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## Industry and Market Data

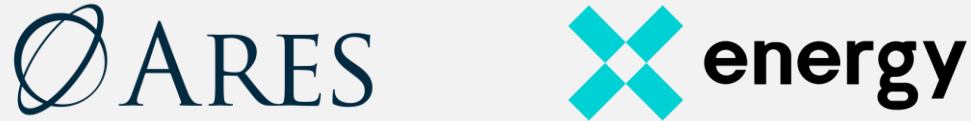
In this presentation, X-energy and AAC rely on and refer to certain information and statistics regarding the markets and industries in which X-energy competes. Such information and statistics are based on X-energy’s management’s estimates and/or obtained from third party sources, including reports by market research firms and company filings. While X-energy and AAC believe such third party information is reliable, there can be no assurance as to the accuracy or completeness of the indicated information. X-energy and AAC have not independently verified the accuracy or completeness of the information provided by the third-party sources.

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# Ares is a Compelling SPAC Partner for X-energy

## Leading Partnership with Ares Acquisition Corporation



- **Ares Acquisition Corporation (“AAC”)** is a special purpose acquisition company with \$1bn of cash-in-trust
- **Ares Management Corporation (NYSE: ARES) (“Ares”)** is a leading global alternative asset manager with ~\$341bn of AUM, ~2,500 employees and 885+ investment professionals
  - Given Ares’ robust sourcing and underwriting capabilities, AAC has been highly selective in pursuing a business combination
- **Ares aims to be a leader in climate initiatives by incorporating sustainability further into select investments and business practices**
  - Established track record in climate infrastructure with over \$3bn invested or committed since 2015 in companies that, among other things, are working to accelerate the transition to a lower carbon economy
- **Ares offers meaningful value creation capabilities for its investments through an experienced public IR team, demonstrated track record of accessing the public markets and dedicated environmental, social and governance (“ESG”) team**

## Ares’ Sponsorship and Deep Infrastructure Investing Experience<sup>(1)</sup>

**>10 IPOs**

*Ares has successfully brought over 10 IPOs to market*

**~3,000 Portfolio Companies**

*Deep executive network and collaboration across portfolio companies*

**~1,800 Institutional Relationships**

*Significant relationships to assist value creation plan*

**~\$14bn**

*Related capital costs for greenfield generation and transmission projects*

**>\$10bn**

*Invested across 250 infrastructure opportunities*

**>\$3bn**

*Invested or committed across 50 climate infrastructure opportunities since 2015*

### Notable Accolades<sup>(2)</sup>



Private Equity Sponsor of the Year 2020



Renewables Investor of the Year (North America)

Note: As of September 30, 2022. AUM amounts include funds managed by Ivy Hill Asset Management, L.P., a registered investment adviser and a wholly owned portfolio company of Ares Capital Corporation, a subsidiary of Ares

1) Investment experience shown includes invested capital from relevant investments made by Ares Infrastructure Opportunities (AIO) and Ares Direct Lending, including Ares Capital Corporation, that are consistent with AIO’s investment mandate

2) The performance, awards/ratings noted herein relate only to selected funds/strategies and may not be representative of any given client’s experience and should not be viewed as indicative of Ares’ past performance or its funds’ future performance; All investments involve risk, including loss of principal; Please see endnotes for additional information



# X-energy & Ares – A Differentiated Partnership



# Introduction & Company Overview

# Two Challenges in Opposition

↑ Global Energy Demand Up  
50% by 2050<sup>(1)</sup>

↓ Need to drastically Reduce Carbon  
Emissions

**Fossil fuels** currently supply ~80% of global energy<sup>(2)</sup>

## Nuclear is the only energy source for reliability and decarbonization



“Always-on” baseload energy



Generates zero carbon emissions



Can be flexibly located near load centers

*“Nuclear power plays a significant role in a secure global pathway to net zero”*

iea<sup>(3)</sup>

# Energy for the Future

“ I founded X-energy because the world needs energy solutions that are clean, safe, secure, and affordable. With so much at stake, we cannot continue down the same path.”

– Kam Ghaffarian, Founder



Digital rendering of a Xe-100 4-pack (320MWe)

## Founded in 2009

*13 years of investment and development*

## Rockville, MD Headquarters

*Rooted in the nuclear community with proximity to the DOE and Nuclear Regulatory Commission ("NRC")*

## 50+ Years of R&D

*Built upon years of R&D in high temperature gas reactors*

## ~400 Employees

*Leading Gen IV nuclear development and licensing team<sup>(1)</sup>*

## \$1.2bn Federal Funding

*Selected for DOE's Advanced Reactor Demonstration Program<sup>(2)</sup>*

## ~\$580mm Investment

*Capital invested to date with \$120 million of committed capital<sup>(3)</sup>*

1) As of December 2022

2) Awarded in December 2020

3) As of December 2022, includes \$210mm of government funding, \$75mm committed capital of Series C-2 financing, including a \$30mm commitment from Ares Management and \$45mm PIPE commitment from Ares Management

## X-energy's Advanced Nuclear Technology



### Our High Performing Reactor: Xe-100

- Gen-IV High-Temperature Gas-cooled Reactors (HTGR) have advantages in sustainability, economics, reliability, safety, and versatility in application
- Each reactor will be engineered to operate as a single 80 MWe unit and is optimized as a four-unit plant delivering 320 MWe



### Our Clean and Safe Fuel: TRISO-X

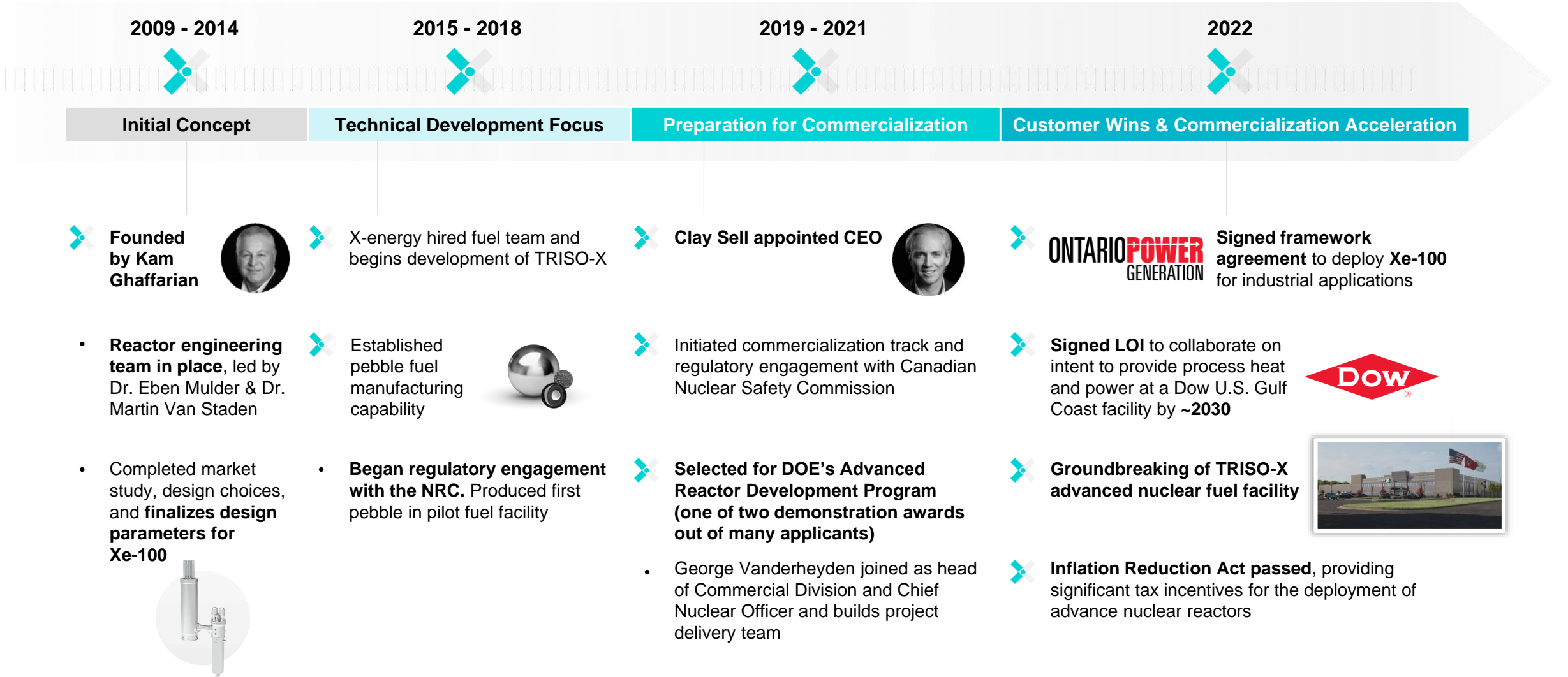
- Our reactors will use tri-structural isotropic (TRISO) particle fuel, developed and improved over 60 years
- TRISO is designed not to melt and can withstand extreme temperatures that are well beyond the threshold of current nuclear fuels
- We manufacture our own proprietary version (TRISO-X) to ensure supply and quality control



### Other Strategic R&D Initiatives

- We're developing advanced concepts for nuclear power and propulsion for potential military, critical infrastructure and space applications

# Our Traction, Accomplishments & Risk Reduction to Date



Note: Commercialization assumes regulatory permitting approvals have been obtained to permit construction of a facility as projected. The regulatory permitting process, including necessary NRC approvals and licensing, is a lengthy, complex process and projected timelines could vary materially from the actual time necessary to obtain all the required approvals. While there is some possibility of an expedited approval process for SMR technology, there is presently no clear path for expedited permitting

Average 25+ Years of Nuclear / Energy Experience with Specialty in Design, Operations, Government Relations and Public Markets

## Key Leadership Team



**Dr. Kam Ghaffarian**  
*Executive Chairman & Founder*

35+ years as a successful entrepreneur across energy, space, contracting, and technology



**J. Clay Sell**  
*Chief Executive Officer*

25+ years of energy experience in private and public sectors; former Deputy Secretary of the U.S. DOE



**Harlan Bowers**  
*President*

25+ years managing successful delivery of spacecraft programs



**George Vanderheyden**  
*Senior VP & Chief Nuclear Officer*

15+ years of executive experience in Nuclear; former CEO of UniStar Nuclear Energy and CNO of Emirates Nuclear Energy Corporation



**Steve Miller**  
*Senior Vice President & General Counsel*

20+ years of energy experience; former Senior VP and General Counsel of Constellation Energy Group's Power Generation business



**Mark Mize**  
*Senior Vice President & Chief Financial Officer*

25+ years of energy experience; former CFO and Treasurer at multiple public and private companies, including Petrohawk Energy



**Dr. Pete Pappano**  
*President, TRISO-X*

18+ years of experience in graphite and fuel fabrication, including the U.S. DOE and Oak Ridge National Laboratory



**Katherine Moshonas Cole**  
*President, X-energy Canada*

30+ years in the nuclear industry with Canadian and international experience



**Dr. Eben Mulder**  
*Senior Vice President, Chief Scientist*

30+ years of experience in pebble-bed design and architecture; former Chief Scientific Officer of South Africa's Pebble Bed Modular Reactor (PBMR) Program



**Dr. Martin van Staden**  
*Vice President, Reactor Development*

25+ years of experience in power generation, including South Africa's PBMR program



**Carol Lane**  
*Vice President, Government Affairs*

25+ years in policy, legislative, and business development activities with the executive branch and Congress

**~400**

**Employees**

*Incl. 34 PhDs and 96 Masters in Engineering / Science<sup>(1)</sup>*

1) As of December 2022

# Key Investment Highlights



**Powerful Tailwinds in Clean Energy**

Significant total addressable market (“TAM”) for advanced nuclear – a carbon-free, always-on generation source capable of addressing the global need for clean energy



**Safe, Advanced Nuclear Design**

Simplified and designed to be meltdown proof, the Xe-100 drives enhanced safety, lower cost, faster construction timelines and modular scalability with broader use cases vs. other SMR / conventional nuclear competitors, including in carbon-intensive power and industrial applications



**Government Support**

Nuclear energy is garnering significant bipartisan support from U.S. government initiatives, including the Company’s \$1.2bn ARDP funding and substantial tax incentives in the Inflation Reduction Act (“IRA”)



**Growing Customer Pipeline**

External validation from blue-chip customers supporting a pipeline of 30+ opportunities, including potential projects for Dow and OPG, both of whom have provided funding to X-energy



**Attractive Business Model**

Capex-light, services-driven business model, including technology licensing, fuel sales and long-term recurring offerings, is designed to drive attractive free cash flow generation



**Innovative Management Team**

Forward-thinking team with an average 25+ years of experience in the nuclear / energy sectors. Management has deep capabilities in design, operations, government relations and public markets and is supported by 34 PhDs and 96 Masters in Engineering / Science<sup>(1)</sup>

1) As of December 2022

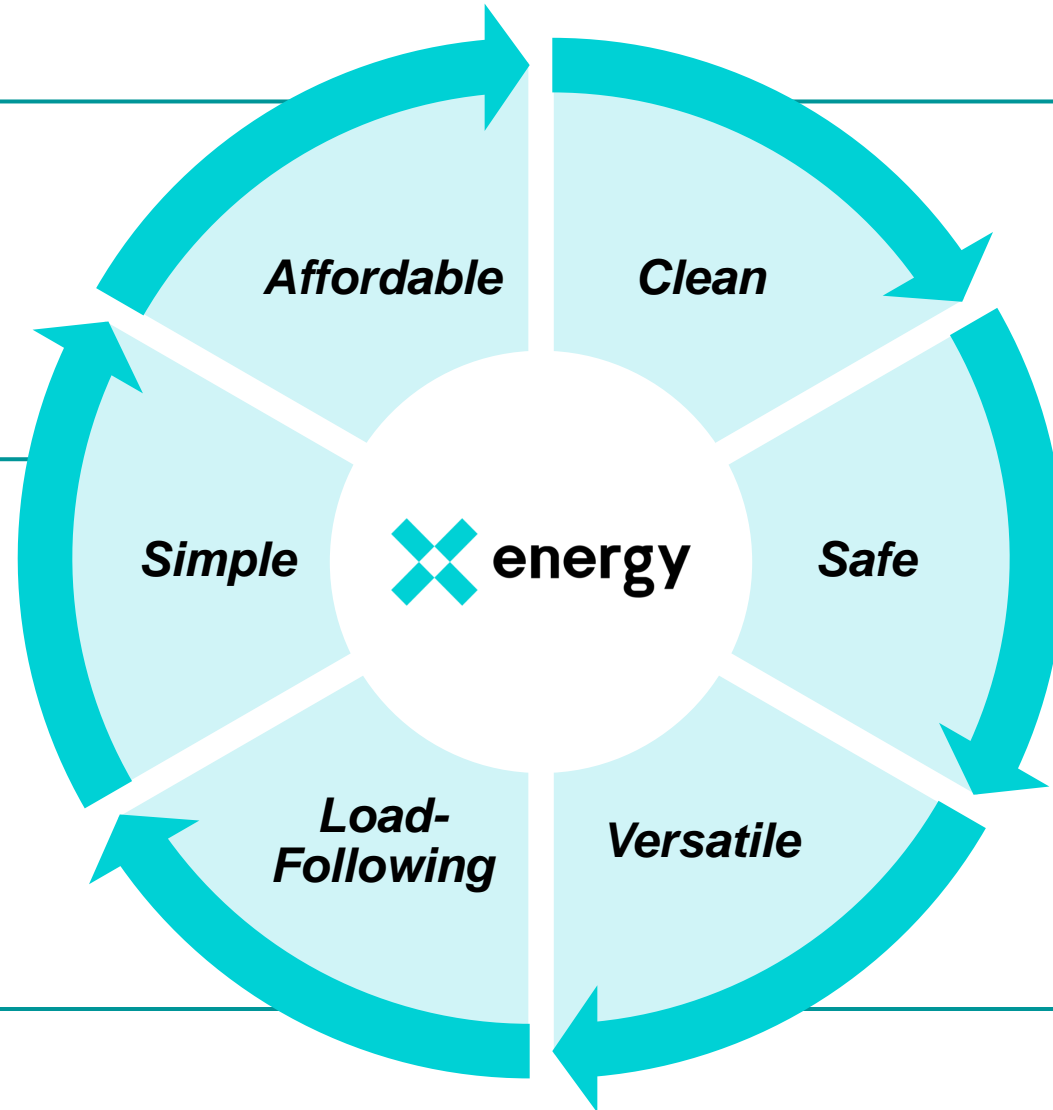
# X-energy is Building Advanced Nuclear Technology

