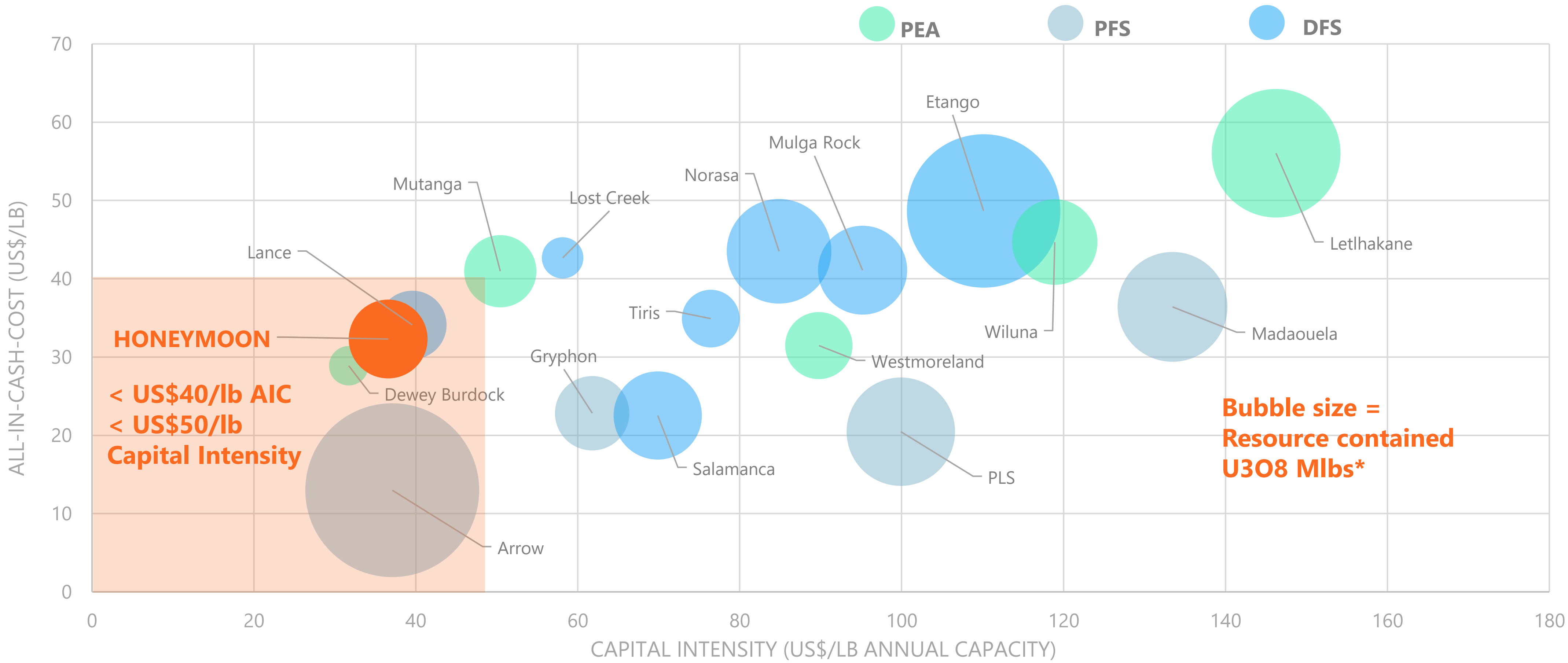
GLOBAL PEER Comparisons of Development Projects

