Corporate Overview

February 2024

Forward Looking Statements

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This presentation contains, and our officers and representatives may from time to time make, “forward-looking statements” within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Forward-looking statements can be identified by words such as “believes,” “anticipates,” “expects,” “estimates,” “projects,” “will,” “may,” “might” and words of a similar nature. Examples of forward-looking statements include, among others but are not limited to, statements we make regarding expected operating results, such as future revenues and prospects from the potential commercialization of isotopes, and our strategies for product development, engaging with potential customers, market position, and financial results. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict, many of which are outside our control. Our actual results, financial condition and events may differ materially from those indicated in the forward-looking statements based upon a number of factors. Forward-looking statements are not a guarantee of future performance or developments. You are strongly cautioned that reliance on any forward-looking statements involves known and unknown risks and uncertainties. Therefore, you should not rely on any of these forward-looking statements. There are many important factors that could cause our actual results and financial condition to differ materially from those indicated in the forward-looking statements, including: our reliance on the efforts of third parties; our ability to complete the construction and commissioning of our proposed enrichment plants or to commercialize the isotopes produced using the ASP technology or the Quantum Enrichment Process; our ability to obtain regulatory approvals for the production and distribution of isotopes; the financial terms of any current and future commercial arrangements; our ability to complete certain transactions and realize anticipated benefits from acquisitions; contracts, dependence on our Intellectual Property (IP) rights, certain IP rights of third parties; and the competitive nature of our industry. Any forward-looking statement made by us in this presentation is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise.

Market and Industry Data

This presentation includes market and industry data and forecasts that we obtained from internal research, publicly available information and industry publications and surveys. Industry publications and surveys generally state that the information contained therein has been obtained from sources believed to be reliable. Unless otherwise noted, statements as to our potential market position relative to other companies are approximated and based on third-party data and internal analysis and estimates as of the date of this overview. Although we believe the industry and market data and statements as to potential market position to be reliable as of the date of this presentation, we have not independently verified this information, and it could prove inaccurate. Industry and market data could be wrong because of the method by which sources obtained their data and because information cannot always be verified with certainty due to the limits on the availability and reliability of raw data, the voluntary nature of the data-gathering process and other limitations and uncertainties. In addition, we do not know all of the assumptions regarding general economic conditions or growth that were used in preparing the information and forecasts from sources cited herein. All forward-looking statements herein are qualified by reference to the cautionary statements set forth herein and should not be relied upon.

ASP Isotopes: At a Glance

1. Proven & Proprietary Technology

ASPI's advanced technology leverages 20 years of R&D history to enrich isotopes in varying levels of atomic mass. Its innovative technology will enable the company to manufacture a diverse range of isotopes, which will meet the growing demand in the Nuclear Medicine and Green Nuclear Energy industry.

2. Multiple Geopolitical Tailwinds Favor Rapid Expansion

Favorable long-term market trends are expected to drive long-term secular industry growth. Recent geopolitical events have created high urgency for companies and countries to search for reliable sources of isotopes.

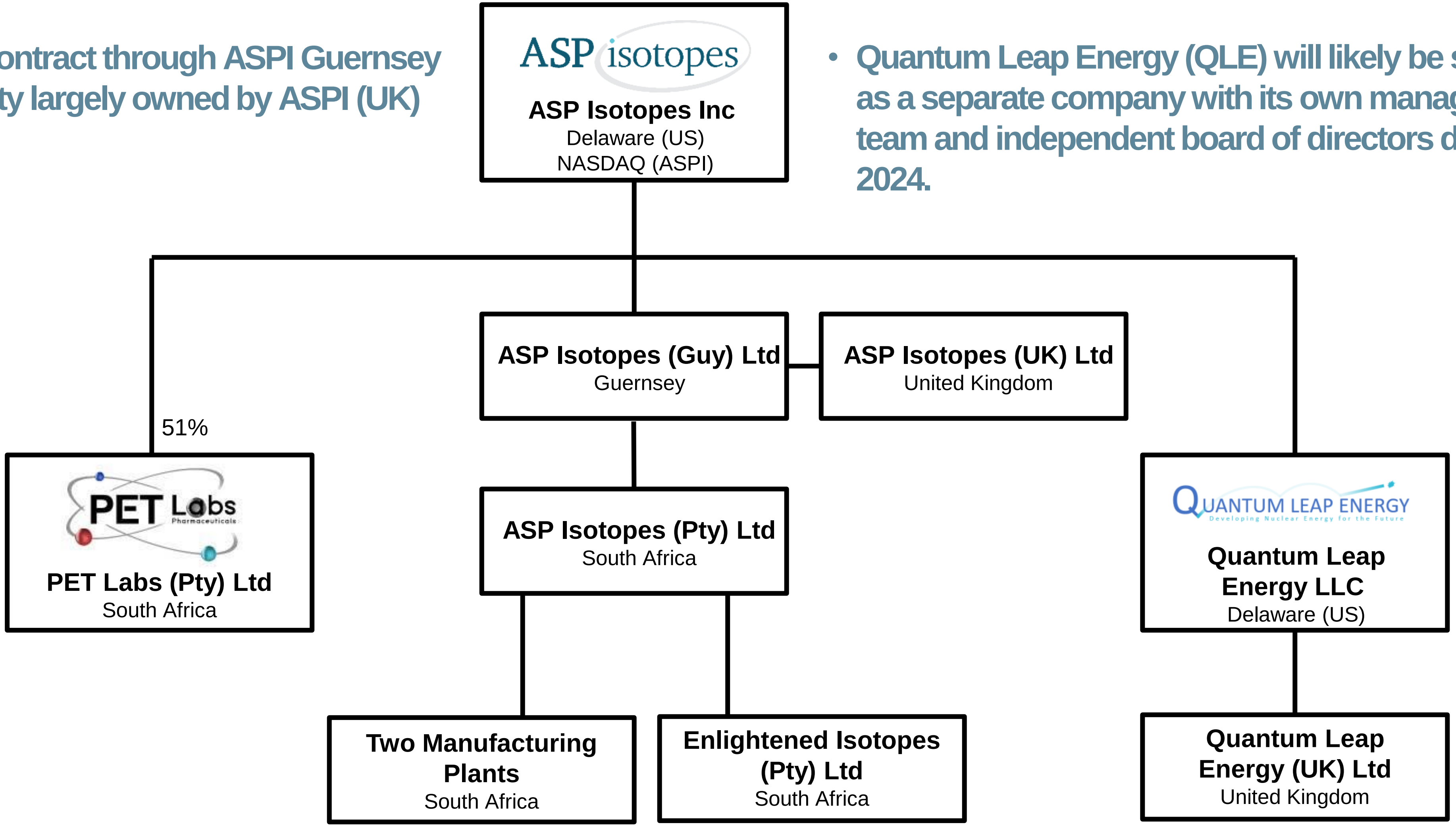
3. Consistent Operational Performance

Since incorporation (< 2 years ago) we have completed the construction of our first manufacturing facility, and we continue to expand our operating footprint in South Africa. Our South African facilities should drive free cash flow during 2024 and beyond.

ASP Isotopes (NASDAQ: ASPI)	
Stock Price (*as of 2/1/24*)	$2.82
Shares Outstanding (*as of 11/6/23*)	48.77M
Market Capitalization	$138M
Cash & Equivalents (*pro-forma at 09/30/23 inc. $9.1m raise on 10/09/23*)	$11.3M
Long Term Debt	$0
Insider Ownership	38.5%

Current Group Structure

- Most customers contract through ASPI Guernsey
- Intellectual Property largely owned by ASPI (UK)



- Quantum Leap Energy (QLE) will likely be span out as a separate company with its own management team and independent board of directors during 2024.

Target Milestones

MARKET MILESTONES

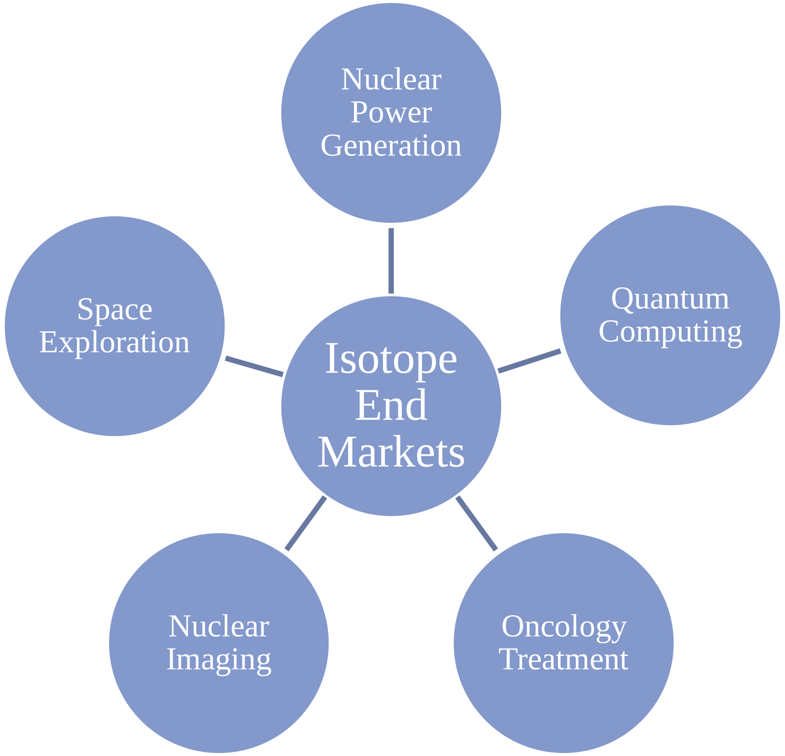
1. Secure at least 2 additional supply agreements for isotopes critical for new technologies and healthcare.
2. Generate sufficient revenues for the company to have annual positive operating cash flow.
3. Enter additional supply contracts for new isotopes in the 2025-2028 timeframe

OPERATIONAL MILESTONES

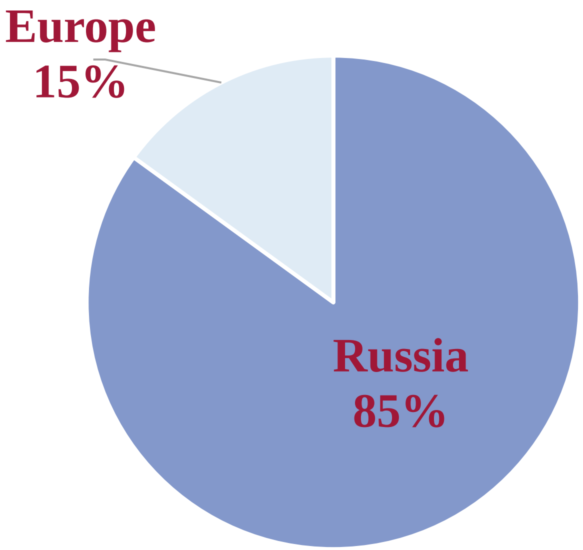
1. Start commercial production of isotopes at our enrichment facilities in South Africa. – **Early 2024**
2. Start constructing a first isotope enrichment facility outside South Africa – which will be in a location with advantaged energy costs. – **2H24**

Isotope Production is Essential for National and Global Security

Isotopes have one of the most **severely compromised supply chains of any material in the world** and are Critical to the following end markets.