# X-energy Is Advancing Nuclear Energy

Modular design and off-the-shelf components designed to drive **scalability, accelerated timelines and ability to manage construction cost** – revolutionizing the construction of nuclear reactors

Radically simpler design with **1/6th the safety systems of a traditional reactor**. Reduction of components enables predictability on costs. Modular components designed to be road-shipped and assembled on site

**Load-following capability can support intermittent solar and wind power generation**. The Xe-100 is designed to ramp up or ramp down between 40% and full power in 12 minutes



**Carbon-free, always-on** generation source capable of addressing the global need for clean energy

**TRISO-X fuel is designed not to melt**. X-energy plants are designed to be **meltdown proof** and are built to require no operator actions under adverse conditions

X-energy plants are designed to deliver heat at high temperatures (565°C), providing a **clean solution for various use cases, including critical industrial applications**

# X-energy & Gen IV SMRs are Key to the Energy Transition

X-energy's solution will outperform other energy sources on key criteria essential to decarbonization

	Fossil Fuels	Renewables (Solar & Wind)	Traditional Large-Scale Nuclear	SMRs <sup>(1)</sup>	
				Gen III+	energy / Gen IV
Carbon-Free Power	✗	✓	✓	✓	✓
Reliable Baseload Power	✓	✗	✓	✓	✓
Efficient Load Following	✓	✗	✗	✗	✓
Industrial Heat Use Case	✓	✗	✗	✗	✓
Emergency Planning Zone Within Site Boundary	--	--	✗	✓	✓ <sup>(3)</sup>
Fuel Safety	✗	✓	✗	✗	✓
Land Efficiency	✗/✓	✗	✓	✓	✓

Xe-100 is designed to ramp down to and up from 40% power in 12 minutes<sup>(2)</sup>

Xe-100 output steam expected to achieve temperatures well beyond Gen III+ SMRs

TRISO-X Fuel to be utilized in the Xe-100 is designed to be meltdown proof

Source: U.S. Department of Energy, U.S. Nuclear Regulatory Commission, Gen IV International Forum, Nuclear Innovation Alliance, Company websites

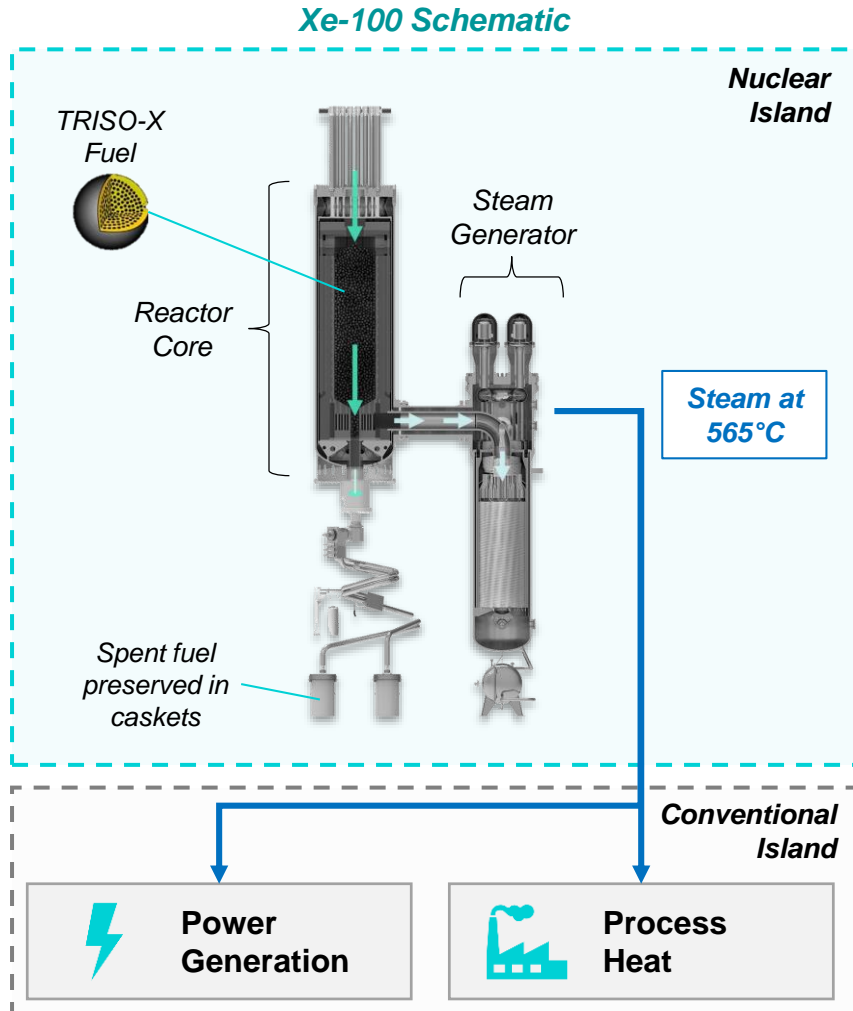
1) Advanced Small Modular Reactors ("SMRs")

2) The Xe-100 is designed to ramp up or ramp down faster than the existing technologies

3) EPZ is expected to match site boundary and is subject to approval by the NRC

# Xe-100 – A Pioneering Gen IV Nuclear Reactor

80 MWe modular design & manufactured components designed to drive scalability, accelerated timeline and cost control



## Modular & Standardized



- Each reactor module is connected to its own steam turbine generator or process heat offtake, so **modules can be constructed / operated independently, and even added as demand grows**
- Onsite work is reduced, and a significant portion of quality control is shifted to centralized fabrication & integration facilities

## Manufacturable, Road-Shippable Components



- Simpler, standardized design allows for **mass production of road-shippable components**
- In contrast, the complex design of traditional nuclear construction has required on-site construction

## Intrinsically Safe



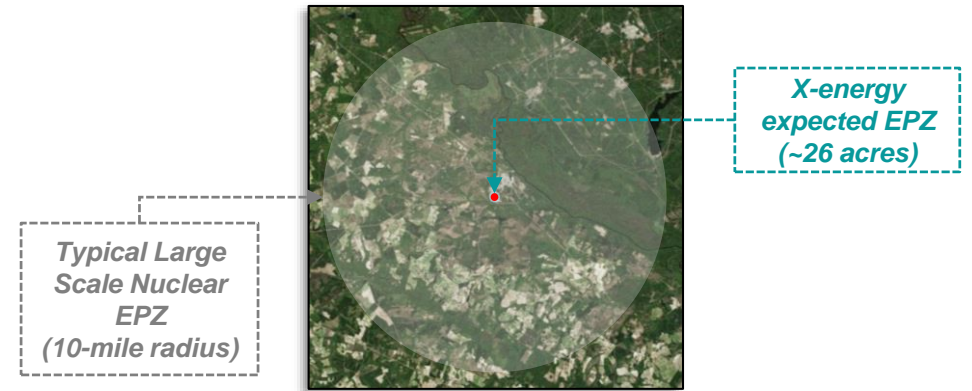
- **Xe-100 is designed to avoid the need for additional safety systems**
- Intrinsically safe design means **1/6th the safety systems of a traditional reactor** and fewer materials (e.g., ~95% less concrete than legacy nuclear plants)
- Simple control system with only 4 variables expected to allow for more automated operations & fewer personnel

# Xe-100 is Attractive Compared to Conventional Nuclear

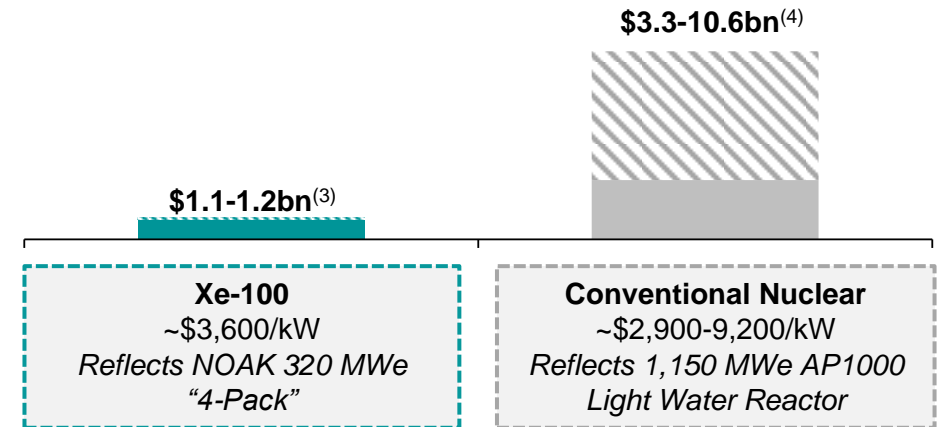
The Xe-100's lower capital costs, simplified operations and improved safety profile are a significant improvement over conventional nuclear

	Xe-100	Conventional Nuclear <sup>(1)</sup>
<b>Power</b>	320 MWe 4-Pack powers ~240k homes	~1,150 MWe powers ~900k homes
<b>Applications</b>	<ul style="list-style-type: none"> <li>• Baseload Power</li> <li>• Load-Following</li> <li>• Industrial-Grade Steam</li> </ul>	<ul style="list-style-type: none"> <li>• Baseload power</li> </ul>
<b>Refueling</b>	<ul style="list-style-type: none"> <li>• Fully-Automated Fuel Handling</li> <li>• Online Refueling</li> </ul>	Requires <u>shutdown</u> for refueling every 18 – 24 months
<b>Acreage</b>	26 acres	500 acres
<b>Construction Timeline</b>	3-4 Years	8-10+ Years
<b># of Site Employees</b>	~96 for Xe-100 four-pack (320 MWe) ~212 for three Xe-100 four-packs (960 MWe)	400
<b>Fuel</b>	High-assay low-enriched uranium (~15.5% enriched)	Low-enriched uranium (<5% enriched)
<b>Containment</b>	Containment is primarily provided by TRISO-X fuel	Large steel and concrete containment structure

## Site-Bounded Emergency Planning Zone ("EPZ")<sup>(2)</sup>



## Lower Capital Cost Makes Xe-100 More Accessible to Customers



1) Represents Westinghouse AP1000, the most recently constructed conventional nuclear plant in the U.S.

2) Represents illustrative location, not an actual Xe-100 location

3) Reflects management estimate for overnight costs of NOAK 320MWe "4-pack" of 80MWe units based on preliminary discussions with suppliers and current labor conditions

4) Source: MIT – Overnight Capital Cost of the Next AP1000 (March 2022); Reflects range of the expected cost of the 10<sup>th</sup> unit AP1000 constructed to the expected full cost of Plant Vogtle units 3 & 4 (the first Westinghouse AP1000 reactor units to be built in the U.S.)

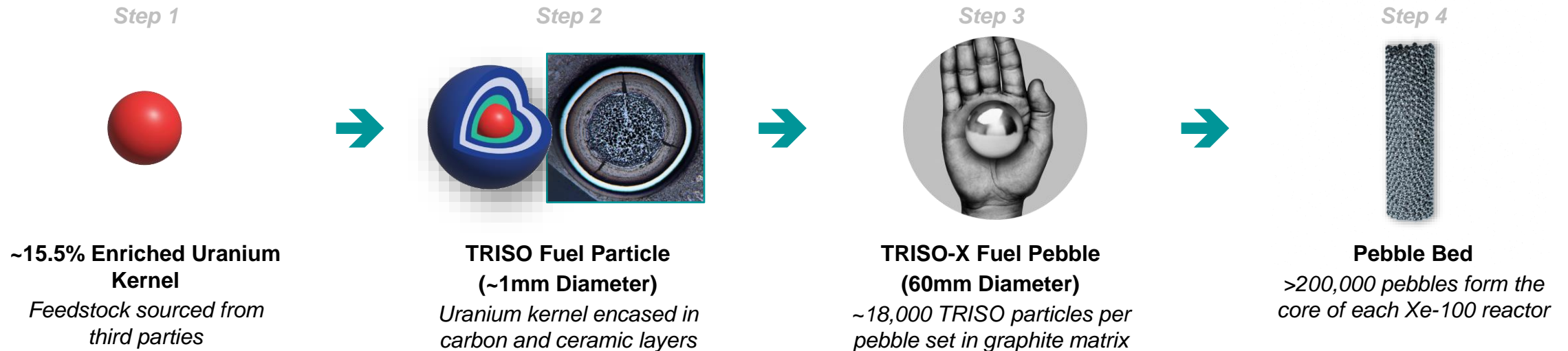
The Department of Energy describes TRISO fuel as “the most robust nuclear fuel on Earth”<sup>(1)</sup>

*It retains waste and fission products within the fuel during all foreseeable adverse conditions, even worst-case accidents, and it is designed not to melt*

- **X-energy manufactures its own proprietary TRISO encapsulated fuel (“TRISO-X”)** to ensure supply & quality control. TRISO Fuel has a 60+ year demonstrated track record through prototype and full-scale reactors
- HALEU-based fuel like TRISO-X increases burnup and efficiency, which decreases costs
- Because **TRISO-X Fuel IS a containment vessel and is designed not to melt**, the Xe-100 does not require large, expensive concrete & steel containment structures
- The low reactor power density and self-regulating core design means that if cooling stops, the core naturally shuts down. This **prevents the reactor from melting under foreseeable adverse conditions and requires no operator actions under such adverse conditions**

