

THIS IS THE PLACE

Tri-Cities, Washington

“Clean Energy Innovation Hub”



OUR ECONOMY

- Third fastest growing metro in Washington
- 87% sustainably sourced energy
- Hub for intersection of clean energy, agribusiness and research & innovation



Nearby Major Cities

- Spokane, Washington.....145 Miles
- Seattle, Washington..... 203 Miles
- Tacoma, Washington..... 216 Miles
- Portland, Oregon..... 223 Miles
- Boise, Idaho..... 294 Miles
- Vancouver, British Columbia....339 Miles



OUR ECONOMY – BY THE NUMBERS



307k

**Metro Area
Population**

60%

**Professional
Sector Jobs**

41%

**Higher Education
Graduates**

147k

**Strong
Workforce**

3k

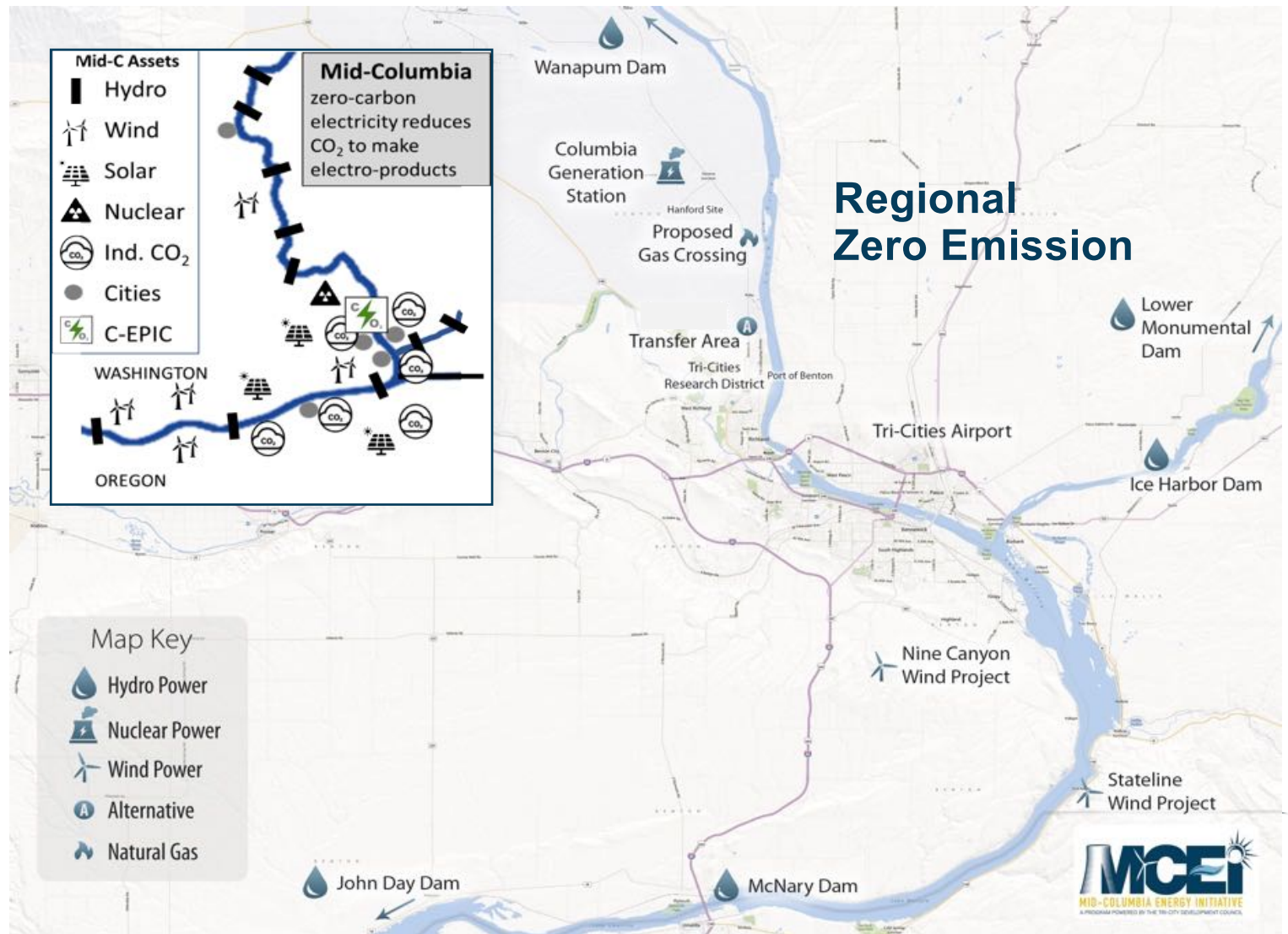
**Engineers
2.8% of Local Workforce**



THE RIGHT PLACE – THEN AND NOW



OUR GRID



THE RIGHT PLACE – THEN AND NOW

CORPORATIONS

5+

INVESTING

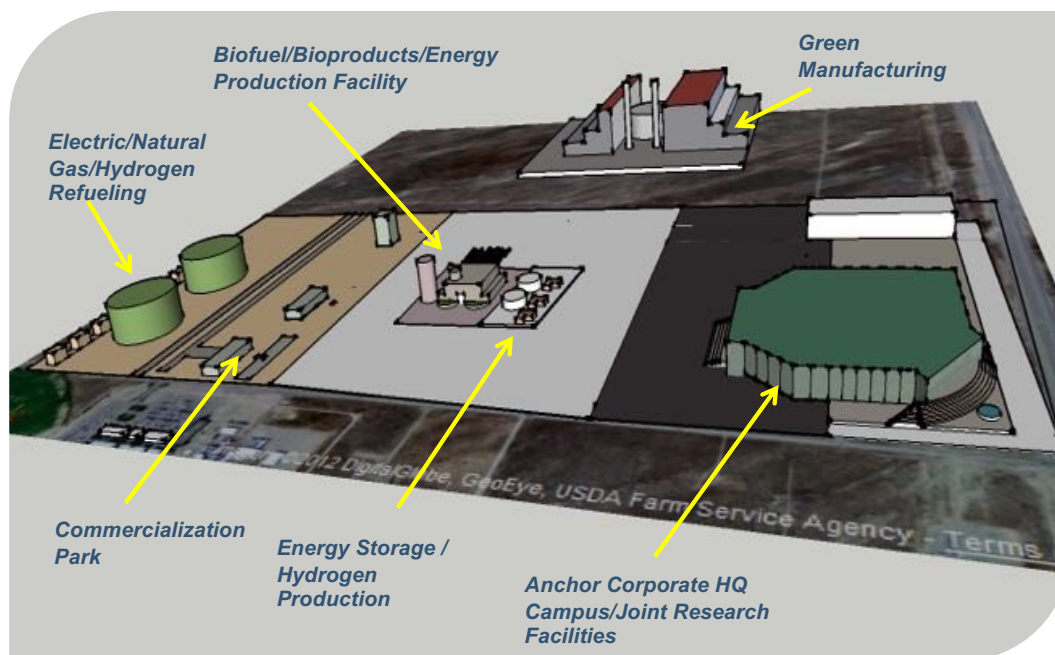
~\$1B+

EMPLOYING

~1,500

CLEAN ENERGY TECHNOLOGY INDUSTRIES

- R&D
- Environmentally-Conscious Manufacturing
- Transportation
- Advanced Grid Technology
- Renewable Energy
- Medical Isotopes



CLEAN ENERGY INDUSTRIAL PARK POTENTIAL



CLEAN ENERGY SECTOR

- Diverse power portfolio including wind, hydro, solar and nuclear
- Leads state in meeting carbon emission targets
- Energy development and storage global research center
- All three Advanced Reactor & SMR Projects have Tri-Cities Connections (X-energy, TerraPower & NuScale)





CLEAN ENERGY INNOVATION HUB

1. Manhattan Project National Historical Park
2. LIGO Hanford Facility
3. FMEF/MASF – Existing Utilities
4. Columbia Generating Station (1,207 MW)
5. Energy Northwest Sites 1 & 4
6. Ruby Flats Solar (150 MW, 300 Acres)
7. North Horn Rapids Industrial Park (1,341 Acres)
8. Port of Benton Barge Facility (Nuclear Port)
9. Washington State University Tri-Cities Campus
10. Pacific Northwest National Laboratory Campus
11. Dual Class I Rail
12. Richland Airport
13. Horn Rapids Solar, Storage & Training (4 MW, 20 Acres)
14. HAMMER Federal Training Center
15. Framatome, 50 years of fuel manufacturing





TRANSPORTATION INFRASTRUCTURE

- Multimodal to reach domestic markets and major marine seaports quickly