Historical Isotope Market Producers[1]



The World remains susceptible to Global disruption of industrial production, electricity generation, national defense, and the entire economy at large. The existence of many industries and defense capabilities faces existential risk without a secure isotope supply.

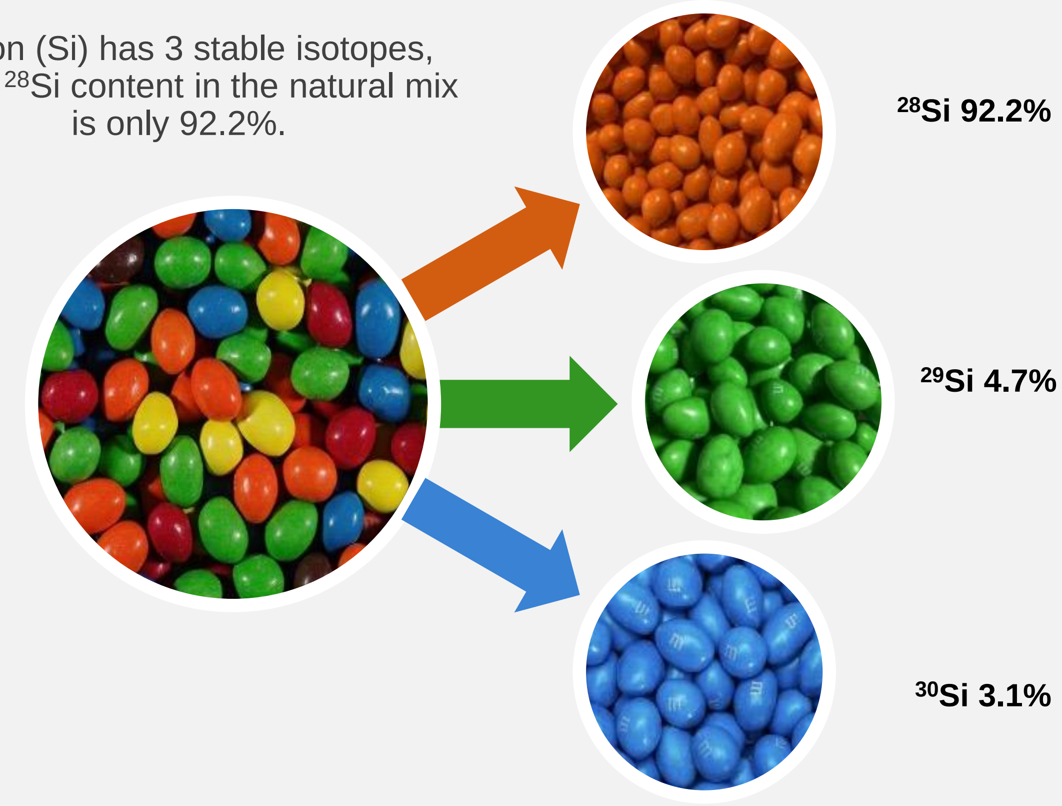
1. https://science.osti.gov/-/media/np/nsac/pdf/docs/2015/2015_NSACI_Report_to_NSAC_Final.pdf

What Is An Isotope?

Isotopes are like identical twins or triplets: very similar in most aspects, except for a few subtle differences.

- Isotopes are two or more atoms of the same chemical element with the same number of protons and electrons but slightly different numbers of neutrons.
- Isotopes are found in nature mixed together, just like M&M chocolate candies: same composition, taste, and size – just different colors. The isotope separation process should sort them into fractions of precisely the same types.
- This separation process is very challenging and expensive precisely because isotopes are so similar to each other, with only minor weight differences.

Silicon (Si) has 3 stable isotopes, where ^{28}Si content in the natural mix is only 92.2%.

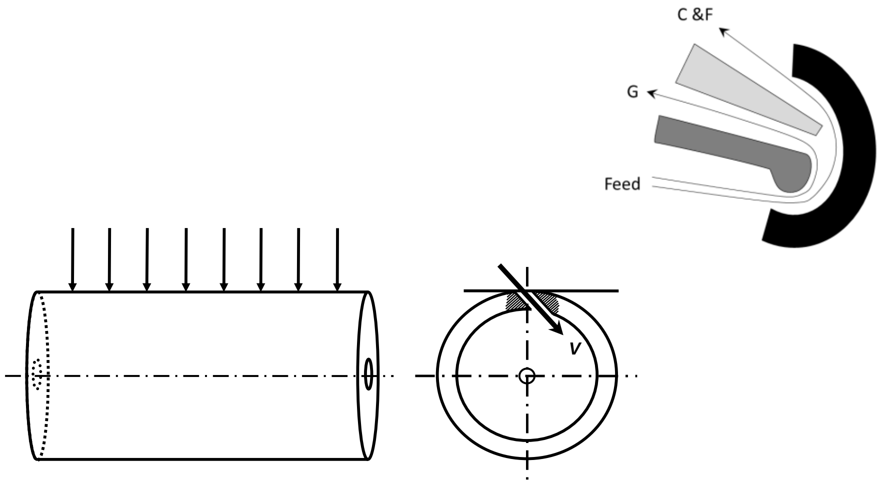


We aim to increase (enrich) ^{28}Si content from its natural 92.2% content to the required >99.995% purity product by removing the ^{29}Si and ^{30}Si isotopes.

Summary of ASP Technologies

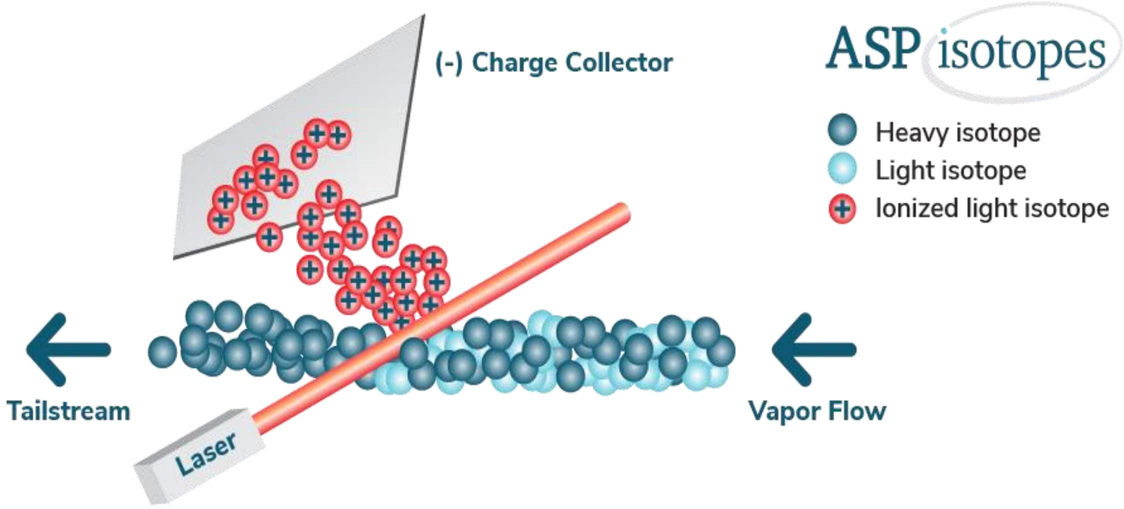
Aerodynamic Separation Process (ASP)

The Aerodynamic separation process utilizes gaseous diffusion via a stationary wall centrifuge paired with proprietary flow directors to separate isotopes of varying levels of atomic mass.



Quantum Enrichment

Quantum enrichment technology employs precisely tuned lasers and quantum mechanical principles to efficiently separate isotopes based on their unique transition energies, achieving high selectivity for most elements.



ASP Isotopes: Technology Highlights

1. Cost-Effective

Isotope enrichment facilities using our technology can be constructed at a fraction of capital cost and time vs. traditional isotope separation facilities.

2. Modular, Scalable Design

The plants can be small in footprint and modular in design, allowing for capacity expansion and growing demand.