➔ **Physics, not mechanical systems, ensures safety**

## Fuel Process



1) Source: Office of Nuclear Energy – TRISO Particles: The Most Robust Nuclear Fuel on Earth (July 2019)

# North America's First Commercial Advanced Nuclear Fuel Fabrication Facility



Digital rendering of a TRISO Fuel Facility

## Proven Fuel Demonstration Facility



*X-energy TRISO-X Fuel Fabrication Pilot Facility at Oak Ridge National Laboratory*

### *X-energy's TRISO-X Pilot Facility has been operational since 2017*

- Features commercial scale singular process line for X-energy TRISO-X patented fuel manufacturing process
- X-energy's pilot facility employs the same techniques and technologies as those that will be used in the fuel facility being constructed in Tennessee
- NRC is familiar with process and has visited site to observe pilot manufacturing
- Presently producing kilogram batch quantities for commercial contracts, validating TRISO-X product and increasing demand

## Construction of Fuel Facility



*Groundbreaking for X-energy's TRISO-X facility in Oak Ridge, TN in October 2022*

### *North America's First Commercial Advanced Nuclear Fuel Fabrication Facility*

- Submitted Category II Fuel Fabrication Facility safety related application to NRC in April 2022 and the environmental report in September 2022. In November 2022, the NRC docketed and accepted the application for review
  - DOE supported to sign and submit NRC application for fuel facility
- Final Fuel Facility Equipment Design Layout anticipated to be complete by Q4 2022
- The Fuel Fabrication Facility is designed to handle up to 16 metric tons of uranium per year once fully built-out
  - Installment of production capacity to be staged according to demand and optimal capital allocation

# Versatility Creates Opportunity for New Nuclear Applications

X-energy is targeting end-markets beyond just conventional power generation to satisfy diverse decarbonization needs



**Conventional  
Power  
Generation**



**High-Temperature  
Steam for  
Industrial Use**



**Replace &  
Re-Use Legacy  
Coal Sites**



**Canadian Oil Sands  
Decarbonization**



**Clean  
Hydrogen  
Production**



**Critical 24/7  
Data Center  
Power**



**24/7 Power for  
Remote Sites  
*Xe-1 Mobile***



**Load Following to  
Complement  
Renewable Use**

Xe-100 could enable bespoke solutions for the world's most challenging decarbonization efforts

## Repurposes Coal Facilities



*DOE identified ~315 operating and retired coal plant sites (~260 GWe) in 2022 as candidates for a coal-to-nuclear transition*

- Nuclear overnight costs could decrease by ~15-35% vs. greenfield construction projects through reuse of coal facility infrastructure
- Potential to increase regional economic activity by up to \$275 million and add hundreds of permanent jobs to the region while decreasing greenhouse gas emissions by 80%+

## Supports Industrial Applications



*X-energy can provide cost-competitive, carbon-free process heat and power to industrial facilities*

- Transportation and industry comprise >50% of US emissions, 2x that of the electricity grid

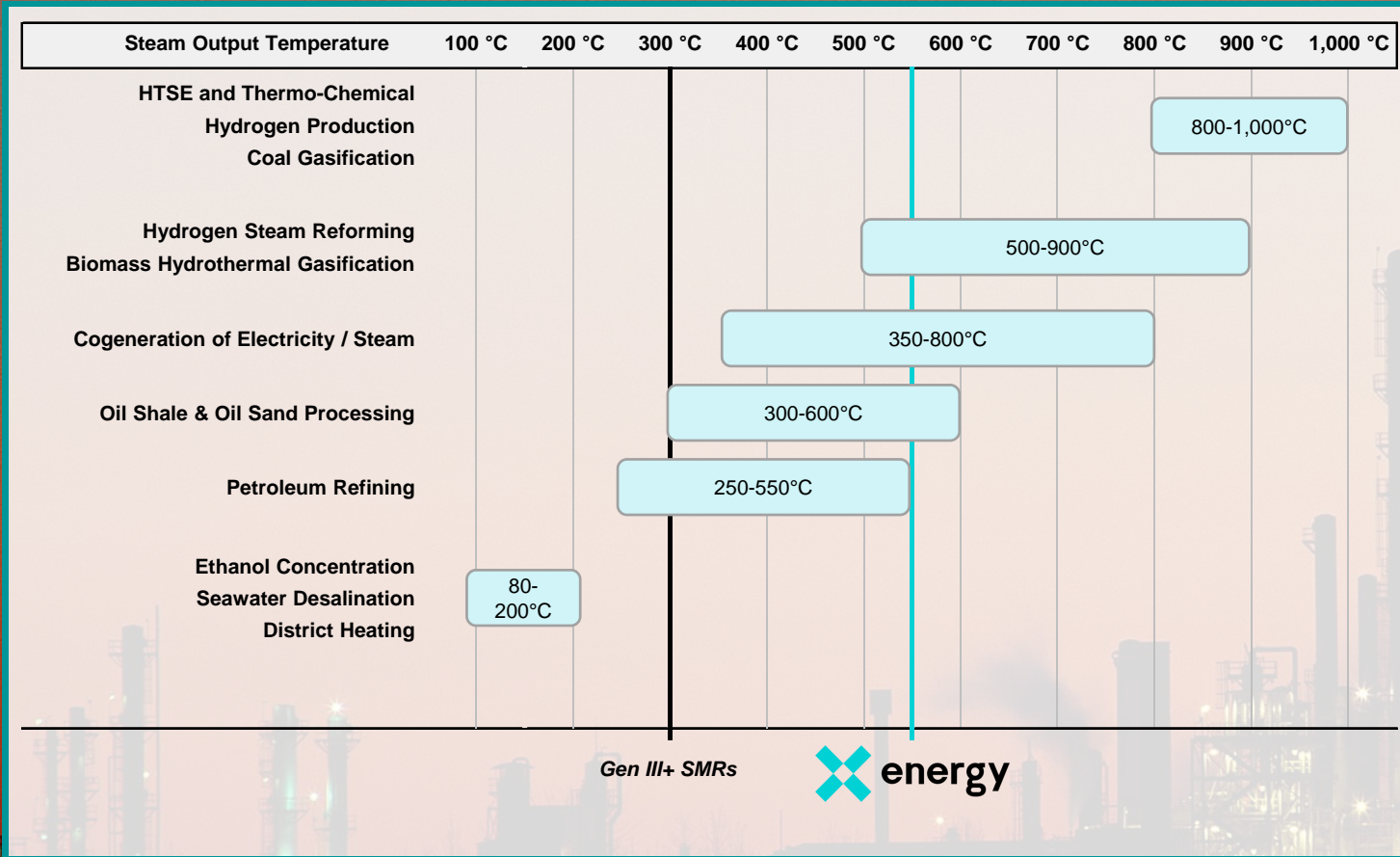
## Enables Clean Hydrogen Production



*X-energy can provide clean electricity to power Hydrogen Hubs*

- Hydrogen has the potential to become one of the principal fuels in a low-carbon economy, but it is highly energy intensive to produce
- Compared to the intermittent sources of wind and solar energy, the Xe-100 can provide a reliable source of energy to power the production of pink hydrogen

# X-energy's Thermal Output is Well Positioned to Satisfy Most Industrial Applications



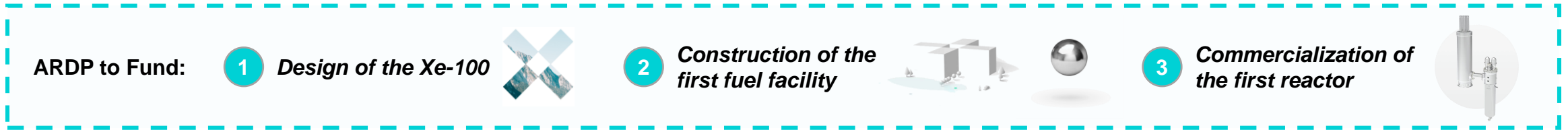
“[High Temperature Gas-Cooled Reactors] have the most market potential for supplying industrial heat applications”

— **BREAKTHROUGH**  
INSTITUTE

Source: Steam output temperatures based on respective SMR technology and selected public company disclosure

# Competitive Position Reinforced by \$1.2 Billion ARDP Grant

X-energy's selection for the DOE's Advanced Reactor Demonstration Program represents a critical advantage over other competitors



## What ARDP Selection Means to X-energy

*In December 2020, X-energy, in collaboration with Energy Northwest, was selected to receive \$1.2bn in funding to deliver a first-of-a-kind commercial advanced nuclear plant and TRISO-X fuel fabrication facility*

- ✓ Recognition from the DOE as an advanced reactor technology of choice (one of two demonstration awards out of many applicants)
- ✓ Funds all remaining design, licensing, commercialization and construction of the first-of-a-kind reactor as a 50% DOE cost share<sup>(2)</sup>
- ✓ Secures first customer deployment
- ✓ Strengthens DOE's support of the advancement of TRISO fuel

*In May 2020, the DOE announced the ARDP to accelerate the development of advanced nuclear reactors through cost-share partnerships, believing that advanced nuclear energy systems hold enormous potential to lower emissions, create new jobs and build a stronger economy*

## Energy Northwest Project Overview

- Energy Northwest, Grant County Public Utility District (“GCPUD”) and X-energy have signed a memorandum of understanding establishing a mutual partnership to build 4 Xe-100 reactors totaling 320 MWe, which the parties expect to be commercially operational in 2029<sup>(1)</sup>
- Driven by Washington’s Clean Energy Transformation Act, which commits the state to an electricity supply free of greenhouse gas emissions by 2045, Energy Northwest and GCPUD are seeking new sources of reliable, affordable and emissions-free electricity
  - GCPUD is an investment-grade entity and a member utility of Energy Northwest, a public power joint operating agency in Washington state
- GCPUD also benefits from the 50% cost share provided by the U.S. Department of Energy<sup>(1)</sup>

*Note: Commercialization assumes regulatory permitting approvals have been obtained to permit construction of a facility as projected. The regulatory permitting process, including necessary NRC approvals and licensing, is a lengthy, complex process and projected timelines could vary materially from the actual time necessary to obtain all the required approvals. While there is some possibility of an expedited approval process for SMR technology, there is presently no clear path for expedited permitting*

<sup>1)</sup> In negotiation with Grant County PUD, but exact utility under Energy Northwest agreement is still being determined

<sup>2)</sup> In November 2021, President Biden signed into law the Infrastructure Investment and Jobs Act, which included \$2.5bn of appropriated funding for ARDP

Industry leaders in both power generation and industrial applications recognize the Xe-100's ability to facilitate decarbonization

## ONTARIOPOWER GENERATION

*OPG is the third largest utility in Canada and one of the largest, most diverse power producers in North America*

- ❖ On July 12, 2022, OPG and X-energy signed a framework agreement to deploy Xe-100 reactors for industrial applications in Canada
- ❖ OPG is the first utility to announce intention to promote application of SMR's to industrial heat applications
- ❖ The Xe-100 can directly support heavy industry including oil sands operations, mining applications, and other industrial processes



*Dow is one of the world's largest diversified chemical manufacturing companies*

- ❖ On August 9, 2022, Dow signed an LOI to build the Xe-100 to provide cost-competitive, carbon free process heat and power to a Dow facility in the Gulf Coast by approximately 2030
- ❖ Dow is the first industrial manufacturer to announce intention to deploy SMR technology options
- ❖ The announcement marks an additional step in Dow's efforts to deliver 30% reduction in scope 1 and 2 carbon emissions since 2005 by 2030, on its path to achieving carbon neutrality by 2050

**In addition to the agreements above, both OPG & Dow have invested in X-energy**

X-energy's current pipeline represents 30+ estimated opportunities across a variety of use cases and geographies

### Tier I – Advanced Partnerships

*In active negotiations with five parties, each with unique use cases*



Signed MOU to support the **development and commercial demonstration** of the country's first advanced nuclear reactor



Signed LOI to build the Xe-100 for **process heat and power** at one of Dow's Gulf Coast facilities



Signed framework agreement to **deploy Xe-100s at industrial sites** in Ontario and throughout Canada

**Confidential European Utility**

Looking to **replace legacy (Generation II) nuclear assets**

**Confidential U.S. Utility**

Focused on meeting **site demand needs and modular scalability** over time

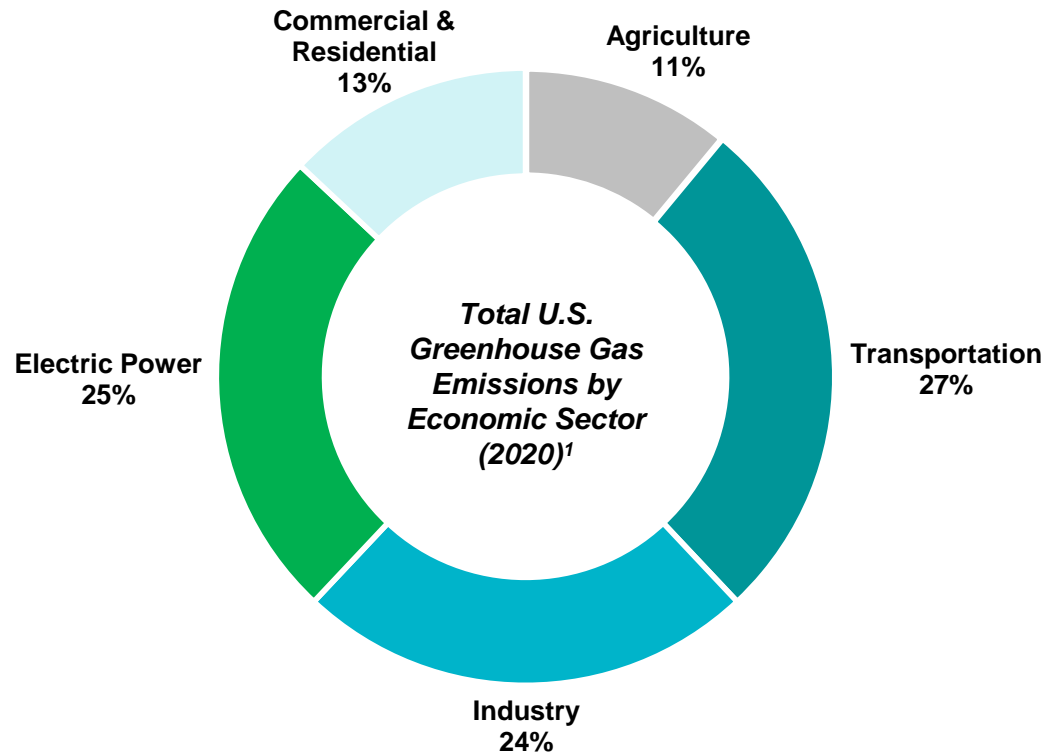
Classification		Potential Customers	Proposed Use Cases	Customer Geography
<b>Tier I</b>	<b>Advanced Partnerships</b> <i>In negotiations with five parties, each with unique use cases</i>	<b>5 Parties</b>	Electricity Industrial Heat Coal Replacement Hydrogen Mining Data Center	   
<b>Tier II</b>	<b>Actively Engaged</b> <i>In discussions on potential project specifications</i>	<b>7 Parties</b>		
<b>Tier III</b>	<b>Early Discussions</b> <i>Pursuing customer with multiple conversations to assess the Xe-100 as a decarbonization solution</i>	<b>22 Parties</b>		

