



Robotics & Tech CSC

November 19, 2025

Today's Agenda

- I. Welcome
- II. Key Background & Refreshers
- III. Roadmap Overview
- IV. AI/Robotics Value Chain Analysis
- V. Discussion
- VI. Next Steps and Adjourn

Key Background & Refreshers

Team Pennsylvania's Core Purpose

Working together
for all Pennsylvanians
in **public-private partnership**,
we **accelerate**
the commonwealth's long-term
economic future.

Areas of Impact

We convene Cross-Sector Collaboratives in the following sectors:



AGRICULTURE



ENERGY



MANUFACTURING



ROBOTICS & TECH



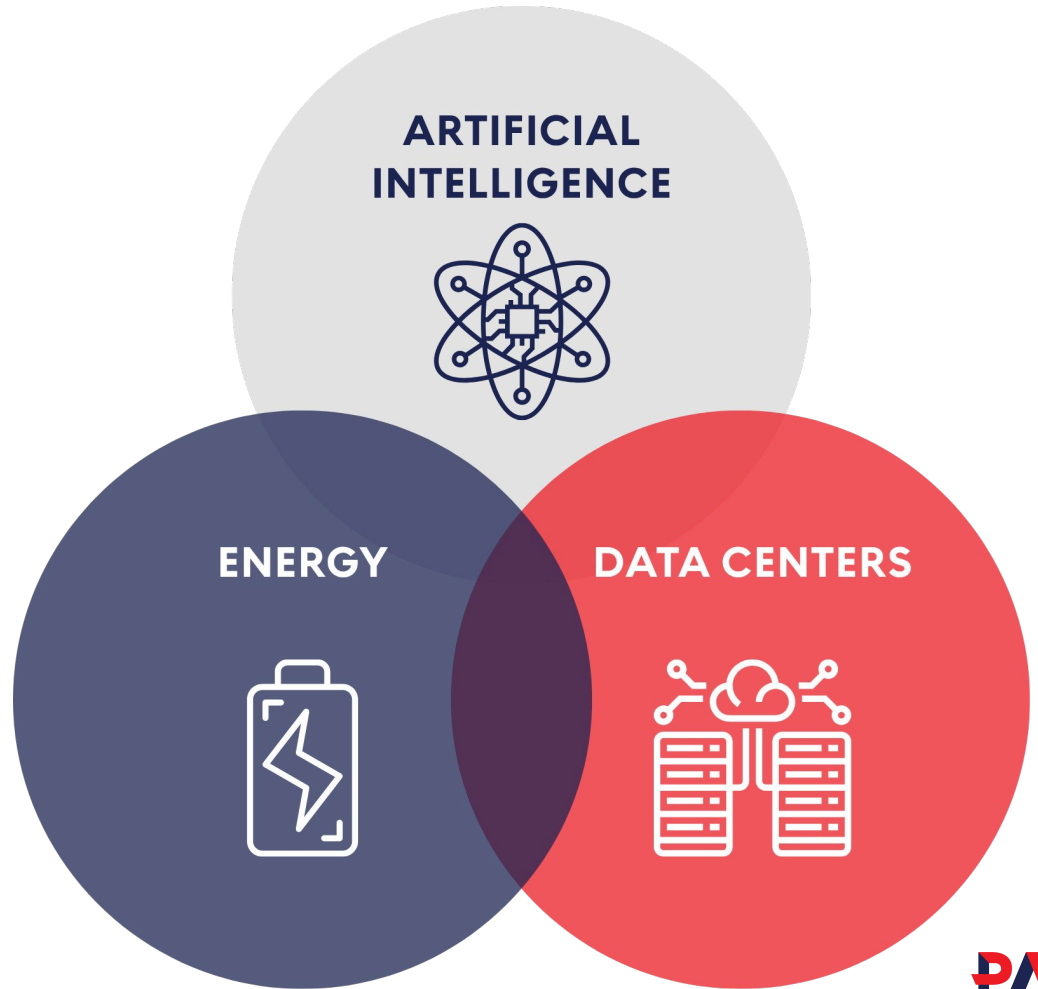
LIFE SCIENCES

Goals for the Robotics & Tech Collaborative

- **Accelerate the adoption of advanced technologies** across the commonwealth's core industries and infrastructure
- **Ensure that emerging technologies are aligned with market needs** and deliver broad-based benefits to communities and companies alike

Energy - Data Center - AI Roadmap

**Pennsylvania's
energy
transformation,
data center
expansion, &
artificial
intelligence
opportunity**



This Roadmap *Is*

- ❑ **An actionable strategic planning document** rooted in current conditions, future trends, and measurable outcomes
- ❑ **A living framework** that adapts for discussion, strategy, and investment
- ❑ **A tool for coordination**, aligning public and private sector efforts to move in the same direction
- ❑ **Nonpartisan**, filtered through Team Pennsylvania's 4 goals
- ❑ **Inclusive of AI** → Not just an energy/data center conversation

This Roadmap *Is Not*

- ❑ A static report or academic study
- ❑ Just a list of technologies or ideas without prioritization
- ❑ A political statement or an inflexible mandate
- ❑ A detailed project plan, though it should inform those that follow
- ❑ A data center siting strategy
- ❑ Energy demand projections or forecasts

Pennsylvania's Unique Opportunity to Lead in Energy Transformation and Data Center Expansion in the AI Age

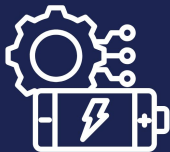
Vision for Pennsylvania

Pennsylvania will take bold action and work together, across sectors, to turn rapid technological change into lasting economic growth for communities across the state.