CAPEX & ALL IN COST
BY PHASES OF DEVELOPMENT



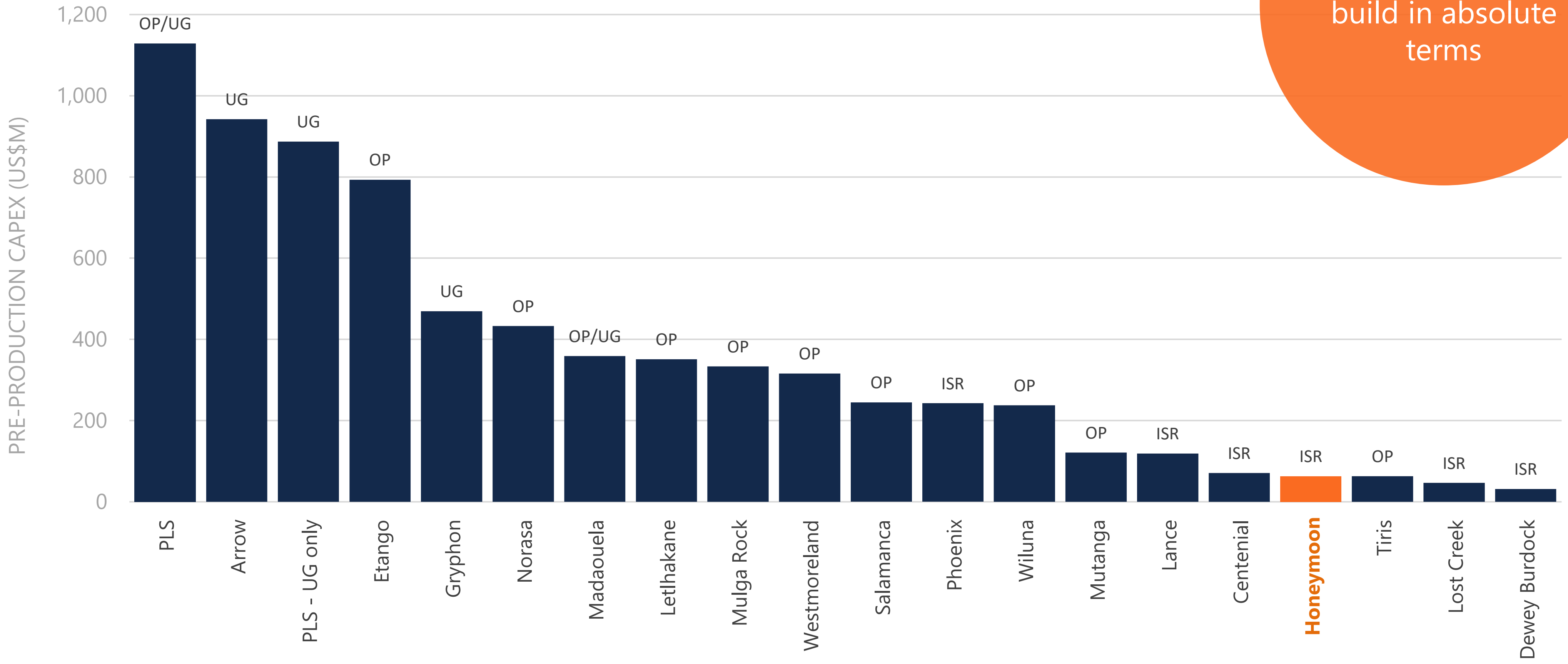
*Refer Appendix for further information on each Company and Project including full details of Mineral Resource by category.

CAPEX INTENSITY & ALL IN COST
BY PHASES OF DEVELOPMENT



*Refer Appendix for further information on each Company and Project including full details of Mineral Resource by category.