**30+ Parties**

# Market Overview

# Global Macro Themes Drive Support for Nuclear

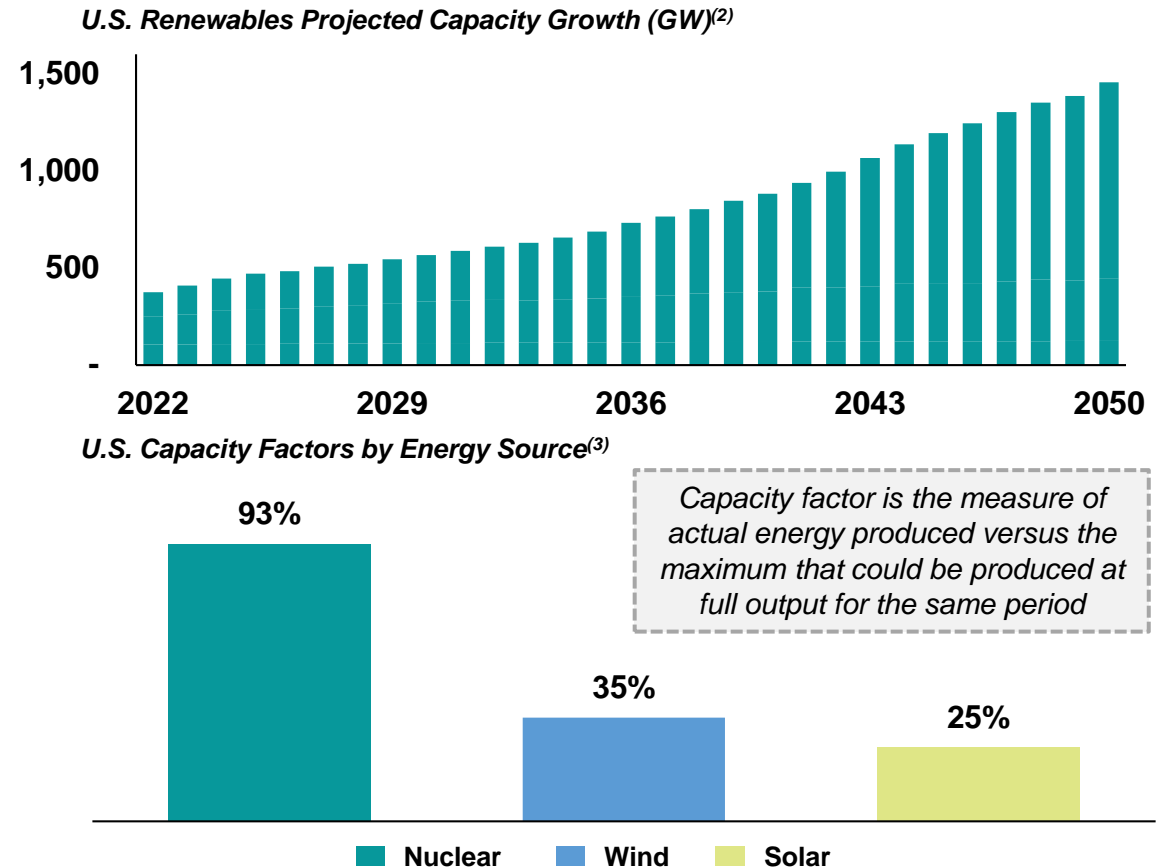
## Nuclear Can Support Decarbonization Beyond Electric Power<sup>(1)</sup>



**Nuclear reactors provide broad opportunities to significantly contribute to the decarbonization of the economy**

1) EPA – Sources of Greenhouse Gas Emissions (August 2022)  
 2) BNEF – U.S. Projected Capacity Growth as of November 1<sup>st</sup>, 2022  
 3) U.S. Energy Information Administration – Capacity Factors for Utility Scale Generators Primarily Using Non-Fossil Fuels

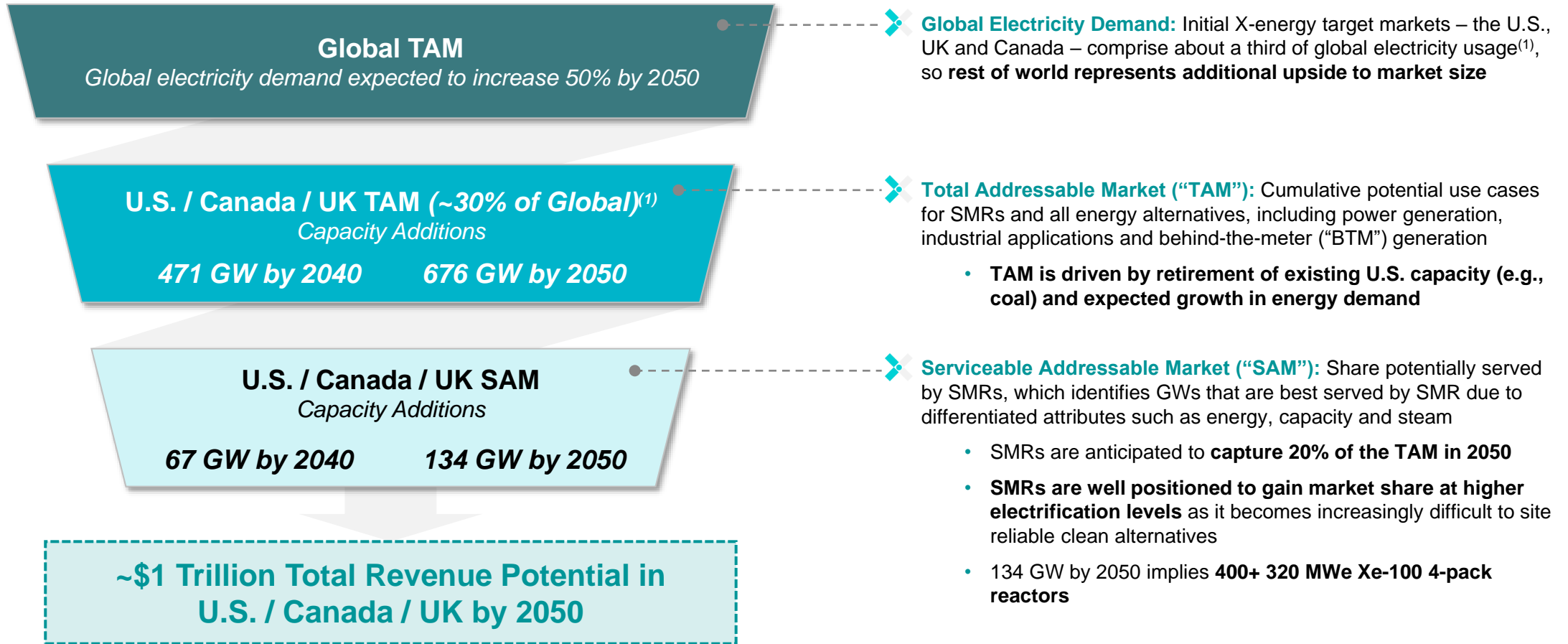
## Clean Nuclear Baseload Power Complements Intermittent Renewables



**Nuclear can fill the void and support high grid reliability as more renewables are added to the grid to replace fossil fuel retirements**

# Clean Energy Transition Drives Market Opportunity

X-energy is well positioned to address the potential ~\$1 trillion market for SMRs in the United States, Canada and UK alone



Source: PA Consulting; EIA

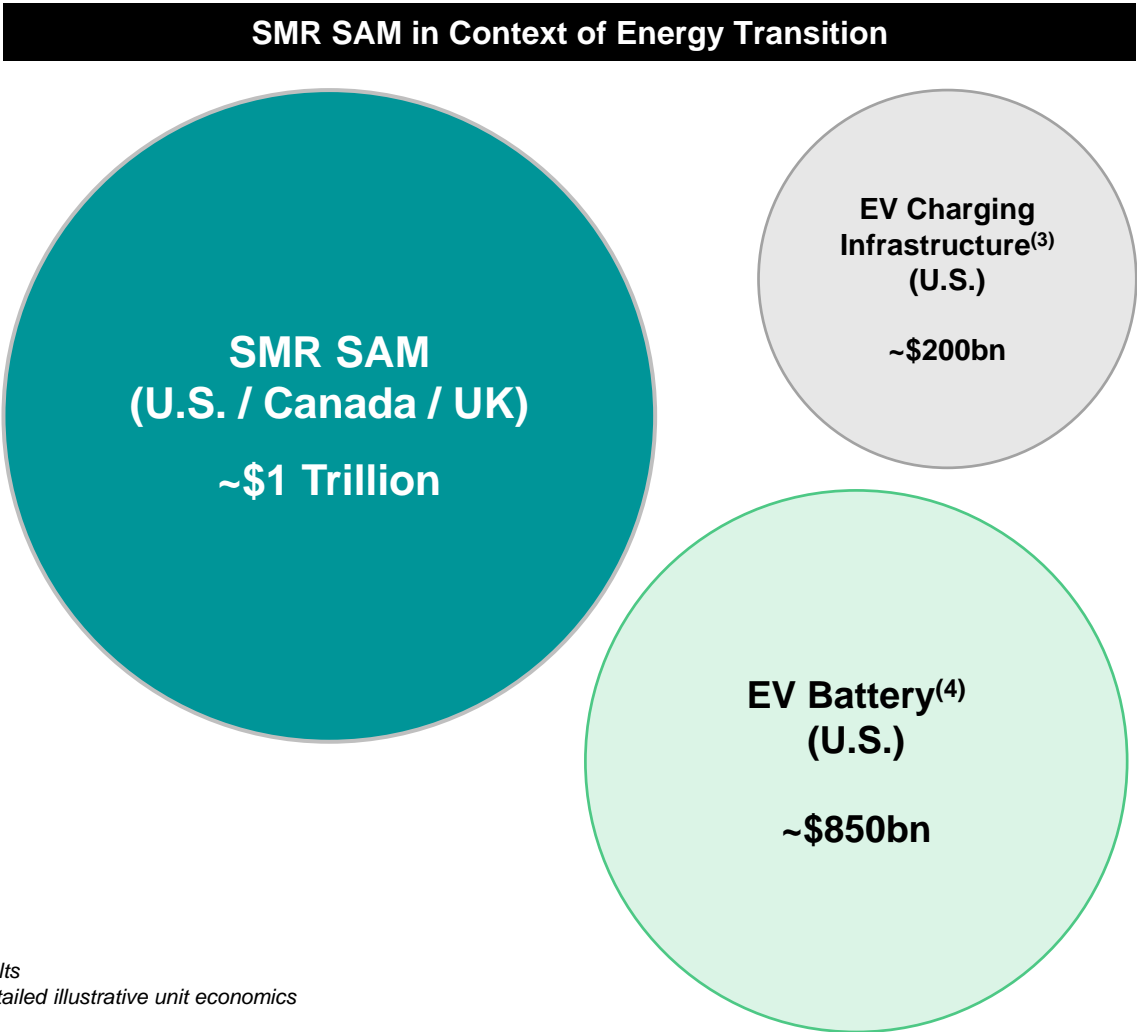
Note: GW values are in derated terms and will be higher in nameplate terms; Canada is extrapolated from Ontario and Alberta results

1) Global electricity usage does not include demand from China, Iran, North Korea, Russia, Syria and Venezuela

# Need for New Capacity Creates Significant Revenue Opportunity

Energy transition provides significant SAM opportunity, driven by the enhanced safety, energy security and reliability of SMRs

Illustrative Estimate of X-energy's Market Opportunity		
	2040E	2050E
U.S. / Canada / UK SAM	67 GW = 67,000 MW	134 GW = 134,000 MW
	÷	
Xe-100 4-Pack of 80 MWe Reactors	320MWe	
	×	
Illustrative Lifetime Revenue of Xe-100 4-Pack <sup>(1)</sup>	~\$2.0 – ~2.5bn	
	=	
SAM Revenue Opportunity <sup>(2)</sup>	~\$500bn by 2040	~\$1 Trillion by 2050



Source: PA Consulting

Note: GW values are in derated terms and will be higher in nameplate terms; Canada is extrapolated from Ontario and Alberta results

1) Illustrative 4-pack of Xe-100s (320MWe) economics assume NOAK status achieved and 60-year life of plant; see pg.37 for detailed illustrative unit economics

2) Based upon midpoint of the illustrative lifetime revenue of Xe-100 4-pack; see page 38 for illustrative revenue estimates

3) Based upon BNEF's estimates of cumulative investment into U.S. electric vehicle charging infrastructure by 2040

4) Based upon BNEF's estimates of cumulative U.S. electric vehicle sales by 2040; battery opportunity assumes 70 kWh pack sizes and \$85 / kWh

# Policymakers Recognize the Importance of Nuclear to Address the Global Need for Clean Power

## United States

I have **long supported** the commercialization of **advanced nuclear technologies** as a **zero-emission source of baseload energy**.



Senator Joe Manchin (D-WV) (2021)



It can't be done with **wind and solar alone**. We have to be a country that steps up and says **it has to be...new advanced nuclear energy**.



Senator Cory Booker (D-NJ) (2019)



**Nuclear energy is a very clean, very reliable way to generate energy safely** - as we do every single day in this country in multiple sites.