Vision for the Roadmap

This roadmap positions Pennsylvania to lead in the age of artificial intelligence. Artificial intelligence and the systems behind it are transforming how we work, live, and grow our economy. With bold goals and flexible strategies, we can shape these forces to benefit every region of the state.

#1



**LEAD THE NATION IN AI-APPLIED
AND NEXT-GENERATION ENERGY
SYSTEM TRANSFORMATION,**

*ensuring that AI not only
consumes energy, but also
advances how it's generated,
stored, and distributed*

#2



**LEAD THE NATION IN AI AND
NEXT-GENERATION
TECHNOLOGY
COMMERCIALIZATION**

*from higher education R&D, private-
sector innovators, startups, and
scale-ups*

#3



**DEPLOY SCALABLE, FIRM ENERGY
GENERATION — TARGET OF 10-12
GW —**

*to support emerging industrial
and compute infrastructure*

Six goals to be achieved by 2035:

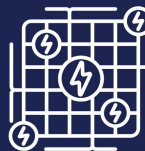
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**ESTABLISH 3-5 INNOVATION
CORRIDORS**

*across Pennsylvania's rural and
urban landscape anchored by
energy-enabled, AI-powered
development*

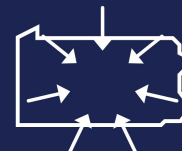
#5



**MODERNIZE GRID
INFRASTRUCTURE AND
PERMITTING**

*to meet the demands of next-
generation data and energy needs*

#6



**SET A STRATEGIC TARGET FOR
PENNSYLVANIA-BASED
SOURCING TO REACH 20% OF
TOTAL SPEND**

*in AI-powered data center and
grid infrastructure projects by
2035*

National & Pennsylvania Context

National and Global Dynamics



NATIONAL AND GLOBAL POLICY SHIFTS

Federal legislation, international agreements



GLOBAL ENERGY AND TECHNOLOGY MARKETS

Pricing, supply chains, trade policies



INFRASTRUCTURE SYSTEMS AT SCALE

Interstate transmission, broadband backbones



GEOPOLITICAL DYNAMICS

International competition and security issues

Pennsylvania Levers



PERMITTING AND REGULATORY PROCESSES

Streamlining approvals to accelerate projects



CROSS-SECTOR COORDINATION

Aligning business, government, labor, and academia



TALENT STRATEGY

Aligning training programs with emerging industry needs



STATE-LEVEL INCENTIVES AND PROGRAMS

Shaping funding, tax credits, or pilot initiatives

Important Dynamics and Considerations

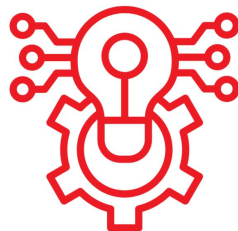
- Consumer Protection
- Data Center Economic impacts
- Demand-Supply Alignment
- Infrastructure, Water, and Land use
- Large Tech Companies Focused on Immediate-Term Gains
- Local Land Planning/Local Dynamics
- Manufacturing Supply Chain
- Measuring Leadership in AI Commercialization
- Nuclear as the Cornerstone of “All-of-the-Above” Energy Approach
- Pennsylvania Tax Structure and Local/State Taxes
- Permitting Complexities and Streamlining
- PJM Dependencies
- Renewables and Other Energy Technologies
- Social License/Community Buy-In
- Workforce/Talent Pipeline Gaps

Long-Term Strategies (2025–2035)

Three mutually reinforcing priorities anchor Pennsylvania's long-term strategies to 2035:



Scale Commercialization
and Technology Leadership



Modernize Energy Systems
for Compute Resilience



Build and Sustain
Talent Pipelines

Near-Term Actions (2025–2027)

To establish Pennsylvania's early leadership in the energy-data-AI economy, near-term actions must remove immediate barriers, signal serious intent to investors and developers, and set the stage for longer-term transformation.



Accelerate Permitting
and Site Readiness



Incentivize Strategic Energy
and Industrial Co-Location



Scale AI in
Manufacturing



Create Collaborative
Environment Encouraging
Shared Resources



Expand Shared
Knowledge Base Between
State and Local Entities



Strengthen Talent
Strategy

Roles and Enablers



What: Policy, Governance, and Legal Reform

Who: Federal, State, and Local Government, Courts, Advocacy Groups



What: Regional Impacts Across Rural, Urban, and Suburban Landscapes

Who: Local/Regional Planning, Zoning, Economic Development, Community Members, Public Sector



What: Technology and AI-Driven Innovation

Who: Private Sector, Federal Labs, Academia



What: Workforce

Who: Education, Workforce Development Boards, Private Sector, Trades

Team Pennsylvania Commitments



#1 Activate Key Initiatives

- Advancing an **AI scaling initiative** for small and medium sized manufacturers
- Conducting a statewide **AI/Robotics value chain analysis**
- Launching a **nuclear initiative** geared toward harnessing the full potential of advanced nuclear energy technologies and powering data centers

Participating Task Force Organizations

The Pennsylvania Energy, Data Centers, Artificial Intelligence Roadmap is the result of collaboration, and while the strategies and considerations reflect the broadest possible set of views, they do not imply a full endorsement by every participant of the Task Force.

*View the full list of
participating
organizations here:*



To View the Full Roadmap:



Or Visit: <https://teampa.com/energy/edcai-roadmap/>

Accelerating Economic Growth Through Public-Private Partnership