PRE-PRODUCTION CAPEX

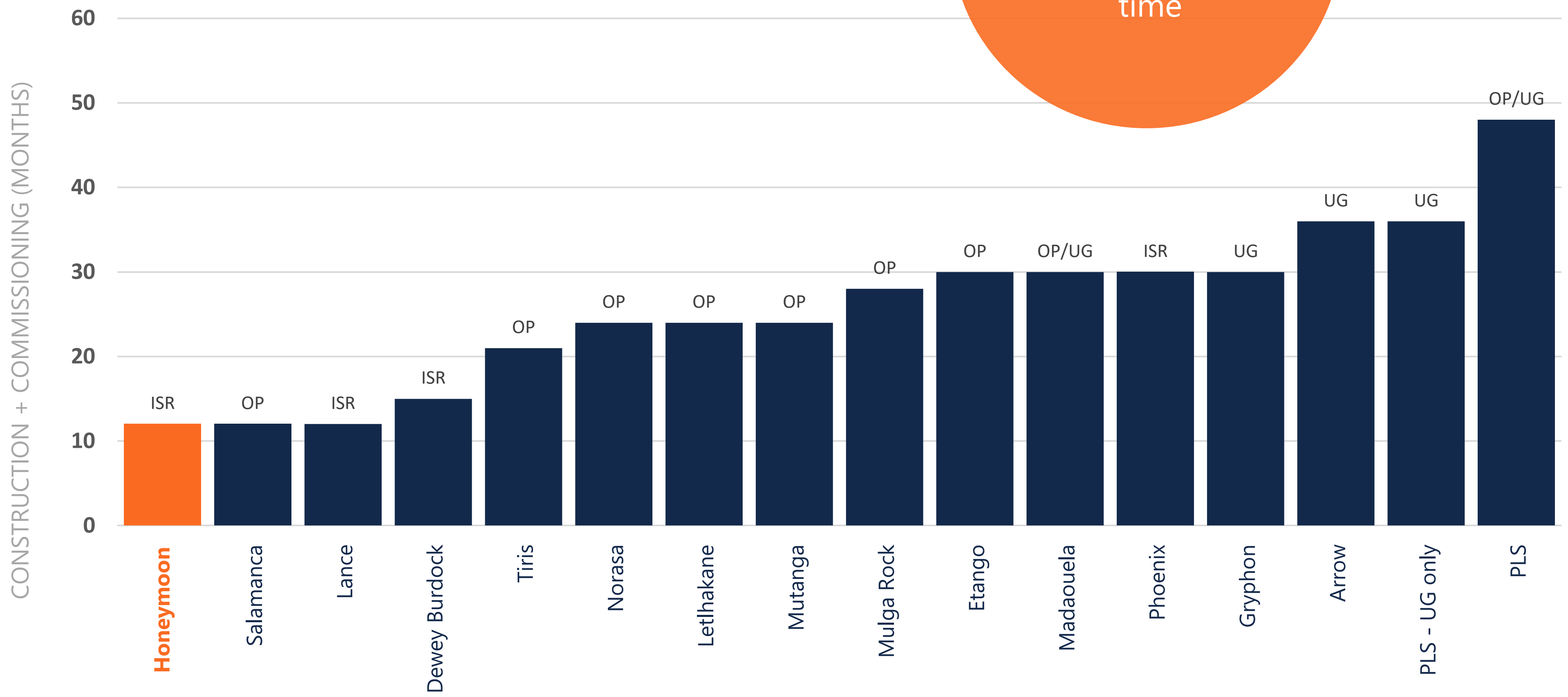


Low capex to build in absolute terms

Refer Appendix for further information on each Company and Project.

CONSTRUCTION AND COMMISSIONING

Competitively short construction time



Refer Appendix for further information on each Company and Project.

THE CASE FOR NUCLEAR

URANIUM:
STRONG MARKET FUNDAMENTALS

OPPORUNITY

- Strong fundamentals supporting a positive price outlook
- Uranium supply and demand fundamentals are rebalancing in an accelerated fashion
- Lack of viable alternatives to provide massive amounts of clean and reliable power

RISING DEMAND

- Demand has exceeded global production in almost every year since 1990
- Highest nuclear power growth in past 25 years
  - 442 Operable reactors in 31 countries
  - 53 Units under construction
  - 110 Reactors planned
  - 330 Reactors proposed

REDUCED PRODUCTION

- Uranium production is now in deficit to demand
- Significant long term supply shortage is emerging
- Spot prices below production costs and hedges falling off

CUTTING SUPPLY

- Dramatic cuts to global uranium supply
- US$ 60lb incentive price required for majority of new uranium production to be economically viable
- US$ 40lb minimum incentive price required for majority of idled mines to restart

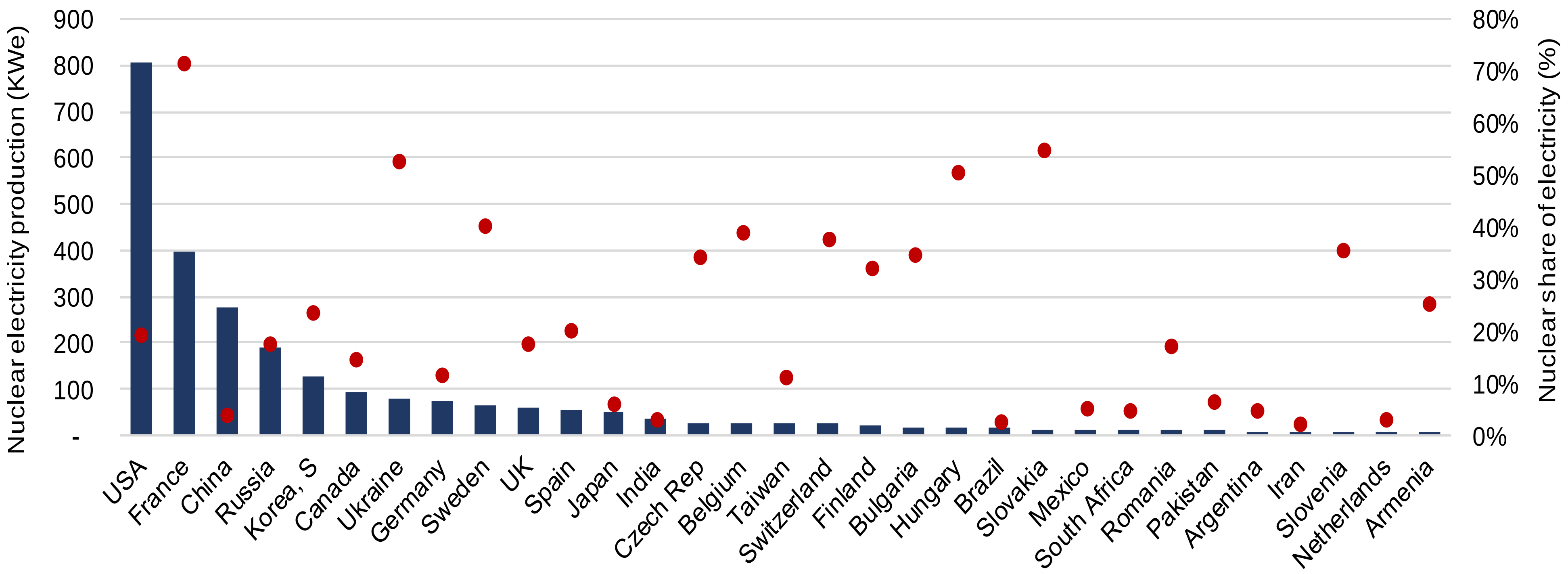
BARRIERS TO ENTRY

- No new production can be built economically at current prices
- Lack of funding for new exploration
- Permitting requirements increasingly difficult with long time lags