Senator Marco Rubio (R-FL) (2022)



**Nuclear has to be part of the array of clean energy technologies**, zero-carbon emitting baseload power.



Jennifer Granholm, U.S. DOE Secretary (2022)

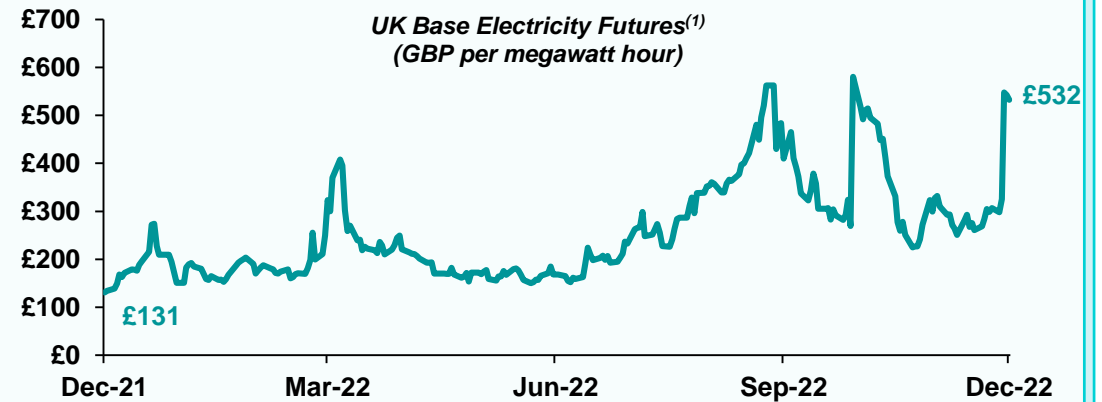


**Billions** allocated to nuclear in **every recent significant energy-related legislation** (e.g., Inflation Reduction Act, Infrastructure Act) with **strong bipartisan support** under both Republican and Democratic Presidential Administrations

## International

Nuclear is the only form of reliable, low carbon electricity generation which has been proven at scale and returns more than a hundred times as much power as a solar site of the same size. **We can only secure a big enough baseload of reliable power for our island by drawing on nuclear.**

British Energy Security Strategy (2022)



**Nuclear Energy** – as a **non-emitting source of energy** – is **critical** to the achievement of Canada's and the world's climate goals.



Jonathan Wilkinson, Natural Resources Minister (CNA) (2022)



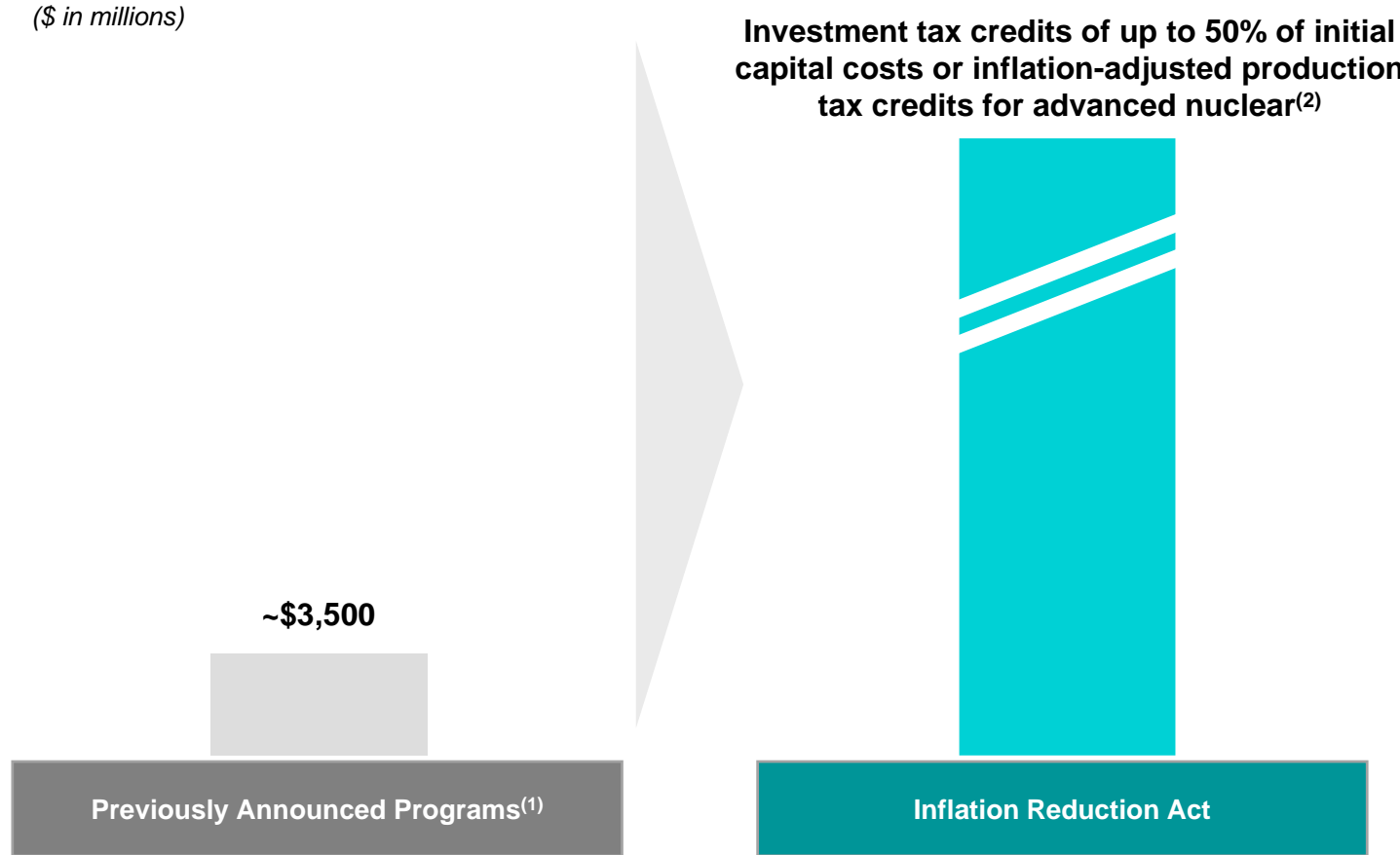
1) FactSet as of December 2, 2022

# Inflation Reduction Act Represents a Significant Increase in U.S. Government Support for the Advanced Nuclear Industry

New U.S. government support will meaningfully accelerate the deployment of advanced nuclear reactors

## U.S. Government Funding for Advanced Nuclear

(\$ in millions)



- ✓ Inflation Reduction Act's Investment Tax Credit and Production Tax Credit represent a meaningful increase in government support for advanced nuclear. Investment tax credits can equal up to **50% of initial capital cost**
- ✓ **\$700mm** has been slated in appropriations to support the availability of HALEU nuclear fuel for research, development and demonstration
- ✓ The IRA has increased the DOE's loan guarantee program to **\$250bn**, which could be applicable to certain advanced nuclear projects

### Case Study: Solar Industry Demonstrates Tax Credit Impact

Since the solar Investment Tax Credit was enacted in 2006, the U.S. solar industry has grown by more than 200x<sup>(3)</sup>

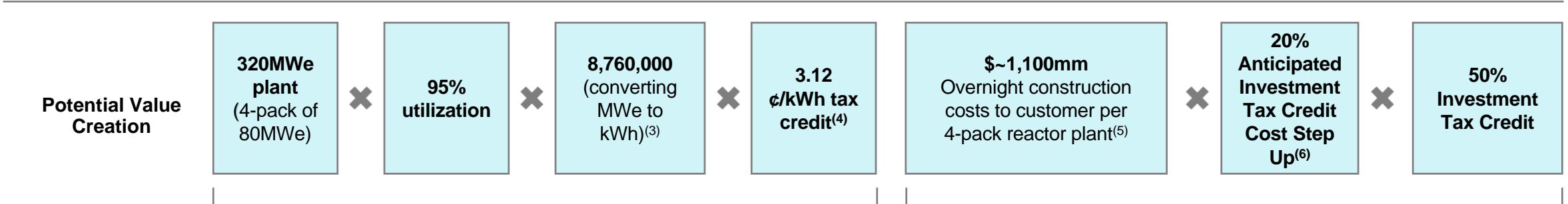
1) Includes Research Funding (i.e., average annual research funding for advanced nuclear since 2009 according to DOE) of \$66mm, Project Pele of \$40mm, HALEU Demonstration program of \$170mm and ARDP of \$3.2bn  
 2) Inflation Reduction Act includes \$700mm to support HALEU and also provides our customers the option of electing either the Investment Tax Credit or the Production Tax Credit (see next page for additional detail)  
 3) Source: Solar Energy Industries Association – Solar Investment Tax Credit (August 2022)

# IRA Provides Significant Support for SMR Deployment

Up to \$830mm in tax credits per 4-pack reactor fundamentally enhances SMR economics for customers

	Clean Electricity Production Tax Credit <sup>(1)</sup> (\$ 45Y)	Clean Electricity Investment Tax Credit <sup>(2)</sup> (\$ 48E)
Per Customer Benefit	Up to <u>~\$83 million</u> potential tax credits to customer per 4-pack reactor per year for 10 years, adjusting each year for inflation	Up to <u>~\$660 million</u> potential tax credits to customer per 4-pack reactor <u>total</u> , claimed in the year when the plant is placed in service

Customers will have the option to select the Production Tax Credit or the Investment Tax Credit depending on which is most advantageous



## How it Works

Tax credit of 1.5¢/kWh adjusted annually for inflation (2.6¢/kWh in 2022) of electricity produced and sold for 10 years of electricity production

- + 10% boost if reactor is in an "energy community" (e.g. former coal mine or brownfield site)
- + 10% boost if reactor constructed with domestic iron and steel (or an exception applies) and minimum percentage of domestic manufactured products

= **3.12 ¢/kWh total credit**

Tax credit of 30% of the initial capital cost in a facility

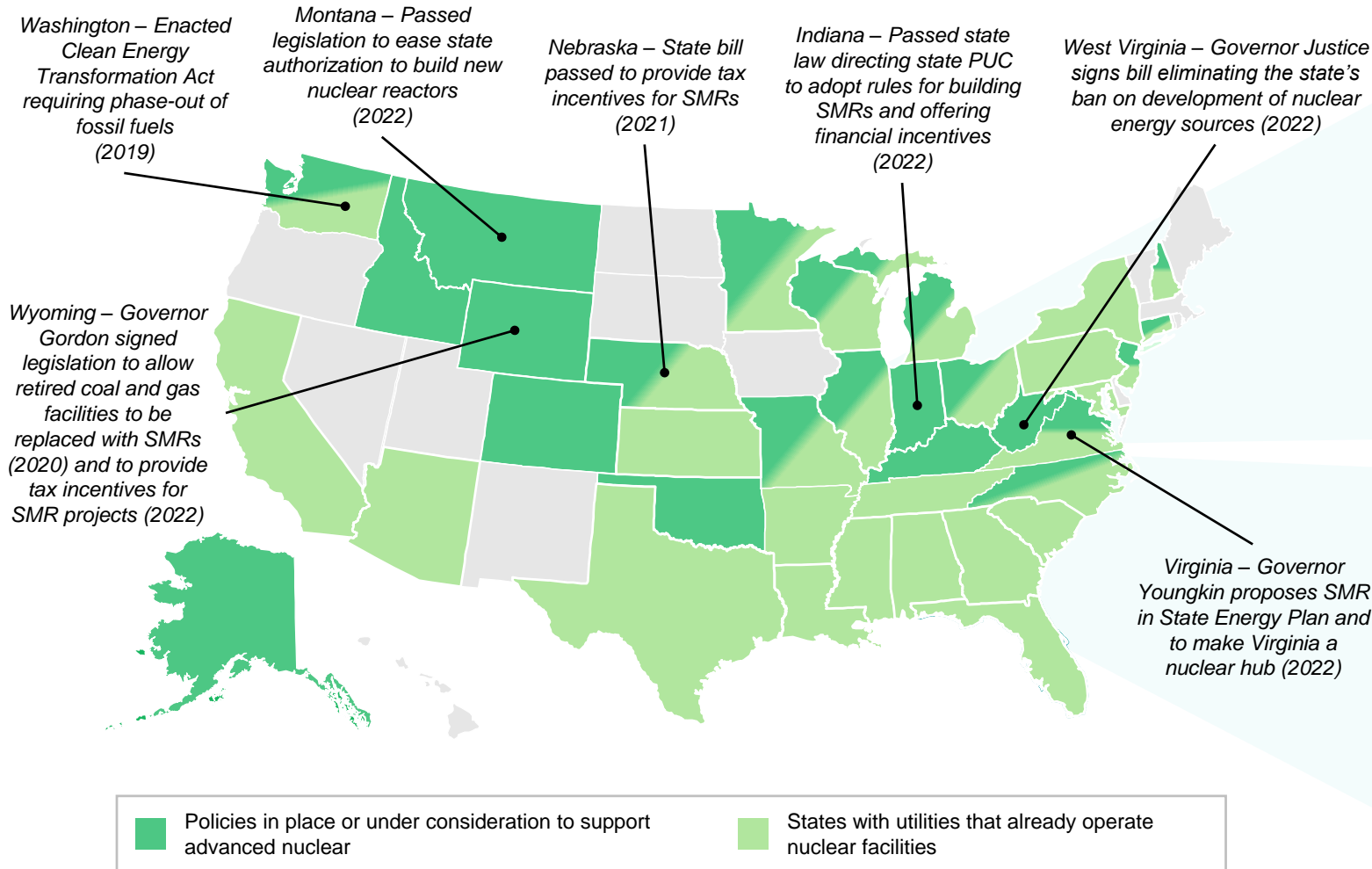
- + 10% boost if reactor is in an "energy community" (e.g. former coal mine or brownfield site)
- + 10% boost if reactor constructed with domestic iron and steel (or an exception applies) and a minimum of 40% domestic manufactured product

= **up to 50% tax credit on upfront capital costs**

Note: See end note for key assumptions

# Support for Nuclear Continues to Gain Momentum

Majority of states either already have nuclear facilities or are supportive of adopting SMR development




## Inflation Reduction Act

Investment / Production Tax Credits  
\$700mm HALEU Support




## Advanced Reactor Demonstration Program

Additional \$2.5 billion from the Bipartisan Infrastructure Law



U.S. DEPARTMENT OF

# ENERGY

Source: PA Consulting (October 2022)

## We are a frontrunner in the deployment of advanced reactors

The Company is pursuing a **well-established, risk-informed licensing process** in the U.S., pursuant to regulations at 10 C.F.R. Part 50, that has been used by more than 100 reactors (including nearly all currently licensed reactors), and the design review process in Canada, each to enable an efficient and timely evaluation of the design

- This approach enables X-energy to seek approval efficiently for its advanced reactor design in the U.S. within the existing regulatory framework
- The NRC has familiarity with high temperature gas cooled reactors from the Next Generation Nuclear Plant project and ongoing advanced reactor activities

Industry leading licensing team of **15 professionals** in continuous engagement with the NRC, facilitated by our close proximity to the NRC in Rockville, MD

Topical reports address aspects of the Xe-100 that may be new or different for the agency. Submitting reports early in the process is meant to increase the overall efficiency of the licensing process