3. Environmentally Friendly

Our isotope enrichment plants are designed to harvest and enrich a natural mix of isotopes – not by-products from nuclear energy reactors. Accelerator-produced isotopes produce less than 10% of the amount of radioactive waste produced by a reactor[1], and **our technology produces no waste at all (not radioactive or any other waste in any form).**

Isotopes of Interest

Isotopes	End-Market	R&D Stage	R&D Evaluation	Under Construction	Anticipated Market Entry
Carbon-14	Pharma & Agrochem				2024
Silicon-28	Quantum Computing				2024
Germanium-70/72/74	Quantum Computing				2025
Molybdenum-100	Nuclear Medicine				2024
Molybdenum-98					2024
Zinc- 67/68	Nuclear Medicine				2025
Ytterbium-176					2025
Nickel-64					
Xenon-129/136					
Chlorine-37	Green Nuclear Energy				
Lithium-6					
Uranium-235					

The Changing Face of Nuclear Medicine

- A Rapidly Growing Market driven by Theranostics (PET Diagnostics + Therapeutics).
- New Product Approvals + Significant Increase in R&D
- > $3.5 billion of Capital Formation
- Recent Product Approvals and Pipeline Advancements have Created Multi-billion Dollar Opportunities

Unpaired Diagnostic Radiopharmaceuticals

Key Products

AXUMIN (Fluciclovine F 18 Injection)	2016
DaTscan™	2011
FDG	2000
NEUROLITE (Kit for the Preparation of Technetium Tc 99m Bicisate for Injection)	1994
Cardiolite (Kit for the Preparation of Technetium Tc99m Sestamibi for Injection)	1990

Companion Theragnostic Radiopharmaceuticals

Key Products

LOCAMETZ (Kit for the preparation of gallium Ga 68 gozetotide)	2022
illuccix (kit for the preparation of gallium Ga 68 gozetotide Injection)	2021
PYLARIFY (Piflufolastat F 18 Injection)	2021
Detectnet™ (copper Cu 64 dotatate injection)	2020
NETSPOT™	2016

Select Key Pipeline

- Zr-89 Df-Crefmirlimab (Ph.2) — ImaginAb
- Ga-68 PSMA-R2 (Ph.1) — NOVARTIS

Beta Therapeutic Radiopharmaceuticals

Key Products

PLUVICTO (lutetium Lu 177 vipivotide tetraxetan)	2023
AZEDRA (iobenguane I 131)	2018
LUTATHERA (lutetium Lu 177 dotatate) injection, for intravenous use	2018
TheraSphere™ Y-90 Glass Microspheres	2007

Select Key Pipeline

- Solucin (Ph.3) — itm
- PSMA-I&T (Ph.3) — CURIUM
- PNT-2002 (Ph.3) — Lilly
- PNT-2003 (Ph.3) — Lilly
- LMI-1095 (Ph.2) — LANTHEUS

Alpha Therapeutic Radiopharmaceuticals

Key Products

Xofigo (radium Ra 223 dichloride injection)	2013

Select Key Pipeline Companies

AKTIS Oncology, Ablaze, LANTHEUS, CURIUM, AlphaTAU, Lilly, POINT Biopharma, CLARITY Pharmaceuticals, NOVARTIS, Actinium Pharmaceuticals, Inc., mariana oncology, BAYER

Isotope End Markets: Nuclear Medicine

ISOTOPES OF INTEREST

Stable Isotope

6 12.011 C Carbon

42 95.950 Mo Molybdenum

30 65.380 Zn Zinc

28 58.693 Ni Nickel

70 173.04 Yb Ytterbium

ASP isotopes

Short half-life Radioisotope

^{14}C

^{99}Tc

^{68}Ga ^{67}Cu

^{64}Cu

^{177}Lu

PET Labs Pharmaceuticals

END MARKET

Carbon-Dating

Pharmacokinetic Tracing

SPECT Scan Imaging

PET Scan imaging

Oncology Treatment

Oncology Treatment
(Non-Hodgkin lymphoma, Prostate Cancer, NETs)

Oncology Treatment
(Neuroendocrine Tumors NETs)

Isotope End Markets: Carbon-14 (^{14}C)

Radiolabeling

A scientific technique used to track the passage of a molecule. The technique incorporates a radioisotope through a reaction, cell, organism, biological system, or metabolic pathway.

Carbon-14

Used as a radiolabeling compound due to its' relatively harmless emission of alpha particles, and long-lasting half-life, which allows researchers to track drug molecules throughout the body.

ASPI has entered into **multi-year** supply agreement with **minimum annual revenues of $2.5M** per year.

ASPI expects to start commercial supply of Carbon-14 during 1H 2024

ASPI's Carbon-14 enrichment facility

Isotope End Markets: Molybdenum-100 (^{100}Mo)

Single-photon emission computed tomography (SPECT)

Global Market Size[6]

$4.61B

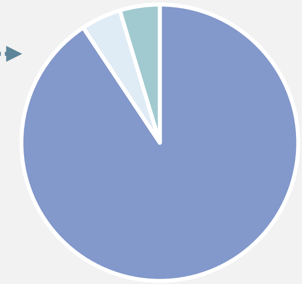
^{99}Tc

Technetium-99

^{99}Tc Global Market Size[7]

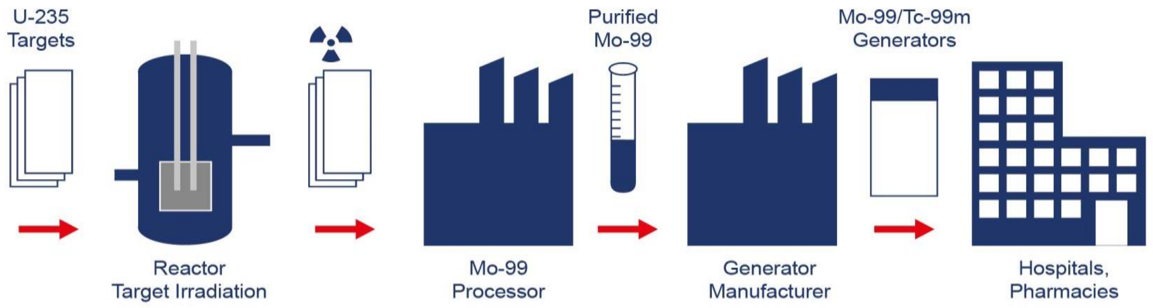
$4.17B

Imaging Agent Distribution



It is estimated that **80-85%** of all SPECT procedures utilize Technetium-99[8]

Current Mo99 Supply Chain



Current Isotope Conversion Process

^{99}Mo → **^{99}Tc**

Half-Life: **66** Hours

Half-Life: **6** Hours

ASP Isotope Conversion Process

^{100}Mo → **^{99}Tc**

STABLE

Half-Life: **6** Hours

Isotope End Markets: Zinc-68 (^{68}Zn)

Positron emission tomography (PET)

Global Market Size[4]

$1.15B

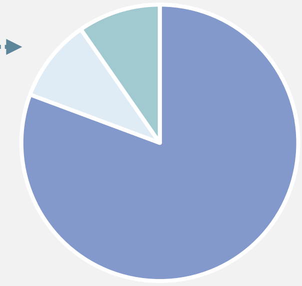
^{68}Ga

Gallium-68

^{68}Ga Global Market Size[5]

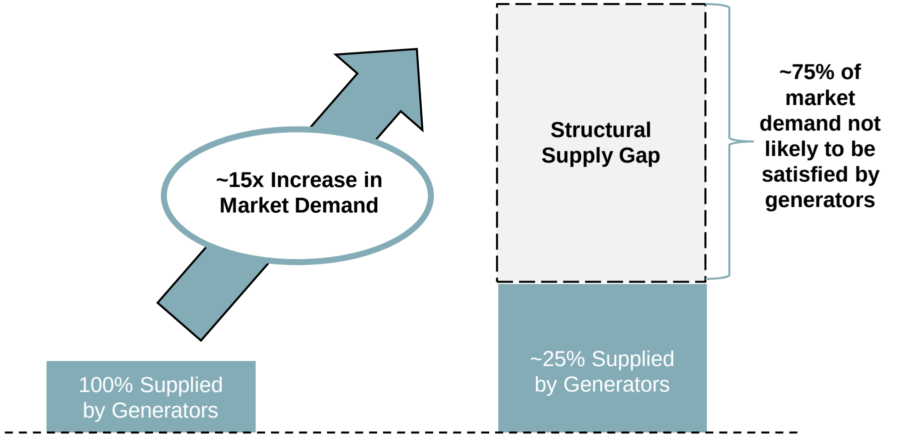
$127M

Imaging Agent Distribution



Over 90% of prostate Cancers Over-Express PSMA, and Ga68 hybrid therapy has a 76/97% Sensitivity/Specificity identification rate when compared to 58/82% in MRI alone.[3]

^{68}Ga is the Key Diagnostic for Most Lutetium and Actinium Based Drugs in Development



~15x Increase in Demand

- There are currently two FDA approved ^{68}Ga labelled drug products
- Additional near-term approvals and increase in use cases upon approval of PSMA therapeutic Radiopharmaceuticals likely drives a 15x increase in demand

^{68}Ga Generators Cannot Address Market Needs

- The primary commercial source for Gallium is ^{68}Ga generators, which are unlikely to produce sufficient isotope to meet anticipated demand.
- ^{68}Ga production using liquid targets are highly inefficient.

^{68}Ga Generator Install-Base Expansion is Cost Prohibitive

- Assuming enough generators can be made to meet projected ^{68}Ga demand; the cost to secure those generators will likely be prohibitive.