NUCLEAR CAPACITY

USA and France continue to dominate overall reactor demand with 32% and 15% of nuclear capacity

Nuclear electricity production and nuclear share of total electricity by country

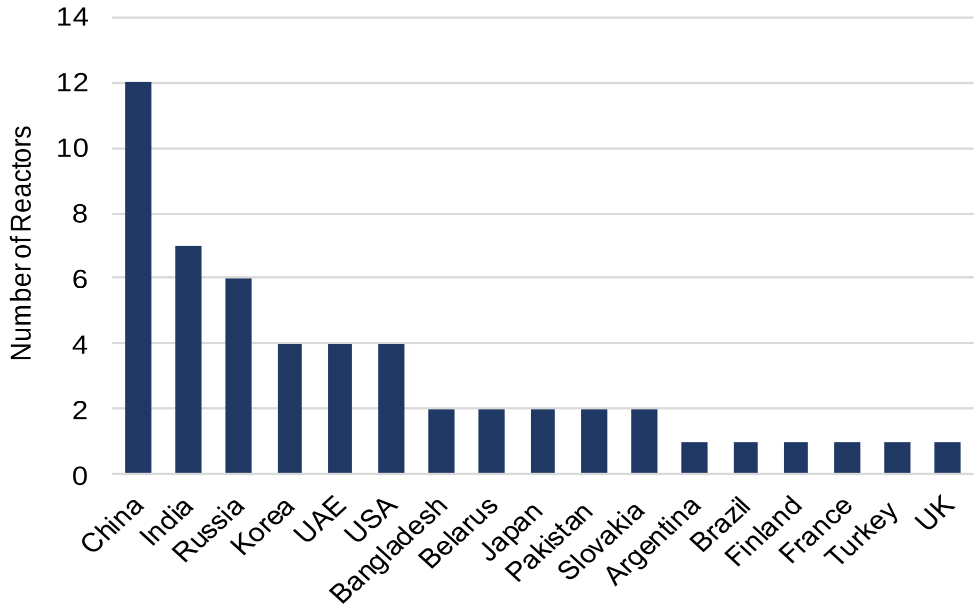


Source: World Nuclear Association, Canaccord Genuity Uranium Sector Note

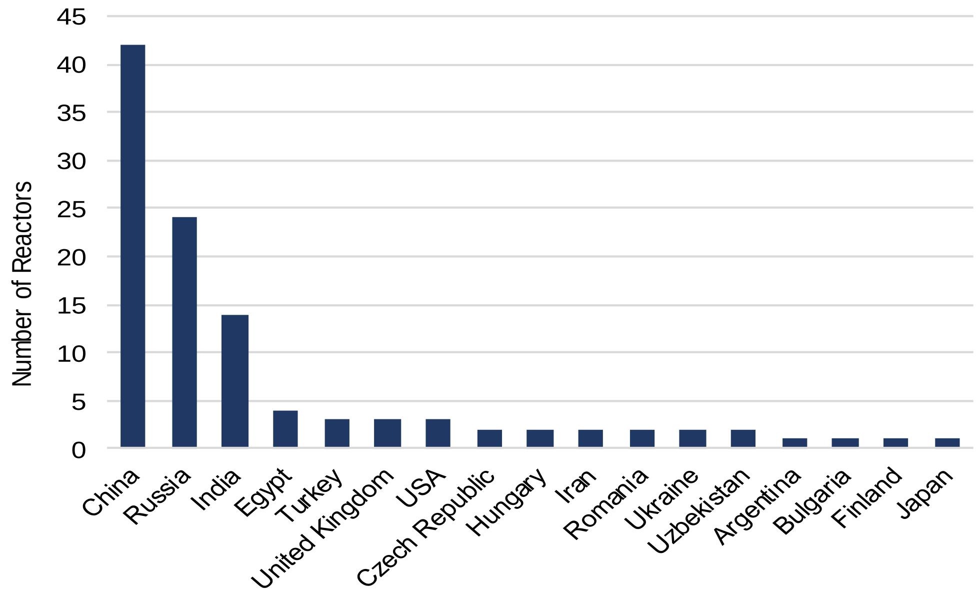
NUCLEAR CAPACITY

China is leading the increase in reactor buildouts, in addition to India and Russia.