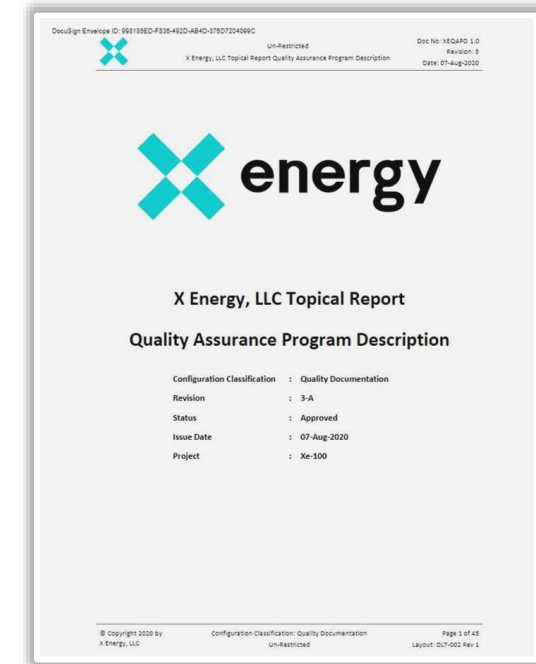
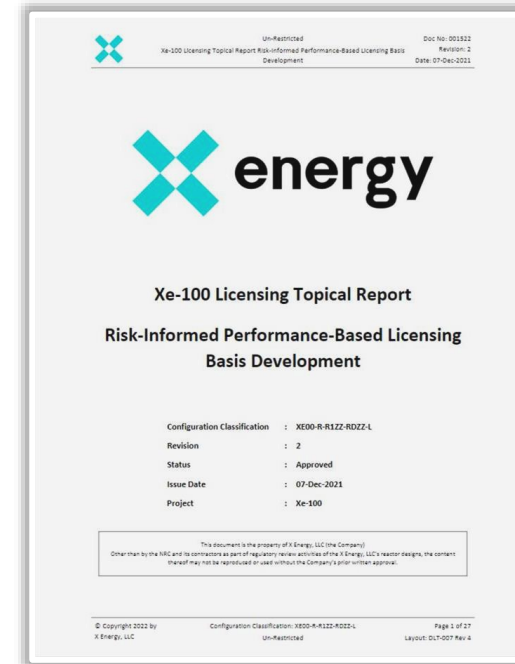
- Once the NRC has approved a topical report, it can be relied upon in a plant-specific licensing action (subject to applicability)

### Key NRC Milestones

**Q2 2022:** X-energy submitted first ever Category II Fuel Fabrication facility license application to the NRC

**Submitted 7 topical reports and 7 white papers to the NRC to date**

### Example Topical Reports



# Financial Summary

# Capex light, Services-Driven Business Model Drives Attractive Financial Metrics

		Project Services	Description
Reactors		Licensing Fee Assembly & Construction	<ul style="list-style-type: none"> <li>Licensing fees for use of <b>proprietary Xe-100 technology</b></li> <li>X-energy to coordinate assembly &amp; construction support with customers and 3<sup>rd</sup> party vendors                             <ul style="list-style-type: none"> <li>X-energy is <b>not anticipated to hold inventory</b> associated with assembly &amp; construction</li> </ul> </li> </ul>
Services		Project Planning Regulatory Support Procurement Support Ongoing Long-Term Services	<ul style="list-style-type: none"> <li>With knowledge and expertise on licensing, construction, procurement and other processes, X-energy intends to provide customers with a <b>full suite of value-added services</b> during development of the reactor</li> <li>Expected to generate <b>long-term recurring revenue streams</b> (including ongoing maintenance, operator training, etc.) through the 60+ year life of a facility</li> </ul>
Fuel		Initial Fuel Load Annual Refueling	<ul style="list-style-type: none"> <li>X-energy to provide customers with initial fuel load and intends to also generate <b>additional long-term recurring revenue streams</b> from TRISO-X required to refuel plants for the 60+ year life of a facility</li> <li>X-energy <b>does not intend to bear any inventory risk</b> associated with uranium or fuel and instead provides services for customers</li> <li>X-energy has <b>no responsibility</b> for management of <b>spent fuel</b></li> </ul>

# Illustrative Unit Economics: Xe-100 4-Pack (320MWe)

Category	Estimated Gross Margin	Cash Revenue		Timing									
		FOAK	NOAK <sup>(1)</sup>	T-6	T-5	T-4	T-3	T-2	T-1	COD	T+1	→ LT	
<b>Xe-100</b>													
Licensing Fees	100%	\$75mm	\$250mm		20%	20%						60%	
Assembly & Construction <sup>(2)</sup>	0-10%	\$700-750mm	\$550-600mm			25%	25%	25%	25%				
<b>Fuel</b>													
Initial Load	5-10%	\$45-50mm	\$45-50mm								100%		
Refueling	~15%	~\$10mm / Yr.	~\$10mm / Yr. (~\$600mm Over Life of Plant)										
<b>Services</b>													
Project Planning	~25%	~\$10mm / Yr.	~\$10mm / Yr.										
Regulatory & Procurement Support	15-20%	~\$150mm / Yr.	~\$125mm / Yr.										
Commissioning Support	60-70%	\$90-100mm	\$80-90mm								100%		
Long-Term Services	~20%	~\$7mm / Yr.	\$4-5mm / Yr. (\$240-300mm Over Life of Plant)										

Note: Assumes 60-year life of plant

1) Model assumes X-energy achieves NOAK status after 25 reactors are put into commercial operation

2) Assumes assembly and construction delivered at cost initially. Gross margins rise to +10% over time as X-energy realizes efficiency gains in assembly and construction processes

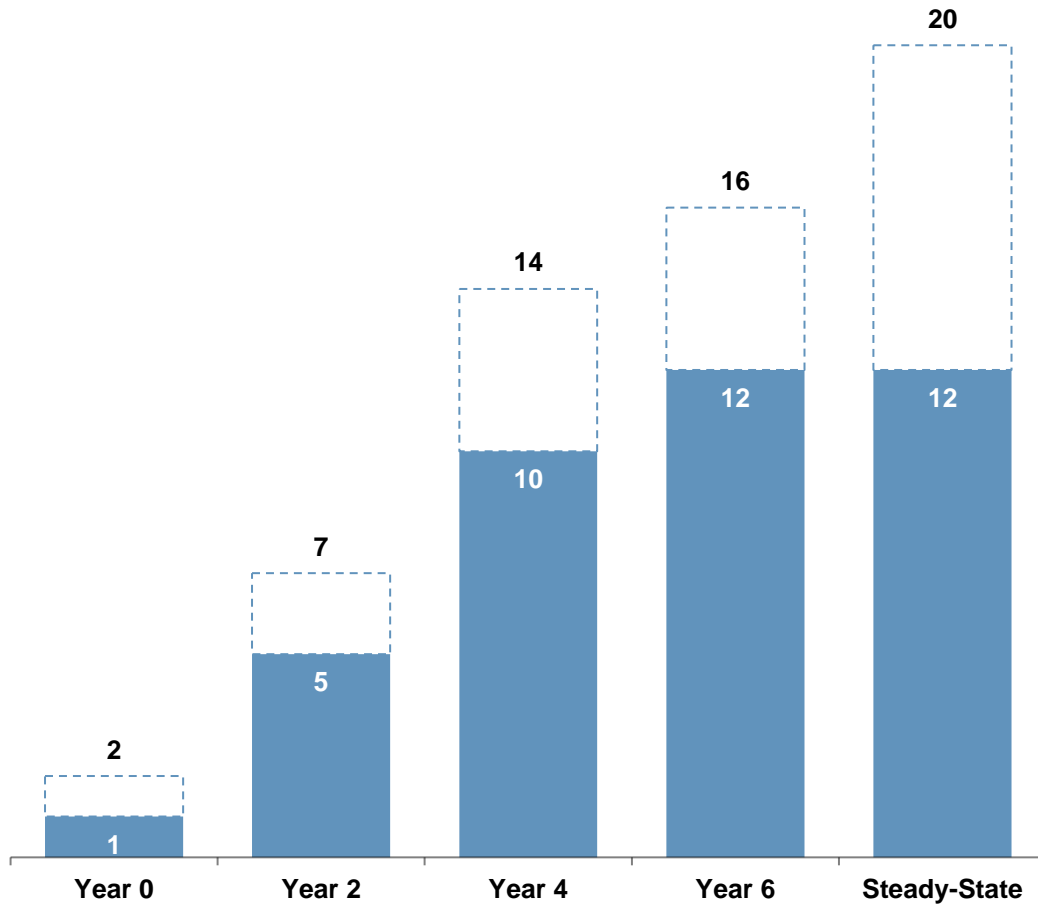
# Illustrative Unit Economics: Xe-100 4-Pack (320MWe) (Cont'd)

ILLUSTRATIVE 4-PACK REACTOR (320MWe) ECONOMICS										60-Year Life
(\$USD in millions)	T-6	T-5	T-4	T-3	T-2	T-1	COD	T+1	→ LT	of Plant
Licensing Fee	-	\$50	\$50	-	-	-	-	\$150	-	\$250
Assembly and Construction	-	-	144	144	144	144	-	-	-	575
Fuel	-	-	-	-	-	-	58	10	580	648
Services	10	10	125	125	125	125	90	5	261	875
<b>Revenue</b>	<b>\$10</b>	<b>\$60</b>	<b>\$319</b>	<b>\$269</b>	<b>\$269</b>	<b>\$269</b>	<b>\$147</b>	<b>\$165</b>	<b>\$841</b>	<b>\$2,348</b>
Licensing Fee	-	\$50	\$50	-	-	-	-	\$150	-	250
% Gross Margin		100%	100%					100%		100%
Assembly and Construction	-	-	7	7	7	7	-	-	-	29
% Gross Margin			5%	5%	5%	5%				5%
Fuel	-	-	-	-	-	-	5	2	87	94
% Gross Margin							9%	15%	15%	14%
Services	3	3	22	22	22	22	56	1	52	202
% Gross Margin	25%	25%	18%	18%	18%	18%	63%	20%	20%	23%
<b>Gross Profit</b>	<b>\$3</b>	<b>\$53</b>	<b>\$79</b>	<b>\$29</b>	<b>\$29</b>	<b>\$29</b>	<b>\$61</b>	<b>\$152</b>	<b>\$139</b>	<b>\$574</b>
% Gross Margin	25%	88%	25%	11%	11%	11%	42%	93%	17%	24%

Note: Illustrative 4-pack of Xe-100s (320 MWe) economics assume mid-point of estimated gross margins and cash revenues, NOAK status achieved and 60-year life of plant

# Delivery Schedule & Other Key Assumptions

## COD Schedule Range<sup>(1)</sup>



## Other Key Assumptions

ARDP	<ul style="list-style-type: none"> <li>Cash from ARDP cost share program is treated as revenue, with the Company expecting to recognize ~\$2bn of revenue (80-85% of direct costs) from 2023 through 2027, split ~\$1.2bn of government funding and the remaining revenue assumed to come from our utility partner<sup>(2)</sup> <ul style="list-style-type: none"> <li>Upon completion of ARDP, X-energy is expected to have finished (i) the design &amp; licensing of the Xe-100, (ii) the assembly &amp; construction of the first 4-pack Xe-100 reactor and (iii) the construction of the 16 MTU Fuel Fabrication Facility (build out of production capacity to be staged according to demand and optimal capital allocation)</li> <li>Approximately 50-55% of ARDP revenue and ~55% of direct costs to be recognized between 2023 and 2024</li> </ul> </li> </ul>
Capital Expenditures	<ul style="list-style-type: none"> <li><b>Fuel Fabrication Facility: \$50-60mm per 8 MTU expansion</b> <ul style="list-style-type: none"> <li>Expansion requires approximately 2 years lead time</li> <li>Each Xe-100 x4 requires ~6.2 MTU for initial load and ~1.8 MTU per year thereafter</li> </ul> </li> <li><b>Annual maintenance of \$5-10mm per 8 MTU plant</b></li> </ul>
Other	<ul style="list-style-type: none"> <li><b>Free cash flow breakeven estimated to be achieved upon receiving pre-COD revenue related to the first 1-3 Xe-100 4-pack commercial sales<sup>(3)</sup></b></li> <li><b>SG&amp;A greater of \$65mm per year or 1.25% of total revenue</b></li> </ul>

Note: Commercialization assumes regulatory permitting approvals have been obtained to permit construction of a facility as projected. The regulatory permitting process, including necessary NRC approvals and licensing, is a lengthy, complex process and projected timelines could vary materially from the actual time necessary to obtain all the required approvals. While there is some possibility of an expedited approval process for SMR technology, there is presently no clear path for expedited permitting

1) Represents COD schedule range for a 4-pack of Xe-100s (320 MWe)

2) Terms of cost sharing agreement subject to ongoing negotiations with X-energy's utility partner

3) Excluding the Advanced Reactor Demonstration Program

# Transaction Overview

## Summary

- Pre-money equity value of **\$2.0+ billion** in the SPAC merger<sup>(1)</sup>
- **\$75 million** secured from institutional / strategic investors in private round of financing (“Series C-2 Financing”), including **\$30 million** from Ares and **\$45 million** from OPG and Segra Capital Management
- **\$45 million PIPE** commitment by Ares Management (the “PIPE Financing”)
- All proceeds raised (after transaction costs) will go to the **balance sheet**
- For illustrative purposes, the sources and uses below reflect the Series C-2 Financing, PIPE Financing and SPAC Transaction as if they closed at the same time<sup>(1)</sup>

## Sources

(\$ in millions, except per share values)

AAC Cash-in-Trust <sup>(2)</sup>	\$1,000
Series C-2 Financing	75
PIPE Financing	45
X-energy Equity Rollover	2,000
<b>Total Sources</b>	<b>\$3,120</b>

## Uses

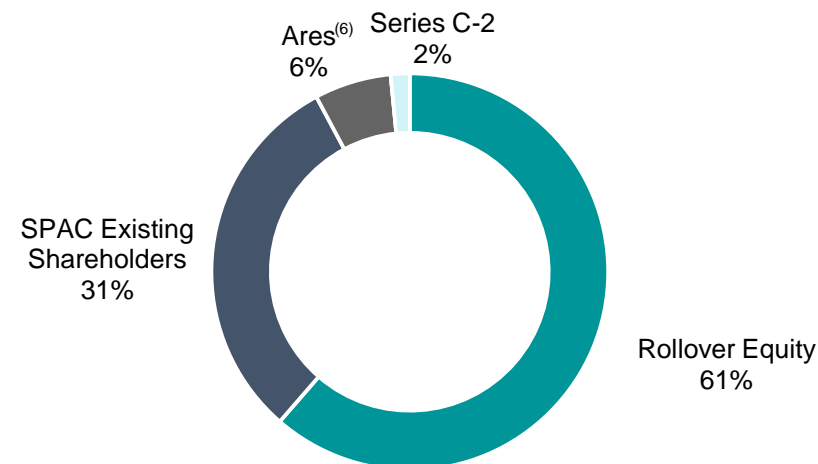
X-energy Equity Rollover	\$2,000
Cash to Balance Sheet	1,054
Estimated Transaction Fees	66
<b>Total Uses</b>	<b>\$3,120</b>