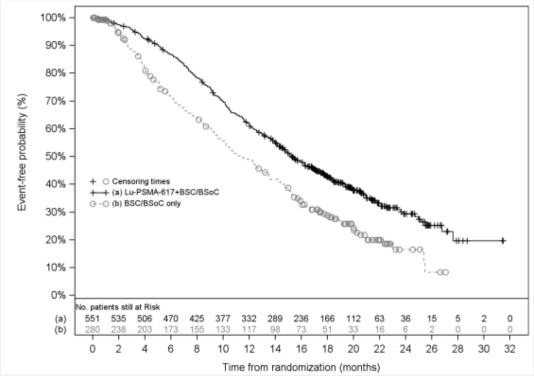
Isotope End Markets: Ytterbium-176 (^{176}Yb)

^{177}Lutetium Based Drugs set to Become a Blockbuster Category Initially driven by Pluvicto (Novartis)

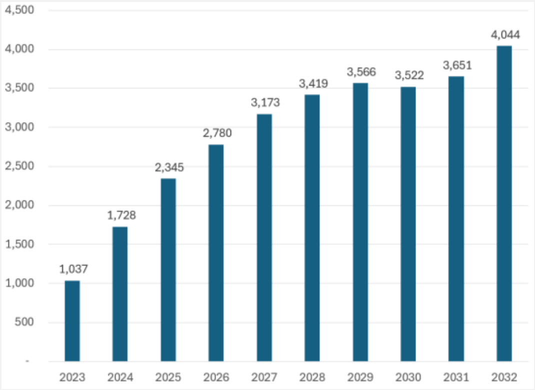
Efficacy Results in VISION

	PLUVICTO plus BSoC	BSoC
Overall Survival (OS)	N=551	N=280
Deaths, n (%)	343 (62%)	187 (67%)
Median, months (95% CI)	15.3 (14.2, 16.9)	11.3 (9.8, 13.5)
Hazard ratio (95% CI)	0.62 (0.52,0.74)	
P-value	<0.001	
Overall response rate (ORR)		
Patients with evaluable disease at baseline	N=319	N-120
ORR (CR + PR), n(%) (95% CI)	95 (30%) (25%,35%)	2 (2%) (0%, 6%)
Complete Response(CR), n (%)	18 (6%)	0 (0%)
Partial Response (PR), n (%)	77 (24%)	2 (2%)
P=value	<0.001	

Kaplan-Meier Plot of Overall Survival in VISION



Consensus Forecasts (US$) for Pluvicto



Traditional route starting with ^{177}Lu

$$^{176}Lu \xrightarrow{(n,\gamma)} {}^{177}Lu + {}^{177m}Lu$$

^{177}Lu: $t_{½}$ = 6.89 days; ^{177m}Lu: $t_{½}$ = 160.4 days

Carrier-free route starting with ^{176}Yb

$$^{176}Yb \xrightarrow{(n,\gamma)} {}^{177}Yb \longrightarrow {}^{177}Lu$$

^{177}Yb: $t_{½}$ = 1.9 hours; ^{177}Lu: $t_{½}$ = 6.89 days

The neutron irradiation of ^{176}Yb is a superior route of producing ^{177}Lu because there is no production of ^{177m}Lu which is difficult to separate and has a long half life.

Cancer	Phase 1	Phase 2	Phase 3	Approved
Neuroendocrine	4	21	2	2
Prostate	6	11	3	
Solid Tumors		2		
Non-Hodgkin's Lympho	2			
Pancreatic/ Colorectal	2	1		
Renal	2			
Breast		1		
Thyroid	2			
Other	1	6		

ASP isotopes

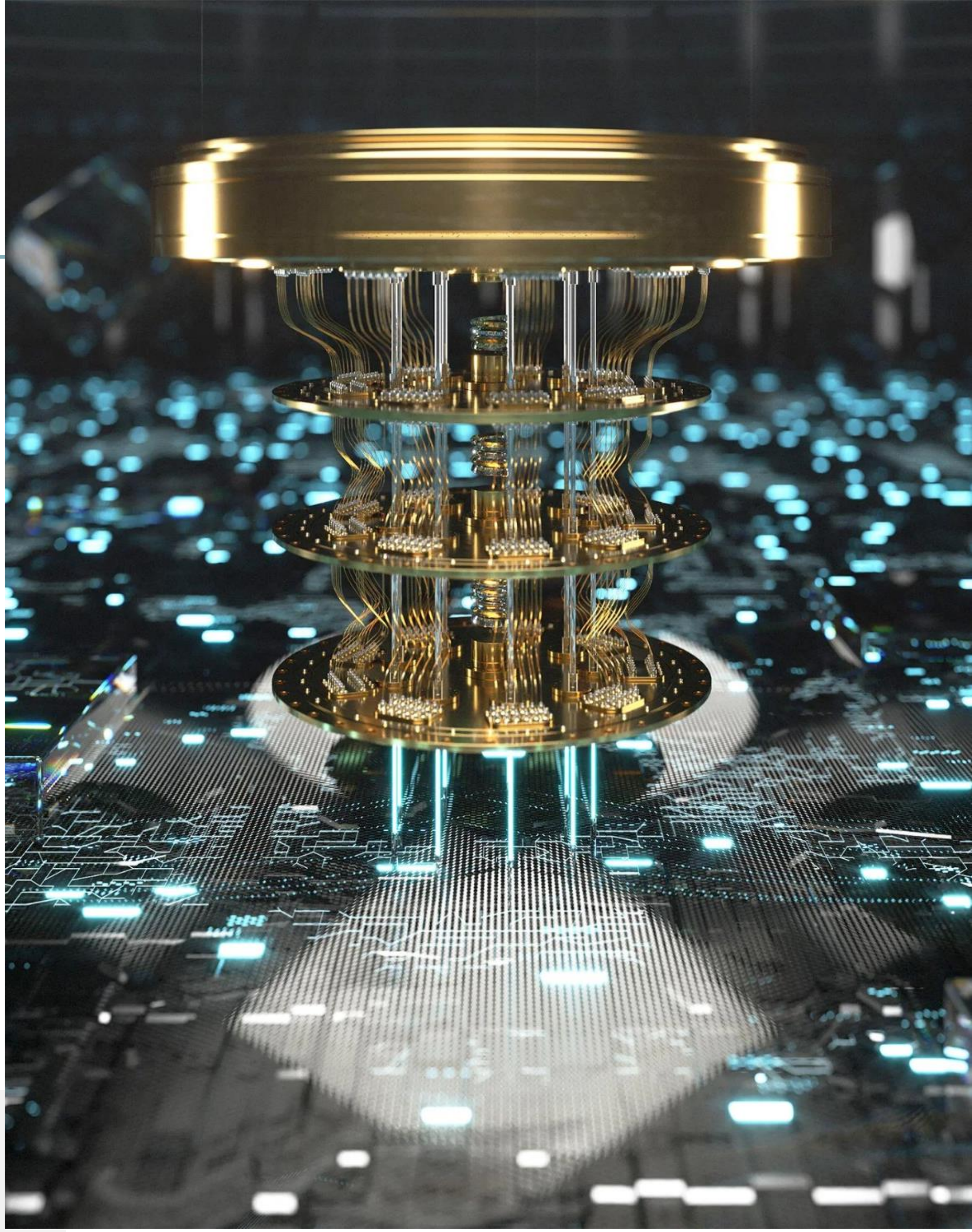
Silicon-28:
Enabling Quantum Computing

Quantum Computers are expected to be 1000x more powerful than today's conventional computers and are widely anticipated to create new opportunities in medicine, artificial intelligence, cybersecurity, finance, logistics, and other industries.

The semiconductor has to be extremely fast for the processing of Qubits. Silicon-29 is a problem in quantum computing because it dominates the breakdown of quantum information, or "decoherence," of the qubits.

- Instead of information being processed in nanometer-scale transistors with binary 'bits' which can have only two states (0 or 1), silicon-based quantum computer processors will utilize atomic-scale quantum spin effects with 'qubits' which can be in multiple superimposed states at the same time, thereby dramatically increasing the processing power in a minuscule fraction of the volume.

- An isotopically pure form of silicon has a thermal conductivity about 60% higher than naturally occurring mono-crystalline silicon. It is believed that isotopically enriched silicon may provide benefits to fiber optics and



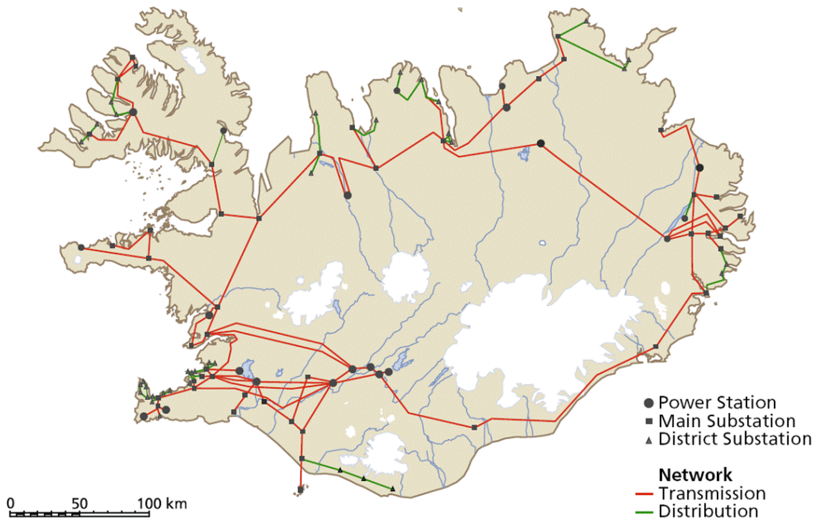
ASPI expects to supply semiconductor companies with highly enriched ^{28}Si during 2024

Future Growth Plans to Scale ASPI Business into new Isotopes

Iceland identified as the likely optimal location for expansion:

- Iceland's policy is to attract high-tech green industry into the country to support its own long-held ESG-based ethos.
- Likely government support from relevant government ministries and Non-Proliferation Regulators. Advisors currently engaged to support regulatory applications which are in progress.
- Plant Location will be conveniently located nearby international airport, shipping port and source of skilled workforce.
- Long-term Energy Solution:
    - Iceland has an extremely sophisticated private green energy supply system, where a customer can select the provider, and ultimate source of the energy they consume. **A local green energy provider has provided quote for 10+ year energy supply at <5 ₵/Kw/h.**
- Expect to produce multiple Isotopes supported by long term contracts with significant partners. Planned isotopes include Silicon-28, Gemanium-72 & 74, Xenon -129, Deuterium, Zinc-68, Molybdenum-100 & 98 and chlorine-37.
- **We expect customers to contribute considerable amounts of capital to the construction of additional manufacturing capacity for new isotopes.**

