



Executive Summary

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

Pennsylvania is at a pivotal crossroads in energy transformation, data center expansion, and artificial intelligence (AI). These converging forces represent both an urgent challenge and an extraordinary opportunity for the commonwealth to lead, adapting to rapid change, and shaping its future. This roadmap outlines a shared, strategic path forward, designed to secure Pennsylvania's position as a powerhouse of innovation, economic resilience, and broad-based prosperity.

At its core, this roadmap is a call to coordinated action. The energy sector is being tested to deliver with innovation, speed, and resilience. Data centers are multiplying, bringing surging demand for firm, scalable, and sustainable power. AI adoption is accelerating across industries. Pennsylvania's assets – its universities, energy mix and infrastructure, industrial base, and strategic geography – uniquely position the state to respond decisively. Success will depend on building capacity, speeding infrastructure deployment, and aligning stakeholders around a common vision.

Pennsylvania needs to signal serious intent, beyond the headlines. We need to evidence our capabilities through certainty and predictability, visible momentum, and credible commitments, all combined with strong collaboration and early wins.

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.



This document presents a bold yet practical framework organized around six strategic goals to be achieved by 2035:

- 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
- 4. Establish 3 to 5 regional 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

This roadmap is not a siting guide or regulatory document. It is a forward-looking strategy grounded in Team Pennsylvania's model of public-private collaboration. Its development reflects a shared recognition that Pennsylvania has the credibility, diversity of resources, and urgency to lead—yet it must act decisively, collaboratively and strategically.

The roadmap is informed by the realities of a rapidly shifting national context. Federal priorities and private capital are moving in lockstep to scale AI infrastructure. Grid operators are revising forecasts upward to accommodate exponential increases in electricity demand. Major firms are seeking states ready to align energy readiness with technology leadership. All while technological innovation is changing specifications and key supply chain elements are experiencing long lead times.



Team Pennsylvania's response is both clear-eyed and optimistic. This roadmap's intention is to lift up every region, from the AI and life sciences clusters in Pittsburgh, and energy R&D in State College, to Philadelphia's life sciences corridor and the foundational assets of rural communities stretching from Erie to Bellefonte to Wayne County. Rural regions offer more than energy resources as they are the test beds for agricultural innovation, advanced manufacturing, and talent potential that is essential to the commonwealth's future. This roadmap reinforces a whole-of-commonwealth approach, championing readiness across sectors and geographies.

Ultimately, this roadmap invites collaboration, though not necessarily consensus. It outlines a framework for where Pennsylvania can go and how it can get there. By building long-term momentum and advancing near-term wins, the commonwealth can transform this moment into a defining decade of economic and technological leadership.