## Illustrative Pro-forma Valuation

(in millions, except per share values)

Transaction Share Price	\$10.00
Pro-forma Shares Outstanding	325
<b>Equity Value</b>	<b>\$3,245</b>
(-) Pro-forma Net Cash <sup>(3)</sup>	(1,031)
<b>Enterprise Value</b>	<b>\$2,214</b>

## Illustrative Pro-forma Ownership (%) at Closing<sup>(4,5)</sup>



Note: Ares Acquisition Corporation (“AAC”), Ares Management Corporation (“Ares Management”) and its affiliates and/or investment vehicles are collectively referred to herein as “Ares”

1) We anticipate that the Series C-2 Financing will close in advance of the SPAC transaction. As a result, (1) the pre-money equity value will increase by the amount of the Series C-2 Financing, (2) the holders of the Series C-2 notes will receive consideration in the SPAC merger on terms that are 10% more favorable than those on which potential investors may invest and (3) any such discount will be absorbed by the existing X-energy equity holders

2) Illustrative, as if no AAC shareholders exercise their redemption rights to receive cash from the trust account at closing. Assumes an illustrative closing date of March 31, 2023

3) Calculated using \$23mm of existing net debt as of September 30, 2022 and \$1,054mm net cash from the SPAC transaction

4) Per the executed Business Combination Agreement (“BCA”), between AAC and X-energy, AAC’s sponsor, Ares Acquisition Holdings LP, will forfeit a portion of its promote shares in the event of shareholder redemptions

5) Assumes \$10 share price, excludes impact of warrants, earn-outs and high-vote shares to be held by certain rollover equity holders, which will entitle such holders to 10 votes per share

6) Includes Ares Management’s shares purchased and committed in the Series C-2 Financing and potential future PIPE Financing; assumes the potential PIPE investors receive common equity at \$10 per share; final terms may vary

## Small Modular Reactors



## Nuclear Services / Equipment

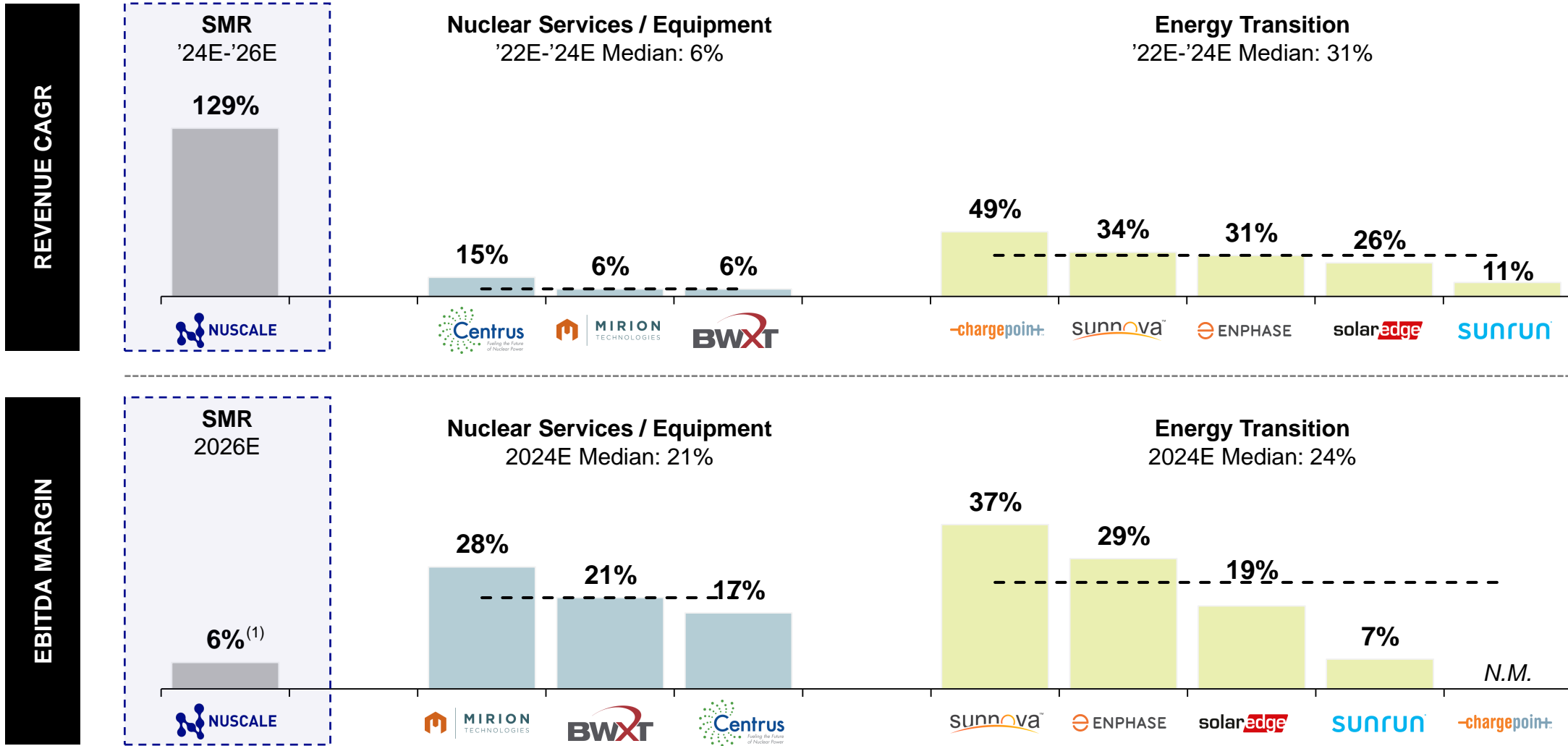


## Energy Transition



*Note: Selected Publicly Traded Companies information provided for illustrative purposes only. The Selected Publicly Traded Companies included in this presentation operate in different segments and industries and the projected financial performance and growth are not necessarily indicative of X-energy's performance or growth.*

# Selected Publicly Traded Companies – Operational Statistics



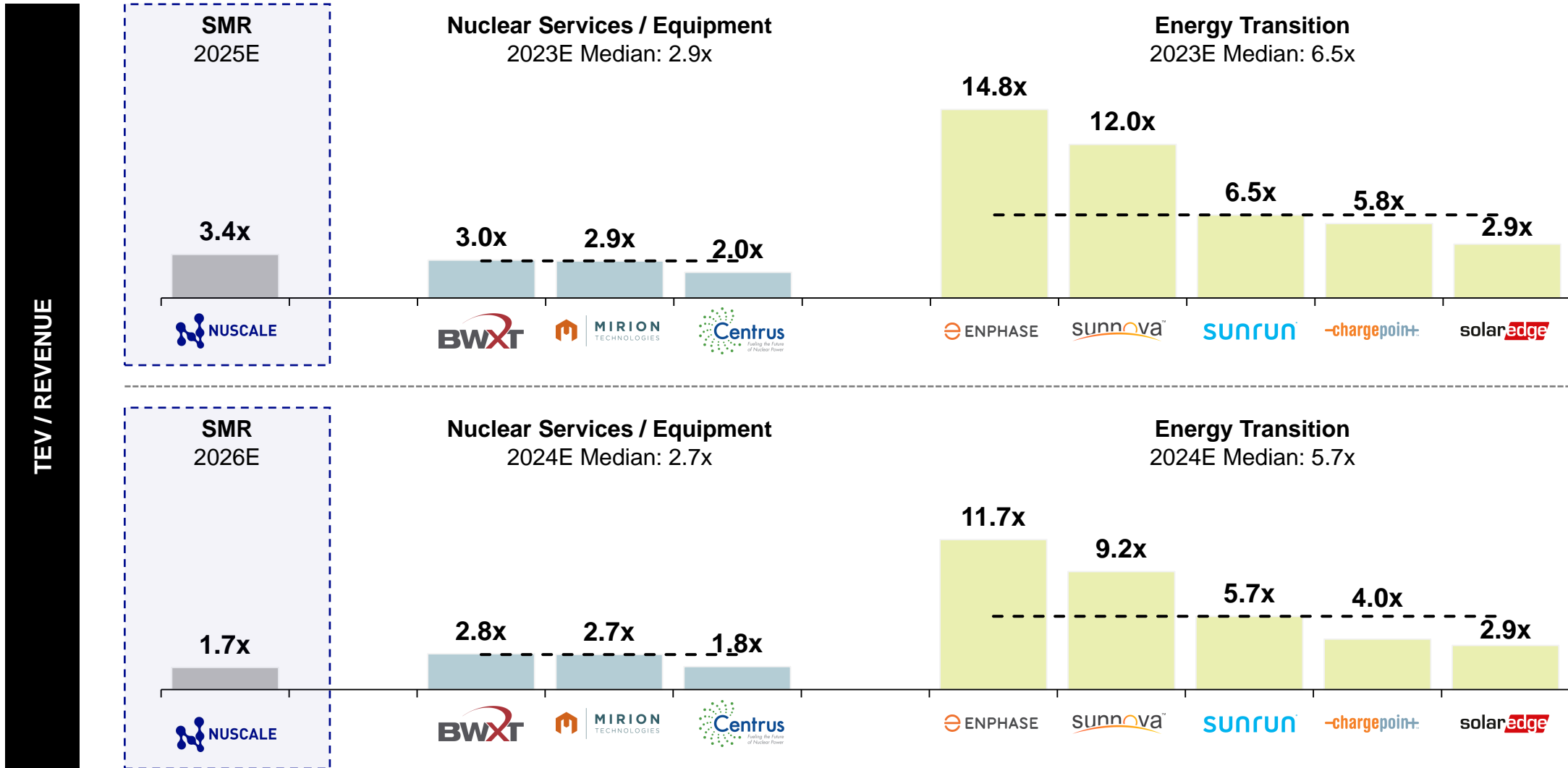
Source: Public company filings and broker estimates from CapitalIQ as of 12/2/2022

Note: Metric noted as "N.M." when metric not available; Information presented includes forecasts and other forward-looking information based on reports, industry publications and other third-party sources and may be incomplete or inaccurate; Actual results may vary

1. Nuscale management estimate of 23% based on cash EBITDA metric disclosed in the April 2022 Investor Presentation; "Cash EBITDA" reflects net income before interest, tax, depreciation and amortization, plus (or minus) any increases (or decreases) in deferred revenue and any decreases (or increases) in work in progress during the year; Work in progress represents the raw materials, labor, and overhead allocated to partially completed power modules

-- Median

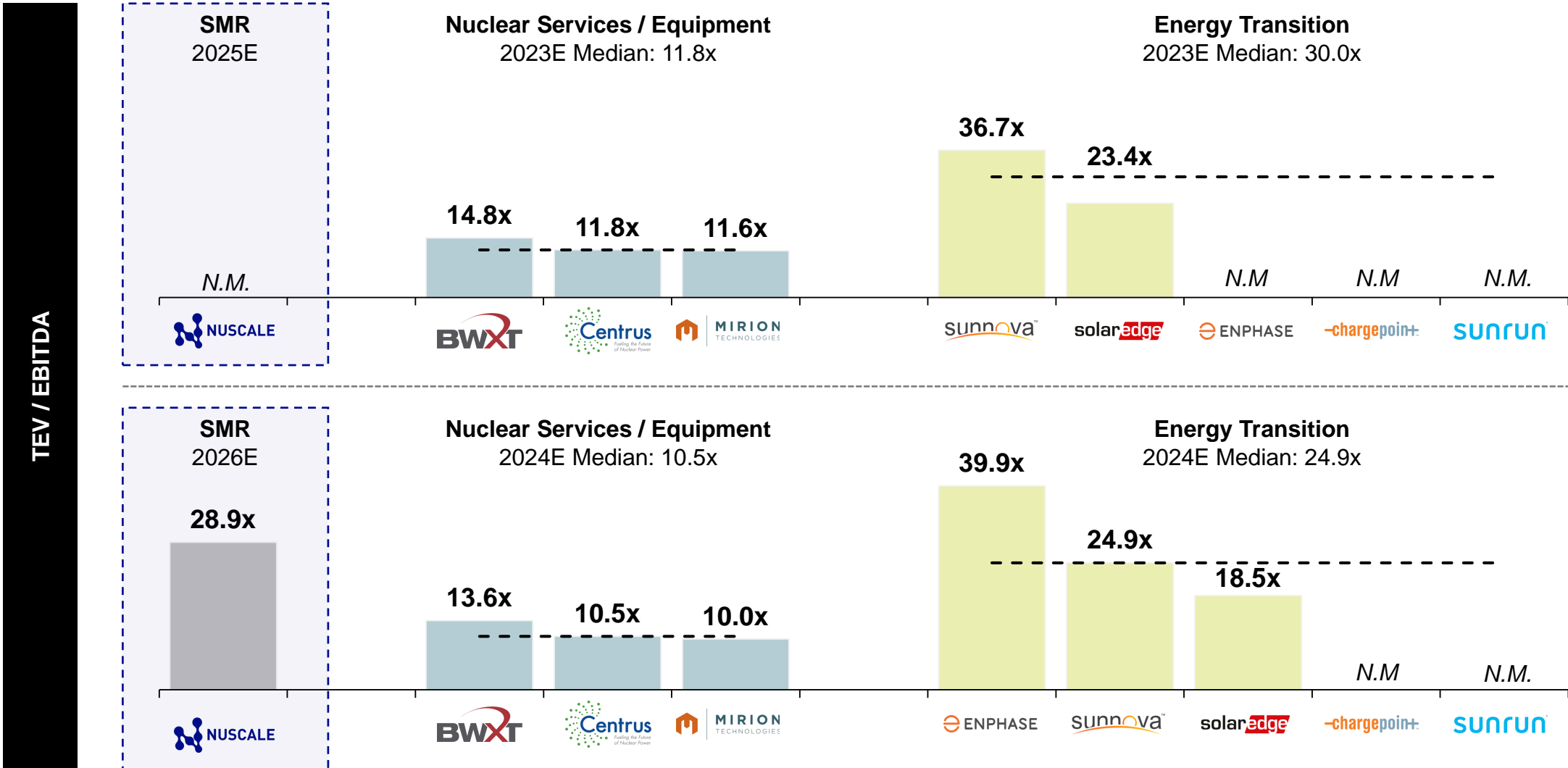
# Selected Publicly Traded Companies



Source: Public company filings and broker estimates from CapitalIQ as of 12/2/2022  
 Note: Multiple noted as "N.M." when multiple is either greater than 50x, negative or not available

-- Median

# Selected Publicly Traded Companies (Cont'd)



Source: Public company filings and broker estimates from CapitalIQ as of 12/2/2022  
 Note: Multiple noted as "N.M." when multiple is either greater than 50x, negative or not available

-- Median

# Appendix

Term/Abbreviation	Meaning
Baseload Power	The minimum amount of electric power delivered or required over a given period of time at a steady rate.
Baseload Power Source	Base load power sources are the plants that operate continuously to meet the minimum level of power demand 24/7.
Brownfield site	A brownfield site is any previously developed land that is not currently in use.
Capacity Factor	The measure of actual energy produced versus the maximum that could be produced at full output for the same period.
COD	Commercial operations date.
DOE (Department of Energy)	The Department of Energy administers aspects of the country's energy policy. The Department of Energy also funds scientific research in the field.
Category II	Category II facilities are licensed to possess special nuclear material of moderate strategic significance. These facilities include HALEU fuel cycle facilities, some non-power reactors and some medical isotope facilities.
EPZ (Emergency Planning Zone)	A zone around a nuclear power plant in which emergency protective action plans are designed to avoid or reduce radiation doses from inhaling radioactive particles.
FOAK (First of a Kind)	Used in engineering economics where the first item or generation of items using a new technology or design can cost significantly more than later items or generations.
Generation IV Advanced Nuclear Technologies	A broad class of nuclear reactors and other technologies that are non-light water based technologies that have been designed in order to remedy weaknesses associated with traditional light water reactor designs.
HALEU (High-Assay Low-Enriched Uranium)	Uranium that has been enriched to between 5% and 20%.
Intermittence	Inability of a renewable energy source to deliver a steady supply of electricity. For example, solar power stops at night and wind power stops when there is not enough wind.
IRA (Inflation Reduction Act of 2022)	The Inflation Reduction Act of 2022 is the FY2022 reconciliation bill, which sets out to reduce the national deficit, address climate change, invest in clean energy, lower the cost of health insurance and prescription drugs, and reform and enforce the tax code.
KWh (Kilowatt Hour)	One kilowatt of power for one hour.
Load Following	A power plant that is able to adjust its power output on demand in order to follow changes in electric grid demand throughout the day.
MWe (Megawatt electric)	A megawatt electric is one million watts of electricity generation capacity.
NOAK (Nth of a kind)	Later example of new technology or design that typically costs significantly less than previous examples.
NRC (Nuclear Regulatory Commission)	An independent agency of the United States government tasked with protecting public health and safety by regulating civilian uses of nuclear materials, including for nuclear energy.