Iceland Electricity Network



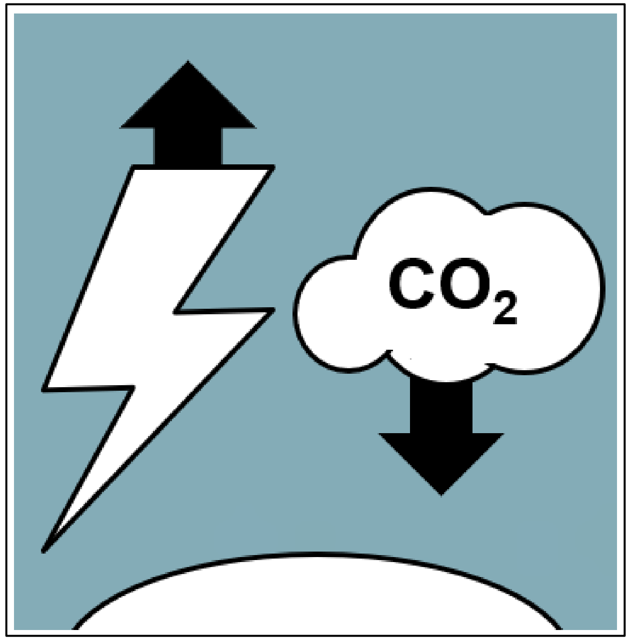
ASP isotopes

QUANTUM LEAP ENERGY

The Problem is Well-Known... Solving it is not as Straightforward

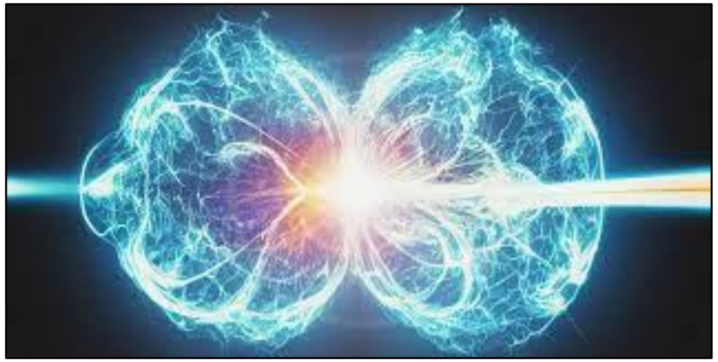
Global Electricity Production needs to double by 2050.

At the same time, the world needs to achieve carbon neutrality.



Protesting is not going to Solve the Problem…

… The Solution Requires Innovation and Investment



The Global Necessity for Increased Green Nuclear Energy

Increasing Demand for Energy

- To reach Net Zero emissions by 2050, the world must increase Global Electricity generation by 250% and double Nuclear energy output.[13]
- Climate scientists recommend increasing the share of low-carbon energies for power generation from 30% to over 80% by 2050.[10]

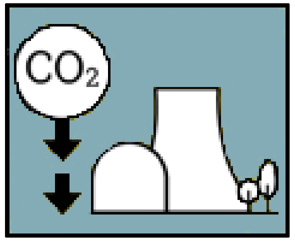
Energy Security

- Russia is responsible for 35% of enriched uranium globally[15]
- The United States imports 95% of its uranium, and 81% of its enrichment comes from overseas.[16]
- Four companies (all state-owned) operating in six countries are responsible for the entire world's production of enriched uranium for nuclear reactors.
- UK Commits GBP 300 million for increased uranium enrichment. US commits over $500m.

Increasing Focus on Nuclear Power By Country

- During COP28, 24 countries backed a Ministerial Declaration calling for the tripling of global nuclear energy capacity by 2050
- UK aims to have up to 24 GW of nuclear capacity by mid-century, up from 6 GW today, which could meet around a quarter of the country's forecast electricity demand
- India plans to build 10 new large reactors. [10]
- Japan is targeting 20-22% of electricity generation from nuclear by 2030. [11]
- China has 38 operable reactors; 19 are under construction, and the country plans to produce 70 GW of power by 2025.[12]

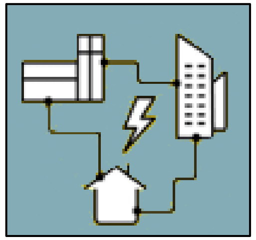
Nuclear Power Uptake Benefits



Low Carbon Energy

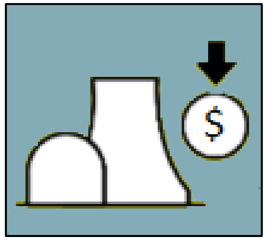
Nuclear power is one of the world's energy sources that emits the least greenhouse gas

70x less CO2 than gas
40x less CO2 than coal
4x less CO2 than solar



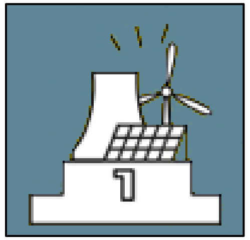
Constant and Controllable Energy

Nuclear power provides continuous electricity thanks to its robust production system, which can adapt to variations in electricity demand.



Cost Competitive Energy

Nuclear power provides continuous electricity thanks to its robust production system, which can adapt to variations in electricity demand.



Essential Energy Diversity

Renewable energies (solar, wind) are by nature intermittent and cannot meet the existing and future energy needs of 8 billion people on their own.

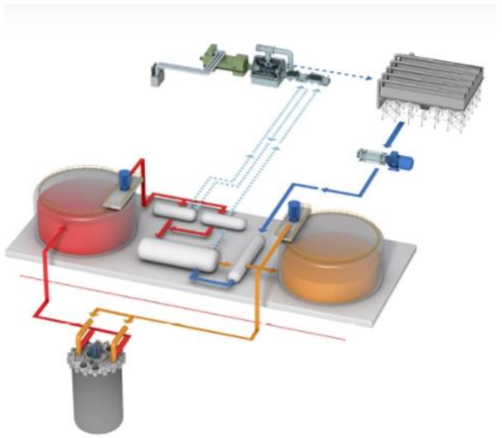
ASP isotopes

SMR (Small Modular Reactors) = Next Wave in Nuclear Energy

The world is moving to a new type of nuclear reactor: SMR

- Modular, smaller size (50 MWe to 300 MWe) reactors allowing greater flexibility in deployment
- Designed for production-line manufacturing rather than conventional custom-built capital projects
- Limited on-site preparation to substantially reduce lengthy construction times
- Simplicity of design, enhanced safety features, economics and quality afforded by factory production, and more flexibility (financing, siting, sizing, and end-use applications)
- Can provide power for applications where large plants are not needed or sites lack infrastructure to support a large unit (e.g., smaller electrical markets, isolated areas, smaller grids, sites with limited water and acreage, or unique industrial applications)
- US DOE has already committed billions of dollars to Advanced Reactor Design Program (ARDP) to facilitate and accelerate development of advanced reactors

TerraPower's Natrium



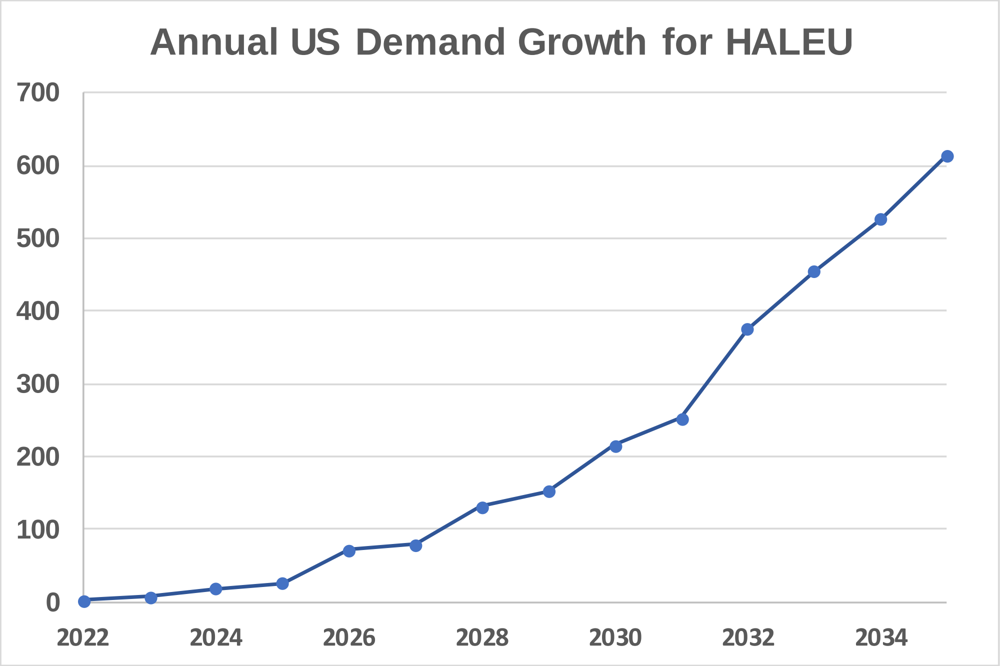
X-Energy's Xe-100

Rolls-Royce's SMR

ASP isotopes

HALEU Supply Issue Looming for SMR Reality

- Current commercial LWRs use low-enriched uranium (LEU) which has less than 5% ^{235}U content.
- Many SMRs and advanced reactors will require High Assay Low Enriched Uranium (HALEU) with ^{235}U enrichment up to 19.75%.
- Currently, there is no commercial source of the supply of HALEU in the Western World. Without fuel, these SMR's are unlikely to become a reality.
- Recently TerraPower delayed the start-up of its SMR from 2028 by at least 2 years due to the lack of availability of HALEU.
- Many other SMR Companies are in a similar position.