Nuclear reactors under construction



Nuclear reactors planned

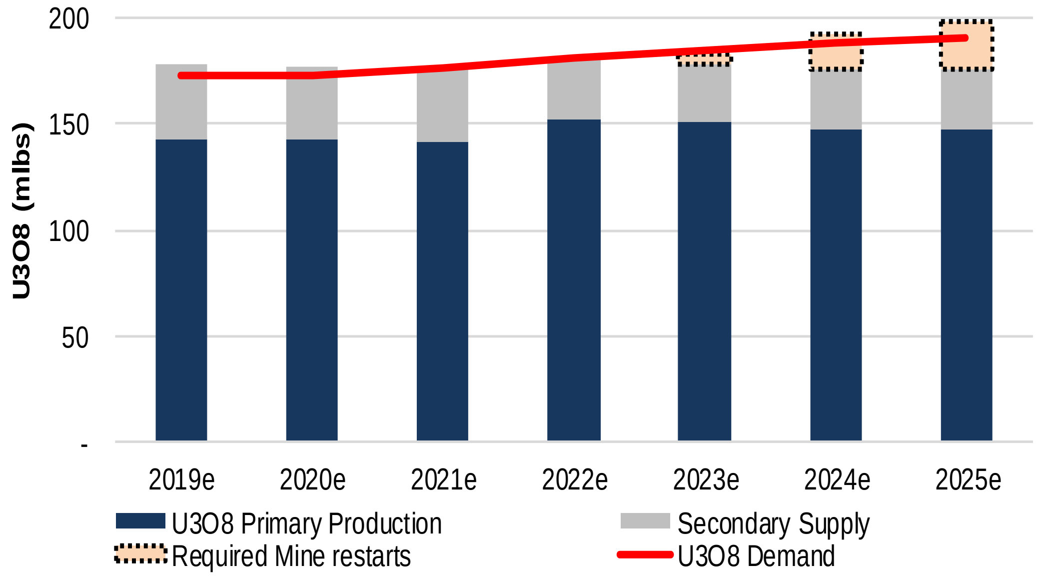


Source: World Nuclear Association, Canaccord Genuity Uranium Sector Note

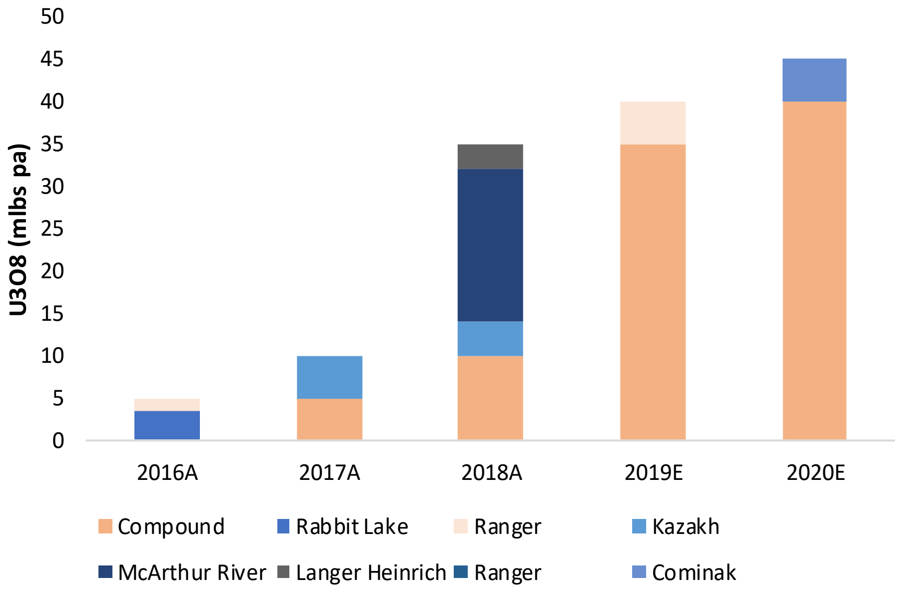
SUPPLY AND DEMAND

Low uranium prices have curtailed supply. Contract prices must rise to incentivise new production meeting known demand