- 1) Our business requires substantial investment. At the time of business combination announcement, the aggregate commitments to the Series C-2 Financing and PIPE Financing are sufficient to satisfy the minimum cash condition for the transaction; however, the commitments will not be sufficient to finance the total capital required for the business plan. To the extent we have significant redemptions in connection with this business combination or are unable to raise the level of capital we contemplate as part of the business combination, we will be required to make significant adjustments to our business plans in light of our available capital resources. For example, we will have to reduce future costs, which could materially impact our business plan, including potentially deferring our TRISO-X fuel fabrication facility, not pursuing some of our other strategic objectives and/or limiting the resources available to further develop our design, sales and manufacturing efforts.
- 2) Our corporate expenditures, including our corporate level outspend, is subject to numerous risks and uncertainties, including uncertainties related to the impact of inflation, evolving regulatory requirements, raw material availability, global conflicts, global supply chain challenges and component manufacturing and testing uncertainties, among other factors. Accordingly, it is possible that our overall cash outspend could be higher than the levels we currently estimate, and any increases could have a material adverse effect on our business, financial condition and results of operations.
- 3) In order to fulfill our business plan, we may require additional funding. To the extent we require additional funding in the future, such funding may be dilutive to our investors and no assurances can be provided as to terms of any such funding. Any such funding and the associated terms will be highly dependent upon market conditions at the time we seek such funding and the progress of our business.
- 4) If we fail to manage our growth effectively, we may be unable to execute our business plan and our business, results of operations, and financial condition could be harmed.
- 5) We have not yet delivered the Xe-100, Xe-1 or any other SMR to customers and do not currently have any pre-orders for any of our reactors, and any setbacks we may experience during our first commercial delivery planned for 2029 and other demonstration and commercial missions or failure to obtain pre-orders could have a material adverse effect on our business, financial condition and results of operation, and could harm our reputation.
- 6) Beginning in 2025, we will depend on pre-sales revenue to fund our demonstration, corporate growth and commercial development. Any delays to our planned commercial deliveries beginning in 2029 or pre-sales expectations could jeopardize our ability to maintain such funding and have a material adverse effect on our business, financial condition and results of operation.
- 7) The amount of time and funding needed to bring our nuclear fuel to market may greatly exceed our projections.
- 8) We depend significantly on U.S. government contracts, which often are only partially funded, subject to immediate termination, and heavily regulated and audited. Continued full funding of the Advanced Reactor Demonstration Program ("ARDP") is also subject to future government appropriations and continued political support. The termination or failure to fund, or negative audit findings for, one or more of these contracts or the ARDP program could have an adverse impact on our business, financial condition, results of operations and cash flows.
- 9) We and our customers operate in a politically sensitive environment, and the public perception of nuclear energy can affect our customers and us.
- 10) Accidents involving nuclear power facilities, including but not limited to events similar to any of the Three Mile Island, Chernobyl or Fukushima Daiichi nuclear accidents, or terrorist acts or other high profile events involving radioactive materials, could materially and adversely affect the public perception of the safety of nuclear energy, our customers and the markets in which we operate and potentially decrease demand for nuclear energy or facilities, increase regulatory requirements and costs or result in liability or claims that could materially and adversely affect our business.
- 11) The market for SMRs generating nuclear power is not yet established and may not achieve the growth potential we expect or may grow more slowly than expected.
- 12) There is limited operating experience for reactors of this type, configuration and scale, which may result in greater than expected construction cost, maintenance requirements, operating expense or delivery timing.
- 13) Competition from existing or new companies could cause us to experience downward pressure on prices, fewer customer orders, reduced margins, the inability to take advantage of new business opportunities, and the loss of market share.
- 14) We rely on a limited number of suppliers for certain materials and supplied components, some of which are highly specialized and are being designed for first-of-a-kind or sole use in the Xe-100. We may not be able to obtain sufficient materials or supplied components to meet our manufacturing and operating needs, or obtain such materials on favorable terms.
- 15) The Xe-100 design has not been approved, nor has it been licensed for use at any site, by the NRC or the Canadian Nuclear Safety Commission, and its approval or licensing is not guaranteed.
- 16) Even if Xe-100 is approved in the United States and Canada, we must still obtain approvals on a country by country basis before we can sell our products in such country, which approvals may be delayed or denied or which may require modification to our design.
- 17) Any delays in the development and manufacture of our SMRs and related technology may adversely impact our business and financial condition.
- 18) The cost of electricity generated from nuclear sources may not be cost competitive with other electricity generation sources in some markets, which could materially and adversely affect our business.
- 19) Changes in the availability and cost of electricity, natural gas and other forms of energy are subject to volatile market conditions that could adversely affect our business.
- 20) Our customers must obtain additional regulatory approvals before they construct power plants using Xe-100 and approvals may be denied or delayed.
- 21) We are part of the nuclear power industry, which is highly regulated. Our fuel designs differ from fuels currently licensed and used by commercial nuclear power plants. The regulatory licensing and approval process for nuclear power plants to operate with our nuclear fuels may be delayed and made more costly, and industry acceptance of our nuclear fuels may be hampered.
- 22) The operations of our planned fuel facility in Tennessee, and any future facilities, will be highly regulated by the U.S. federal and state-level governmental authorities, including the NRC as well as the State of Tennessee and the other jurisdictions in which we may establish operations. Our operations could be significantly impacted by changes in government policies and priorities.
- 23) We must obtain governmental licenses to possess and use radioactive materials, including isotopes of uranium, in our fuel facility operations. Failure to obtain or maintain, or delays in obtaining, such licenses could impact our ability to fabricate TRISO-X fuel for our customers, who will be entirely reliant on us for fuel, and have a material adverse effect on our business, financial condition and results of operation.
- 24) We must complete nuclear grade material qualifications and obtain regulatory approvals for the use of various materials in our TRISO-X fuel and our reactor designs. This includes long lead time irradiation testing and analysis, which may require redesign or use of alternative suppliers if results are unsatisfactory. Further, certain key nuclear grade materials and components, such as graphite, are only produced in limited quantity and predominantly outside of the United States. Cultivating expanded foreign or domestic U.S. supply chain manufacturing capacity for key materials and components depends on cooperation from government and supply chain partners that may result in shortages and delays if not accomplished within assumed timelines or costs.
- 25) Our operations involve the use, transportation and disposal of toxic, hazardous and/or radioactive materials and could result in liability without regard to fault or negligence.
- 26) If we are unable to access high-assay low-enriched uranium ("HALEU"), our ability to manufacture TRISO-X fuel will be adversely affected, which could have a material adverse effect on our business, financial condition and results of operations. Historically, Russia has been a significant global supplier of HALEU, but due to the ongoing war in Ukraine and associated U.S. sanctions imposed on Russia, we are highly dependent on the U.S. government for access to HALEU.
- 27) We are subject to stringent U.S. export and import control laws and regulations. Unfavorable changes in these laws and regulations or U.S. government licensing policies, our failure to secure timely U.S. government authorizations under these laws and regulations, or our failure to comply with these laws and regulations could have a material adverse effect on our business, financial condition and results of operations.
- 28) Our business with various governmental entities is subject to the policies, priorities, regulations, mandates and funding levels of such governmental entities and may be negatively or positively impacted by any change thereto.
- 29) The U.S. government's budget deficit and the national debt, as well as any inability of the U.S. government to complete its budget or appropriations process for any government fiscal year could have an adverse impact on our business, financial condition, results of operations and cash flows.
- 30) Our customers could incur substantial costs as a result of violations of, or liabilities under, environmental laws.
- 31) Changes in tax laws could adversely affect our business prospects and financial results.
- 32) We rely on intellectual property law and confidentiality agreements to protect our intellectual property. We also rely on intellectual property we license from third parties. Our failure to protect our intellectual property rights, our infringement of third party intellectual property or our inability to obtain or renew licenses to use intellectual property of third parties, could adversely affect our business.
- 33) We are subject to information technology and cyber security threats which could have an adverse effects, including regulatory, on our business and results of operations.
- 34) A pandemic outbreak of a novel strain of coronavirus, also known as COVID-19 has disrupted and may continue to adversely affect our business operations and our financial results.
- 35) Uncertain global macro-economic and political conditions could materially adversely affect our results of operations and financial condition.
- 36) We depend on key executives and management to execute our business plan and conduct our operations. A departure of key personnel could have a material adverse effect on our business.
- 37) Our business plan requires us to attract and retain, qualified personnel including personnel with highly technical expertise. Were we not to be able to successfully recruit and retain experienced and qualified personnel, it could have a material adverse effect on our business.
- 38) As a growth-oriented company, our securities have been subject to downward pressures in recent months, including inflationary pressures, increases in interest rates and other adverse economic and market forces, which may result in high redemptions of the cash available from the trust fund. If there are substantial redemptions, there will be a lower float of our common stock outstanding, which may cause further volatility in the price of our securities and adversely impact our ability to secure financing following the closing of the Business Combination.

## Infrastructure Investing Accolades

Note: There may be other award categories for which Ares, its funds or its portfolio companies were considered but did not receive awards. The awards noted herein relate only to selected funds/strategies and may not be representative of any given client's experience and should not be viewed as indicative of Ares' past performance or its funds' future performance. All investments involve risk, including loss of principal.

- 1) Infrastructure Investors selected Ares Infrastructure Opportunities for Private Lender of the Year – Global, Renewables Investors of the Year – North America, Renewables Deal of the Year – Global (Apex Clean Energy) for the year 2021. Ares received the awards represented by survey participants that voted independently. In addition, survey participants could nominate another firm not listed in the category. Infrastructure Investors is a publication that covers the flow of private capital into infrastructure projects around the world, as published by PEI, which is a group focused exclusively on private equity, private debt, private real estate and infrastructure and agri-investing. Ares was selected as the winner of the aforementioned awards through a selection process by those persons choosing to vote in each category, which may include firms that submitted for awards, but which are not allowed to vote for themselves. Ares did submit for these categories but did not pay a fee to participate in the selection process. The selection of Ares Infrastructure Opportunities to receive these awards was based in part on subjective criteria and a potentially limited universe of competitors.
- 2) Power Finance & Risk (PFR) selected Ares Infrastructure Opportunities for Private Equity Sponsor of the Year, and Credit Fund Manager of the Year for the year 2020. Ares received the awards represented by survey participants that voted independently. PFR provides news, analysis, proprietary data and perspectives on financing and M&A in the power and utilities industries and alternative energy firms, covering the Americas. Ares was selected as the winner of the aforementioned awards through a selection process by unprecedented judging panel comprising 45 senior market participants from across project development, banking, law and investing. The PFR editorial team combined the feedback obtained in these interviews with PFR's own reporting and data to determine the final winners. Ares did submit for categories but did not pay a fee to participate in the selection process. The selection of Ares Infrastructure Opportunities to receive these awards was based in part on subjective criteria and a potentially limited universe of competitors.

## IRA Potential Value Creation Assumptions

- 1) Eligibility requirements: Applies to qualified facilities placed in service after 2024 and the construction of which generally begins before 2034, facility's greenhouse gas emission rate cannot exceed zero, electricity must be produced in the U.S. and sold to "unrelated persons," facility meets U.S. Labor Department "prevailing wage" and "apprenticeship" standards
  - Projects that start construction after the following "applicable year" are subject to a four-year phase-out beginning the later of (i) the date that the U.S. Secretary of Energy determines that annual greenhouse gas emissions from electrical generation is equal to or less than 25% of emissions in 2022 or (ii) 2032
  - The "prevailing wage" and "apprenticeship" standards will be deemed to be met if projects "began construction" earlier than 60 days after the Treasury issued relevant guidance
- 2) Eligibility requirements: Applies to qualified facilities placed in service after 2024 and the construction of which generally begins before 2034, facility's greenhouse gas emission rate cannot exceed zero and facility meets U.S. Labor Department "prevailing wage" and "apprenticeship" standards. Credits are subject to recapture if eligibility requirements are not maintained or if the facility is sold
  - Projects that start construction after the following "applicable year" are subject to a four-year phase-out beginning the later of (i) the date that the U.S. Secretary of Energy determines that annual greenhouse gas emissions from electrical generation is equal to or less than 25% of emissions in 2022 or (ii) 2032
  - The "prevailing wage" and "apprenticeship" standards will be deemed to be met if projects "began construction" earlier than 60 days after the Treasury issued relevant guidance
- 3) Hours in a year times 1,000
- 4) Shown in 2022 dollars. Tax credit will step-up annually with inflation. No inflation shown above
- 5) X-energy management's estimate for a customer's direct costs to construct a 4-pack XE-100 reactor. Subject to diligence and IRS rule making process on expense eligibility for investment tax credit
- 6) X-energy assumption not explicitly included in IRA; similar provisions have been included in prior renewables tax credit programs