- The U.S. government has made a multi-billion-dollar commitment to help commercialize HALEU-fueled advanced reactors. Inflation Reduction Act passed August 2022 - supporting nuclear power generation and domestic nuclear fuel supply including $700 Million funding for the DOE's HALEU Availability Program.
- The NEI estimates (above) that by 2035 US domestic demand for HALEU could reach >600 Metric Tons.
- Many European and Asian countries are also in need of HALEU for SMRs

Comparing and Contrasting Enrichment Methods

	Gaseous Diffusion	Centrifugation	Molecular Laser Isotope Separation (MLIS)	Atomic Vapor Laser Isotope Separation (AVLIS)	Silex Systems	Quantum Enrichment (used by QLE)
Cost	High capital cost	Capital 1/10 of Diffusion	Low Capital, small size	Low Capital, small size	Low Capital, small size	Low Capital, small size
Speed	High pressure	High speed	UF6 Flow Cooling (80K)	U metal 3000K	Adiabatic expansion nozzles (10 – 20K)	U metal 3000K
Technology Notes	High technology	Rotor design & material	Multiphoton Dissociation	Selective Photoionization	Laser excitation transmission by skimmer	Enhanced resonant multiphoton ionization
Selectivity	Selectivity α ≥ 1.003	Selectivity α ≥ 1.15	Selectivity α ≥ 1.05	Selectivity α ≥ 10-50	Selectivity α ≥ 2 - 20	Selectivity α ≥ 50
SWU	2500 kWh/SWU	50 kWh/SWU	30 kWh/SWU	40 kWh/SWU	Estimate < 50 kWh/SWU	40 kWh/SWU
Stages Required	500 Stages to reactor grade	50 Stages	120 Stages	1-2 Stages	1-2 Stages	Single stage

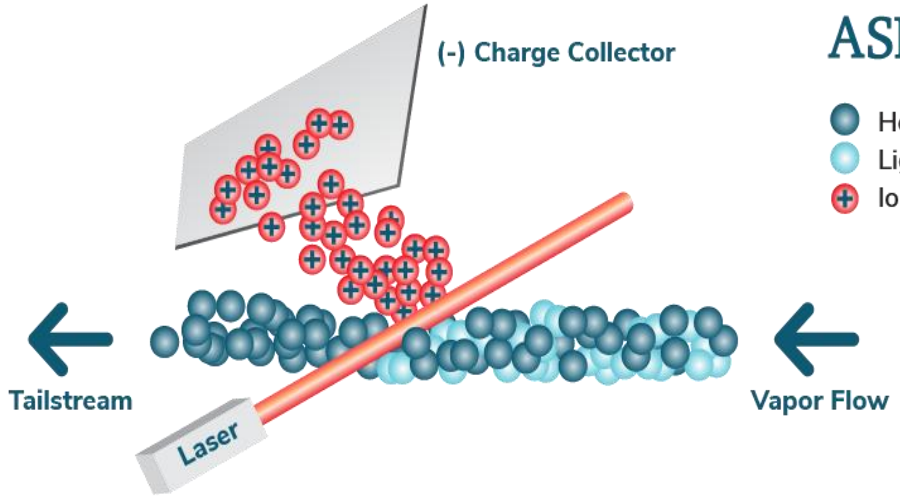
What is Quantum Enrichment?

- Quantum Enrichment was derived from AVLIS (Atomic Vapor Laser Isotope Separation). Isotopes of every element also have unique spectroscopic “signatures” defined by the electromagnetic radiation or “light” absorbed by their atoms from electron transitions.

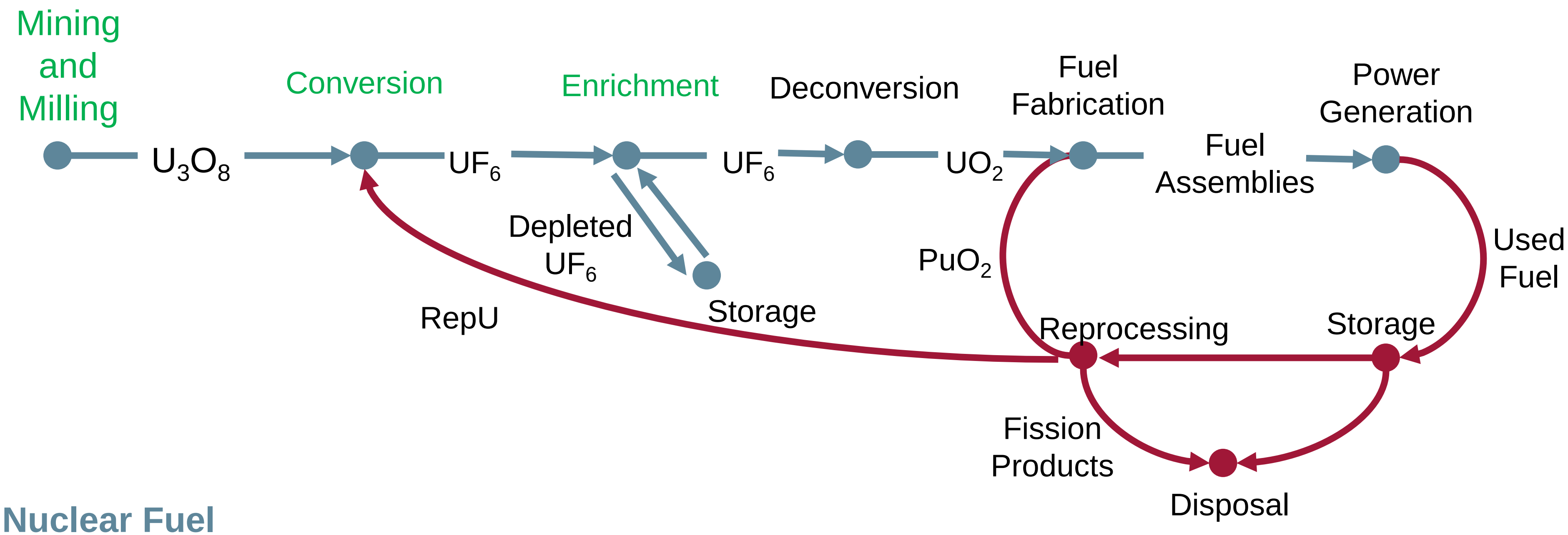
- Quantum enrichment depends on the quantum mechanical connection between energy and frequency in an atom’s electrons. QE separates two isotopes by taking advantage of the slight differences in the transition energy between two isotopes. This method is described as a “quantum mechanics” method.

- A laser is a device that can produce large numbers of photons, all having almost precisely the same frequency or energy. Photons are defined as energy packets that compose electromagnetic radiation. By precisely tuning lasers to a specific isotope's spectrum (color) signature, those atoms can be selectively photoionized and then electrically separated based on their electric charge.

- The isotopic selectivity of enrichment is very high and can produce the desired enrichment in a single step. In principle, Quantum Enrichment can separate isotopes of most elements.