Supply Demand forecast



Closures represent ~25% of supply base

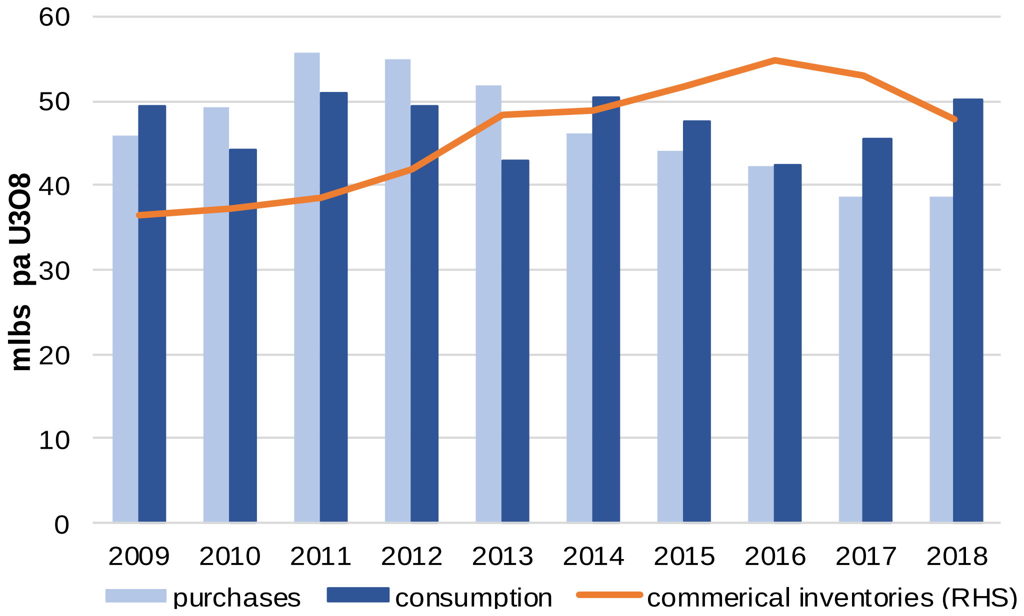


Source: SNL, UxC, WNA, IAEA, Company Reports, Canaccord Genuity estimates

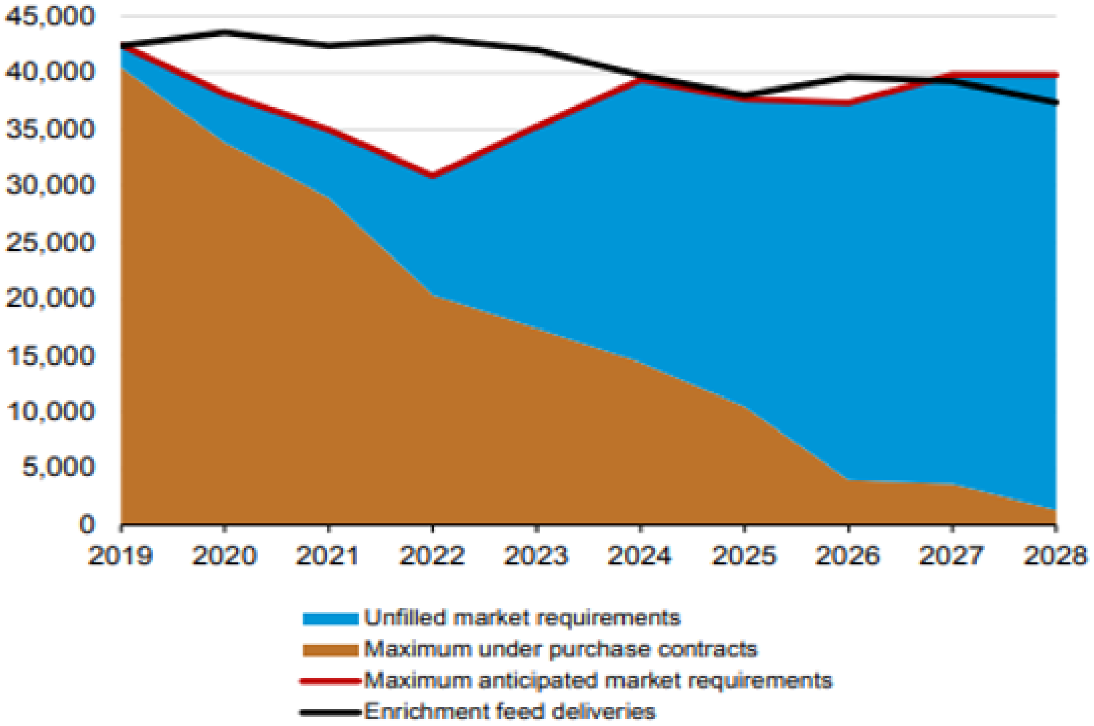
CONTRACT COVERAGE NEEDED

Satisfying utility consumption by drawing down inventories and buying from the spot market is not sustainable

US inventories are being drawn down



US utilities will have to cover soon

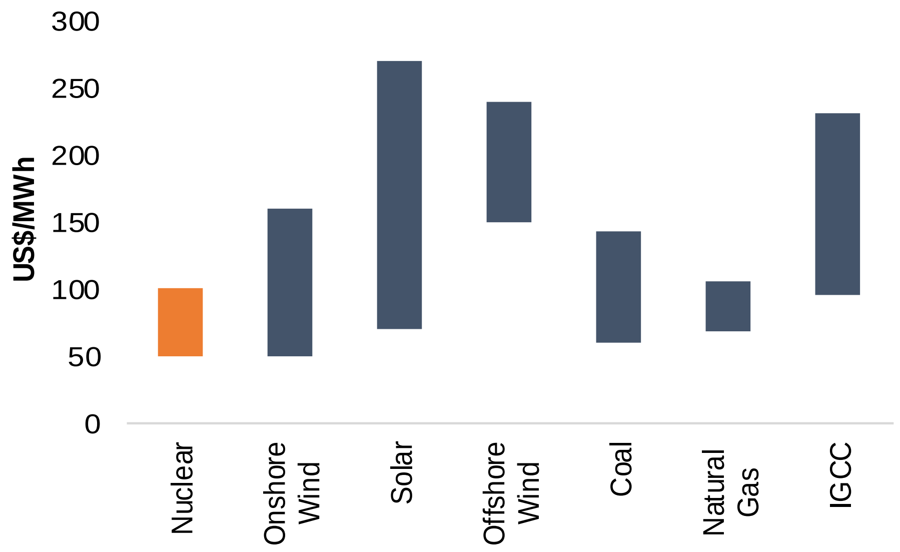


Source: USA Energy Information Administration (EIA), , Canaccord Genuity Uranium Sector Note

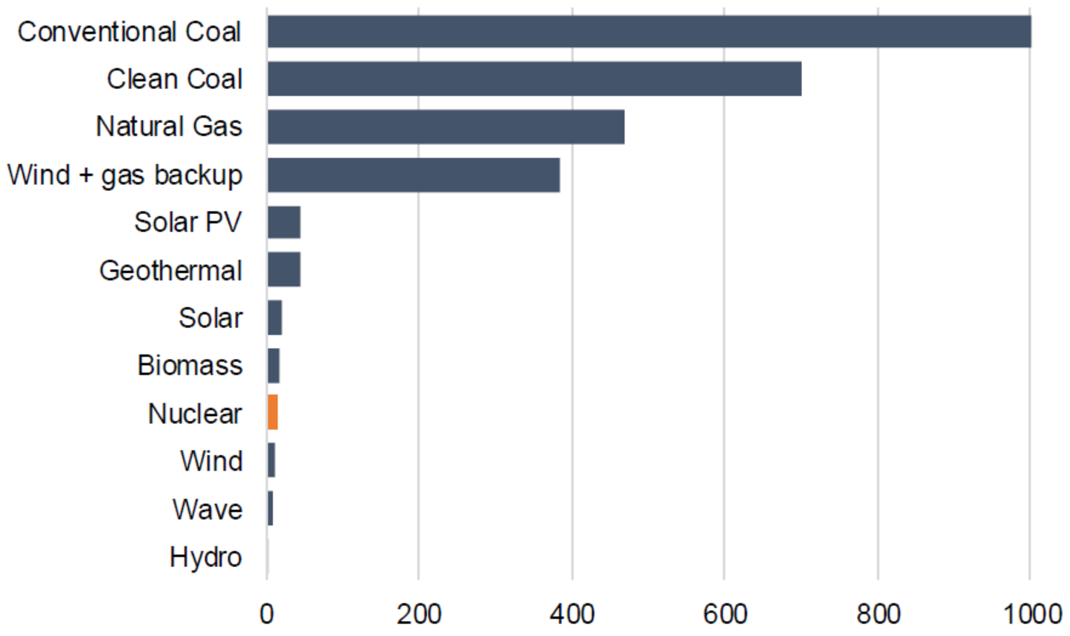
NUCLEAR ENERGY COSTS & CO_2

Nuclear energy remains one of the most cost competitive sources of energy, with lowest $C0_2$ emissions

Levelised unit cost and $C0_2$



$C0_2$ emissions by energy type (kg $C0_2$/kWh)



Source: Nuclear Energy Agency, Canaccord Genuity Uranium Sector Note

APPENDIX

Source: SS: Scoping Study, PEA: Preliminary Economic Assessment, PFS: Preliminary Feasibility Study, DFS: Definitive Feasibility Study or Feasibility Study. All study outputs from technical reports on the respective company's websites. Exchange rates used A$:US$0.68 and C$:US$0.75. All Mineral Resource, Ore Reserves and Study findings have been reported on a 100% equity basis.