Nuclear Fuel Cycle

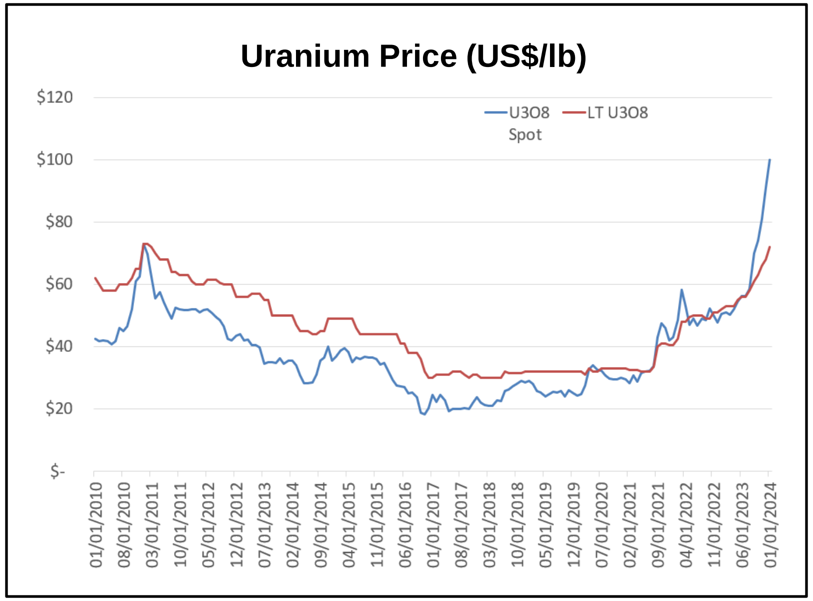


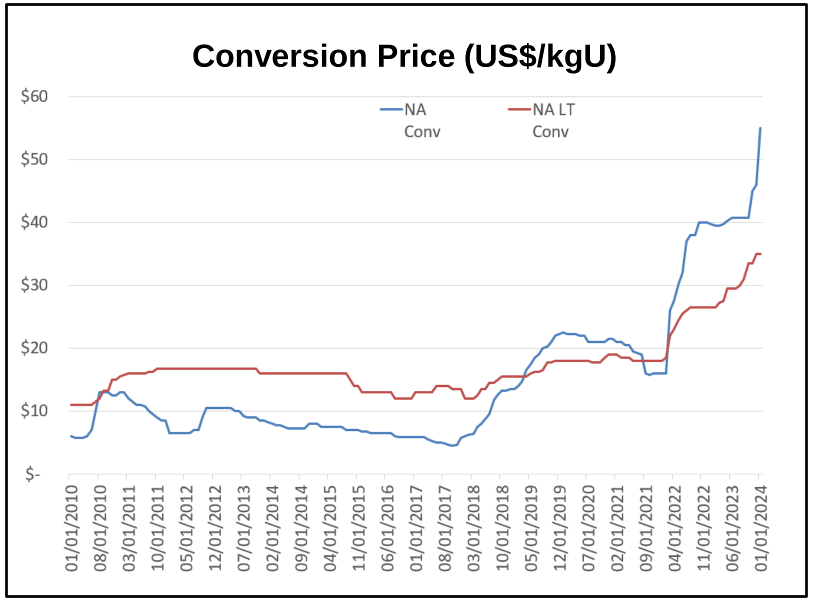
Nuclear Fuel Cycle

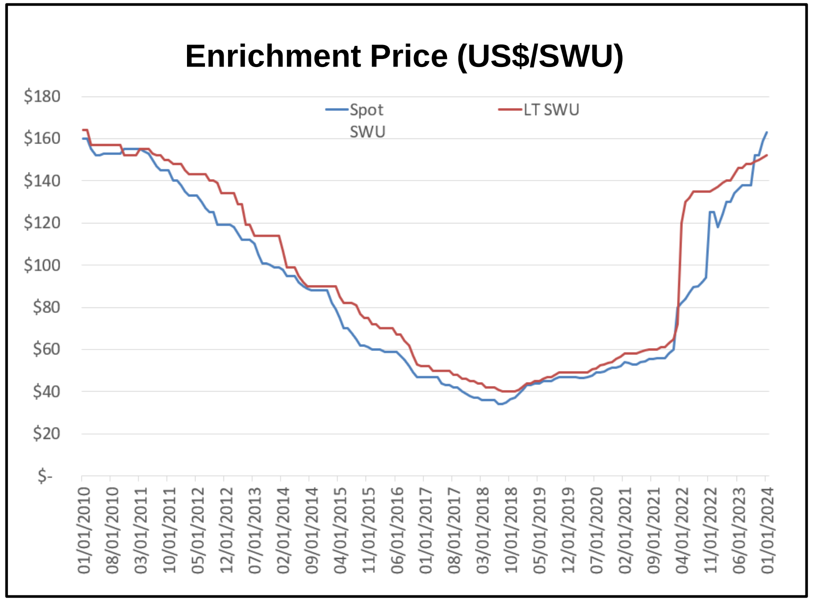
- **Front End**
- **Back End**

Nuclear Fuel Chain Prices

- Uranium supply has been in a state of sustained deficit since 2018, which is widening due to years of underinvestment in uranium assets, resulting in production issues from the world's largest suppliers.
- Meanwhile, demand for front-end nuclear fuel (U3O8, UF6, EUP) continues to grow given ambitious global nuclear roll out strategies.
- Global geopolitics is adding pressure to an already bifurcated market, particularly in conversion and enrichment where Russia is the dominant player.
- China is the demand outlier and could procure over 7x global annual supply for themselves, and their domestic conversion and enrichment production will be used solely for their own reactor fleet.
- It takes several years, often over 12 years, for new permitted uranium supply to come on stream.



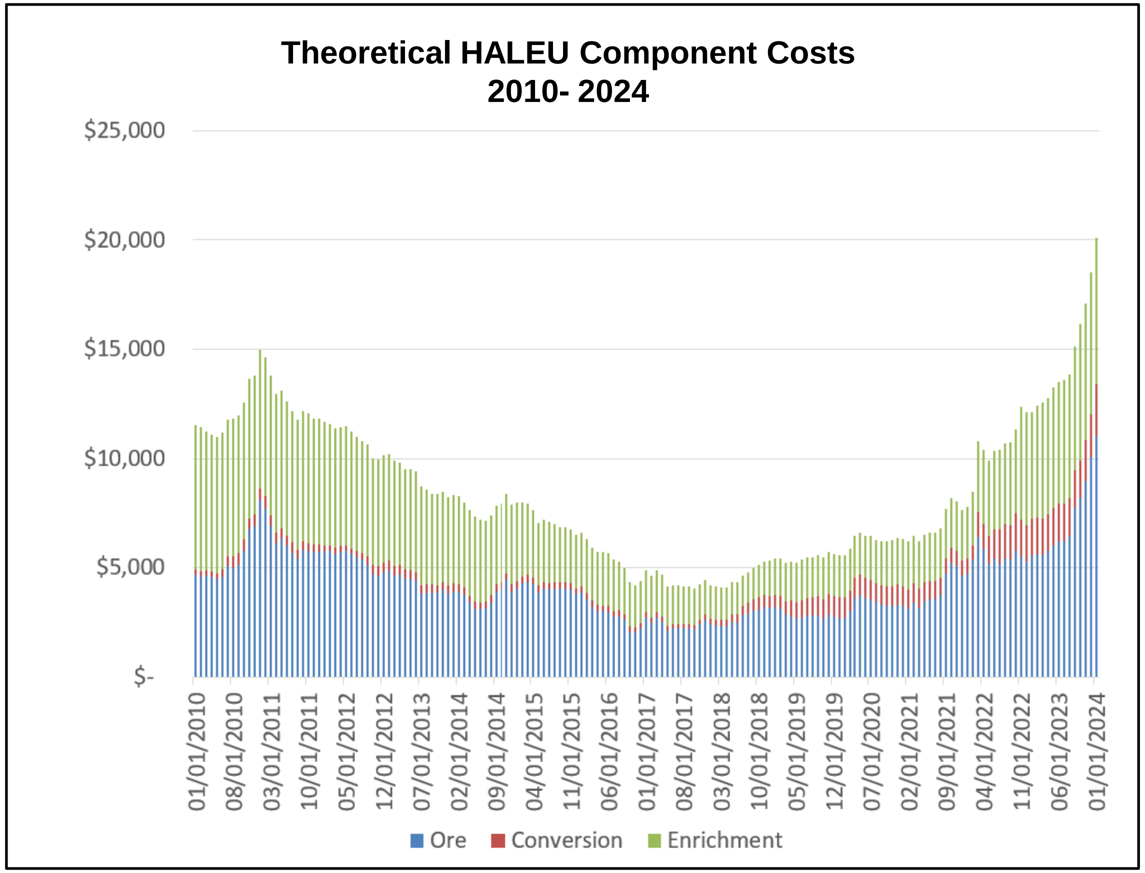


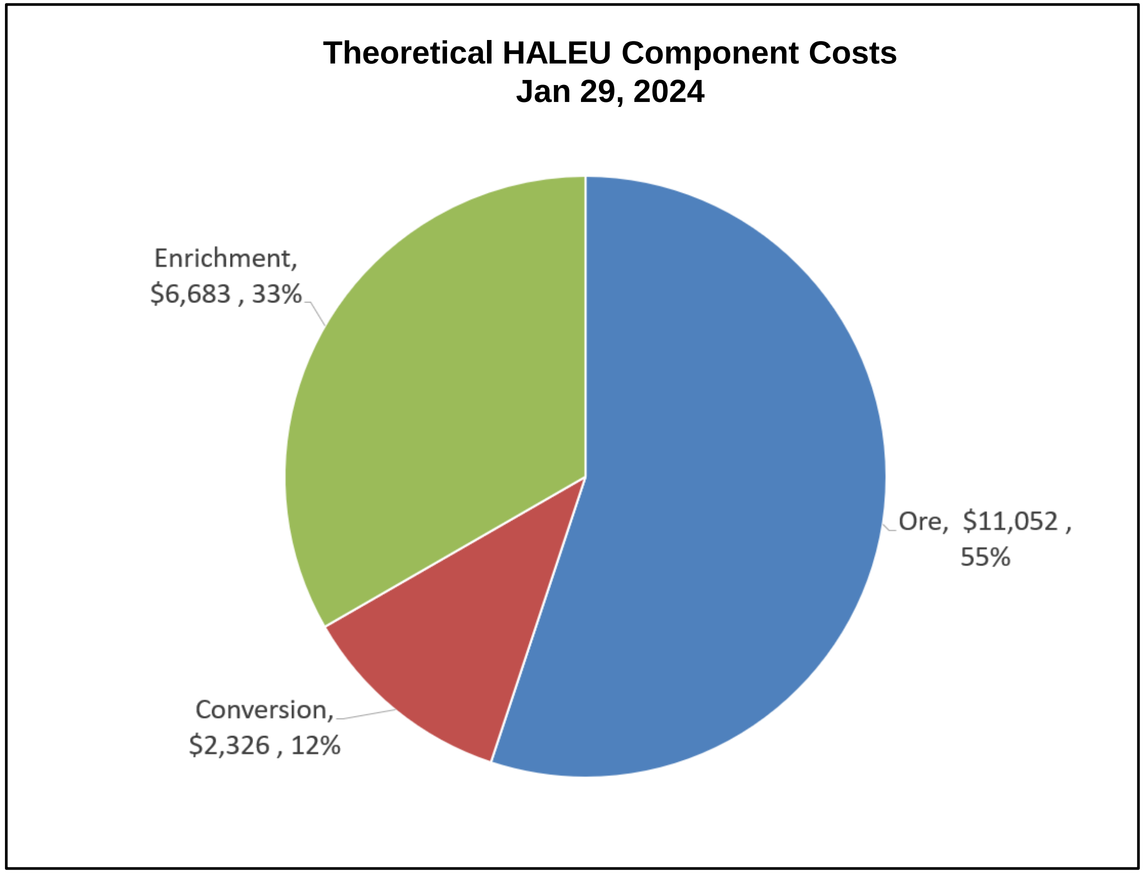


ASP isotopes

Implications for HALEU

- If available (currently there is no western supplier of HALEU), HALEU would likely cost >>$18,000 per Kg.
- Many SMR company's based their business plans assuming HALEU <<$10,000 per Kg





Current Implications of Depleted UF6 tails

Depleted tails from other Uranium enrichers produce nuclear waste. The **management of this waste is becoming a problem.**

We believe that our Process has the ability to process this waste into HALEU
Potentially providing a solution to this growing environmental problem

If we can secure access to this Nuclear Waste at an attractive cost, we should be able to **produce HALEU at highly competitive prices**.

Depleted UF6 Tails stored in Ohio, USA

Depleted UF6 Tails by Country[1]

Location	Accumulated Depleted UF6 (in tons)	Annual Increase in Reserves (in tons)
USA	700,000	30,000
Russia	640,000	15,000
France	200,000	18,000
BNFL (Great Britain)	44,000	-
Urenco (Germany/ UK/ netherlands)	43,000	6,000
Japan	38,000	700
China	30,000	1,500
South Africa	3,000	-
Others	1,500	-
Total	**1,699,500**	**71,200**

(1) The amount of accumulated DUHF by countries of the world-Great Encyclopedia of Oil and Gas

Investment Thesis

1. Proven & Proprietary Technology

ASPI's advanced technology platform leverages 20 years of R&D history to enrich isotopes in varying levels of atomic mass. Its innovative technology will enable the company to manufacture a diverse range of isotopes, which will meet the growing demand in the Nuclear Medicine and Green Nuclear Energy industry.