GLOBAL PEER COMPARISONS REFERENCE TABLE

Company	Project	Country	Development Phase	Year of Study	Mining Method	Study price $/lb	Construction months	Capex $m	Opex C1 US$/lb	Opex AISC US$/lb	Opex AIC US$/lb
Boss Resources	Honeymoon	Australia	FS	2020	ISR	50	12	63	21.07	27.40	32.30
Berkeley Energia	Salamanca	Spain	DFS	2016	OP	39-67	12	245	15.39	17.31	22.54
Aura Energy	Tiris	Mauritania	DFS	2019	OP	60	21	63	25.43	29.81	34.91
Vimy Resources	Mulga Rock	Australia	DFS	2018	OP	60	28	333	27.93	34.00	41.09
Forsys metals	Norasa	Namibia	DFS	2015	OP	65	24	433	34.72	37.85	43.50
Bannerman Resources	Etango	Namibia	DFS	2015	OP	75	30	793	38.00	41.64	48.65
Peninsula	Lance	US	DFS	2018	ISR	49	12	119	15.59	31.77	34.10
Ur Energy	Lost Creek	US	Production	2016	ISR	-	-	47	37.83	37.83	42.67
Denison	Phoenix	Canada	PFS	2018	ISR	29-45	30	243	3.33	4.85	8.90
Denison	Gryphon	Canada	PFS	2018	UG	50	30	469	11.70	13.42	22.82
Goviex Uranium	Madaouela	Niger	PFS	2015	OP/UG	70	30	359	24.50	31.49	36.40
Fission Uranium	PLS	Canada	PFS	2019	OP/UG	50	48	1,129	6.77	8.28	20.46
Fission Uranium	PLS - UG only	Canada	PFS	2019	UG	50	36	887	7.18	10.45	48.65
NexGen Energy Ltd	Arrow	Canada	PFS	2018	UG	50	36	942	4.38	9.13	12.98
A Cap Resources	Letlhakane	Botswana	SS	2015	OP	81	24	351	40.00	47.92	56.04
Toro Energy	Wiluna	Australia	PEA	2014	OP	70	24	238	31.10	37.26	44.69
Goviex	Mutanga	Zambia	PEA	2017	OP	50	24	121	31.10	36.37	40.95
Laramide	Westmoreland	Australia	PEA	2016	OP	65	-	316	23.30	24.57	31.47
Azarga Uranium	Centenial	US	PEA	2010	ISR	65	-	71	34.94	34.94	42.20
Azarga Uranium	Dewey Burdock	US	PEA	2019	ISR	55	15	32	10.46	26.66	28.88

Source: SS: Scoping Study, PEA: Preliminary Economic Assessment, PFS: Preliminary Feasibility Study, DFS: Definitive Feasibility Study or Feasibility Study. All study outputs from technical reports on the respective company's websites. Exchange rates used A$:US$0.68 and C$:US$0.75. All Mineral Resource, Ore Reserves and Study findings have been reported on a 100% equity basis.

GLOBAL PEER COMPARISONS REFERENCE TABLE

Company	Project	Country	Measured Grade (ppm)	Mlbs U3O8	Indicated Grade (ppm)	Mlbs	Inferred Grade (ppm)	Mlbs	Resource (M+I+I) Mlbs	Resource Grade ppm U3O8	Ore Reserve (P+P) Mlbs	Ore Grade ppm U3O8
Boss Resources	Honeymoon	Australia	1,100	7.6	630	25.5	570	39	71.6	620	-	-
Berkeley Energia	Salamanca	Spain	597	12.3	516	47.5	395	30	89.3	514	54.6	408
Aura Energy	Tiris	Mauritania	355	3.6	334	7.0	344	28	38.5	345	8.1	336
Vimy Resources	Mulga Rock	Australia	1,100	13.0	790	33.0	432	45	91	570	42	845
Forsys metals	Norasa	Namibia	200	7.0	196	108.0	200	11	126	200	90.7	200
Bannerman Resources	Etango	Namibia	194	14.4	188	150.2	182	106.1	270.7	186	130.1	195
Peninsula	Lance	US	489	3.9	466	11.9	470	38.1	53.9	473	-	-
Ur Energy	Lost Creek	US	480	8.0	440	5.2	440	6.4	19.7	458	-	-
Denison	Phoenix	Canada	-	-	191,000	70.2	58,000	1.1	71.3	191,000	59.7	191,000
Denison	Gryphon	Canada	-	-	17,000	61.9	12,000	1.9	63.8	17,000	49.7	18,000
Goviex Uranium	Madaouela	Niger	1,200	31.4	1,400	79.4	1,300	27.7	138.42	1,360	51.3	923
Fission Uranium	PLS	Canada	-	-	21,000	102.4	12,200	32.8	135	16,940	90.5	14,200
Fission Uranium	PLS - UG only	Canada	-	-	10,200	21.0	12,300	32.3	53.3	11,470	8.236	6,300
NexGen Energy Ltd	Arrow	Canada	-	-	40,300	256.6	8,600	91.7	347.7	31,950	234	30900
A Cap Resources	Letlhakane	Botswana	-	-	323	42.2	321	148.2	190.4	321	-	-
Toro Energy	Wiluna	Australia	579	6.2	520	60.4	368	17.4	84	482	-	-
Goviex	Mutanga	Zambia	400	4.8	300	10.4	300	44.9	60	284	-	-
Laramide	Westmoreland	Australia	-	-	880	36.0	800	15.9	51.9	869	-	-
Azarga Uranium	Centenial	US	-	-	900	10.4	900	2.3	17.7	1,130		
Azarga Uranium	Dewey Burdock	US	1,320	14.3	720	2.8	550	0.7	17.8	1,135	-	-

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