2. Multiple Geopolitical Tailwinds Favor Rapid Expansion

Favorable long-term market trends are expected to drive long-term secular industry growth. Recent geopolitical events have created high urgency for companies and countries to search for reliable sources of isotopes.

3. Consistent Operational Performance

Since incorporation (< 2 years ago) we have completed the construction of our first manufacturing facility, and we continue to expand our operating footprint in South Africa. Our South African facilities are expected to enter commercial production during 2024 and should drive free cash flow.

Appendix

Company Timeline

Management Team

Company History

2021

September 2021

- ASP Incorporated in Delaware
- Raised $4 million in Pre-seed funding
- Received appropriate permits from the non-proliferation council of South Africa for ASP to Acquire Klydon's Plant

October 2021

- ASP Isotopes wins competitive auction for Klydon Large-scale Plant
- Raised an additional $6 million and commenced procurement of components

2022

Jan/Feb 2022

Start discussions with the Initial customer base for multiple isotopes

July 2022

Acquisition of the Small-Scale Plant enrichment facility from Klydon

November 2022

- Initial public offering (NASDAQ) raising $5 million
- Signed Supply agreement with BRICEM for enriched Molybdenum^{100}

2023

March 2023

ASP announces the commissioning of its Small-Scale Plant

May 2023

ASP enters into a multi-year supply agreement for Carbon 14 with minimum annual revenues of $2.5m

June 2023

ASP Secures $9m Supply Contract with US Customer for highly Enriched Isotopes

Nov 2023

- ASP acquires 51% of the outstanding capital stock of PET Labs (SA)
- ASPI Commits to add two additional cyclotrons into South Africa

4Q 2023

- Formation of Quantum Leap Energy focused on nuclear fuels
- Entered into 2 MOUs with US Small Modular Reactor Companies for production of HALEU.

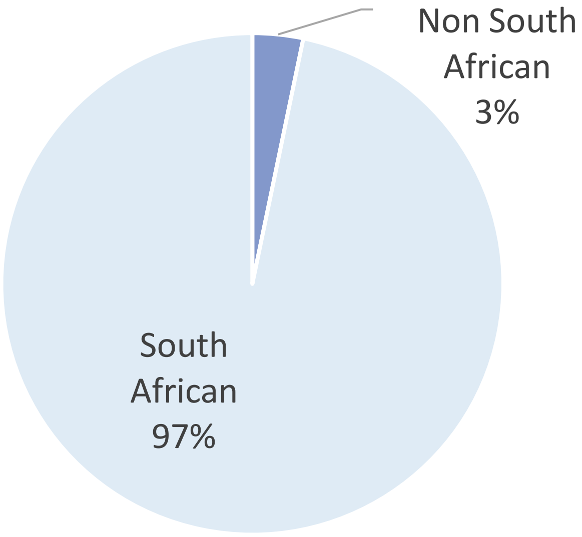
ASPI: Employees Demographics

We now have over 70 employees.

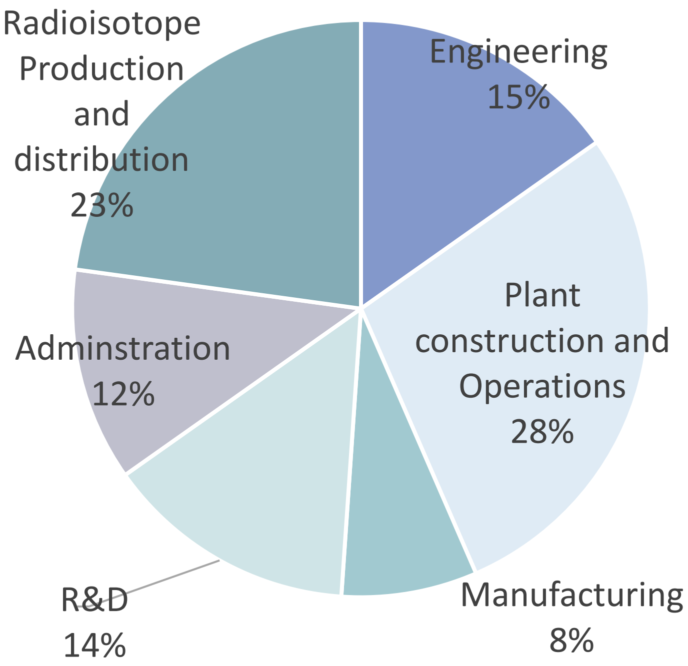
19% of employees have PhDs

41% of employees have advanced degrees or higher

Employees By Nationality



Employees By Role



ASP Isotopes: Leadership Team

PAUL MANN
Chairman, and CEO

- Co-founded ASP Isotopes in September 2021
- 20+ years of experience on Wall Street investing in healthcare and chemicals companies at Soros Fund Management, Highbridge Capital and Morgan Stanley.
- MA and MEng (Chemical Engineering) from Cambridge University, Research Scientist at Procter and Gamble. CFA charter holder.

HENDRIK STRYDOM, PhD
Director, Chief Technology Officer

- Co-developer of “Aerodynamic Separation Process” (ASP) and CEO of Klydon, the predecessor company since 1993.
- Extensive research on the laser separation of heavy isotopes (AVLIS, MLIS, SILEX).
- Dr. Strydom has PhD (Physics) (2000) from the University of Natal (Durban).

GERDUS KEMP, MD, PhD
Medical Director, CEO PET Labs

- CEO Pet-Labs, a South African radiopharmaceutical operations company dedicated to nuclear medicine and the science of radiopharmaceutical production
- Medical Director Klydon, Medical Director Molybdos
- Ph.D. (Inorganic Chemistry) from the University of Johannesburg. Current Lecturer in Radiography, University of Pretoria

ASP Isotopes: Senior Management

Xandra Van Heerden, PhD
Head of R&D

- Head of Research & Development at ASP. Previously R&D Manager at a large biomedical engineering company
- Senior lecturer at the University of Pretoria for five years, with a focus on chemical mass transfer processes and separation technologies (Distillation)
- PhD (Chemical Engineering) from the University of Pretoria

Heino Van Wyk
Head of Engineering

- Process engineer with design experience in Petrochemical, Chemical, Water and Isotope Separation Plants
- Process Engineer and Engineering Manager at Klydon. Headed up design process on a MoF6 & Carbon-14 enrichment plant
- Beng (Chemical Engineering) from the University of Pretoria

Ben Swanapol
Head of Chemistry

- Head of Chemistry at ASP. Has 44 years of experience in petrochemical, nuclear, chemical process, aerospace and defense industries
- Previous chemist at UCOR SA (UCOR), Atomic Energy Corporation of SA (AEC), Termtron Technologies, Sasol and Klydon
- National Diploma (Chemistry) from Tshwane University of Technology

Robert Ainscow
Chief Financial Officer

- Co-Founder, ASP Isotopes in September 2021
- 20+ years experience on Wall Street in Capital Markets, Asset-Backed Finance, and Control at Investec Bank, Bear Sterns, and Morgan Stanley
- B.A. (Joint Hons) in Law and Modern Languages from Bristol University

ASP Isotopes: Scientific Advisors

PROF EINAR RONANDER, PhD
Chief Scientific Advisor

- Globally recognized as a leading scientist in the field of isotope separation for medical and industrial applications
- Pioneered the Molecular Laser Isotope Separation (MLIS) and the Atomic Vapour Laser Isotope Separation (AVLIS) for heavy volatile isotopes
- Has extensive knowledge base and experience in gas centrifuge separation, distillation separation, electromagnetic separation, infra-red lasers for MLIS, and visible lasers for AVLIS. Einar obtained a PhD (Physics) at the University of Stellenbosch, a PhD (Chemistry) at the University of Pretoria, he serves on the Advisory Board for Science (Univ. Stellenbosch), and the Steering Committee of the Laser Institute at University of Stellenbosch.
- Einar serves as reviewer of global scientific papers for leading journals and his own published papers rate in the top 10% globally by citations standards, and he performs as invited speaker at global conferences and is an Extra Ordinary Prof (Physics).

SERGEY VASNETSOV
Consultant and Chemical Engineer

- Founder and Managing Director of ChemBridges, strategy consulting firm, since 2016.
- SVP of Strategy and M&A at LyondellBasell (NYSE: LYB) (2010-2016).
- Managing Director, Equity Research at Barclays Capital and Lehman Brothers (1996-2010).

ASP Isotopes: Non-Executive Directors

PROF MIKE GORLEY, PhD
Director

- Director of Fusion Technology at the U.K. Atomic Energy Authority. and a visiting Professor at the University of Bristol, U.K. Mike is a well-known expert in fusion technology and fusion materials.
- Previously served as a Chief Technologist and Strategic leader and program area manager for fusion technology at the UK Atomic Energy Authority.
- Ph.D. (DPhil) in Materials Science from Oxford University, U.K

TODD WIDER, MD
Director

- Executive Chairman and Chief Medical Officer, Emendo Biotherapeutics
- Active Staff (*~20 Years)* in reconstructive surgery at Mount Sinai Hospital in New York
- MD Columbia College, Residency in General Surgery and Plastic and Recon at Columbia Presbyterian, Postdoctoral fellowships at Memorial Sloan Kettering as Chief Microsurgery Fellow

DUNCAN MOORE, PhD
Director

- Partner at East West Capital Partners, specializing in investment opportunities within the Healthcare Industry across the APAC region.
- Global Head of Healthcare Equity Research at Morgan Stanley from 1991 to 2008,
- M.Phil & PhD in Biochemistry from Cambridge University

JOSHUA DONFELD
Director

- 20+ years Investing experience on Wallstreet
- Co-founder and co-managing partner of Castle Hook Partners, Specializing in Healthcare & Natural Resources
- Portfolio Manager, Soros Fund management sector agnostic Focus
- Magna Cum Laude, Princeton University, Economics

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