- Airports – Pasco, Richland
- Major rail line – Class I rail operators (BNSF, Union Pacific, Port of Benton, Port of Pasco)
- Interstates, highways, state routes
- Barge high and low dock





**Pacific Northwest National Laboratory (PNNL)
Energy Sciences Center/GSL**



**PNNL Environmental
Molecular Sciences
Laboratory**



Atkins Energy Lab



**Ste. Michelle Wine
Estates WSU Wine
Science Center**



Bio-Products, Sciences & Eng. Lab



**PNNL
Discovery Hall**



**Applied Process
Engineering
Laboratory (APEL)**



**Washington State
University (WSU)
Collaboration Hall**





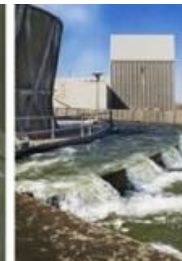
WORKFORCE EDUCATION TRAINING PARTNERS

Highly educated and skilled workforce supported by a rich education system from P-K to Ph.D.

- HAMMER Federal Training Center
- Columbia Basin College
- Washington State University Tri-Cities
- Delta High School
- Army National Guard Readiness Center (Coming Soon)
- Apprenticeship programs and trades

VOLPENTEST **HAMMER** FEDERAL TRAINING CENTER





ENERGY STORAGE/GRID

PNNL programs address all facets of energy storage research, development and deployment:

- New technology development
- Materials research and development
- Power electronics
- System testing
- Safety codes and standards
- Interconnection
- Economic evaluation
- Energy system planning
- Policy and regulatory issues
- Siting and permitting



The Grid Storage Launchpad will be a user facility that enables PNNL to work with energy storage developers to rapidly build and test prototypes for new energy storage technologies.

Energy Storage Mission Statement:
Establish the Tri-Cities as a national leader for energy storage research and development, manufacturing and deployment.



HYDROGEN



PACCAR



WASHINGTON STATE UNIVERSITY
TRI-CITIES

Pacific Northwest
NATIONAL LABORATORY



Microsoft



amazon

PLUG POWER

Universal Hydrogen



FIRST MODE



CHARGE
CONSORTIUM FOR HYDROGEN



STARS
Technology Corporation

MCEI
MID-COLUMBIA ENERGY INITIATIVE
POWERED BY THE TRI-CITY DEVELOPMENT COUNCIL

TRANSPORTATION/EV



NUCLEAR ENERGY TECHNOLOGY & FUELS

Washington VERTical Strategic Framework

VERT = "green" in French

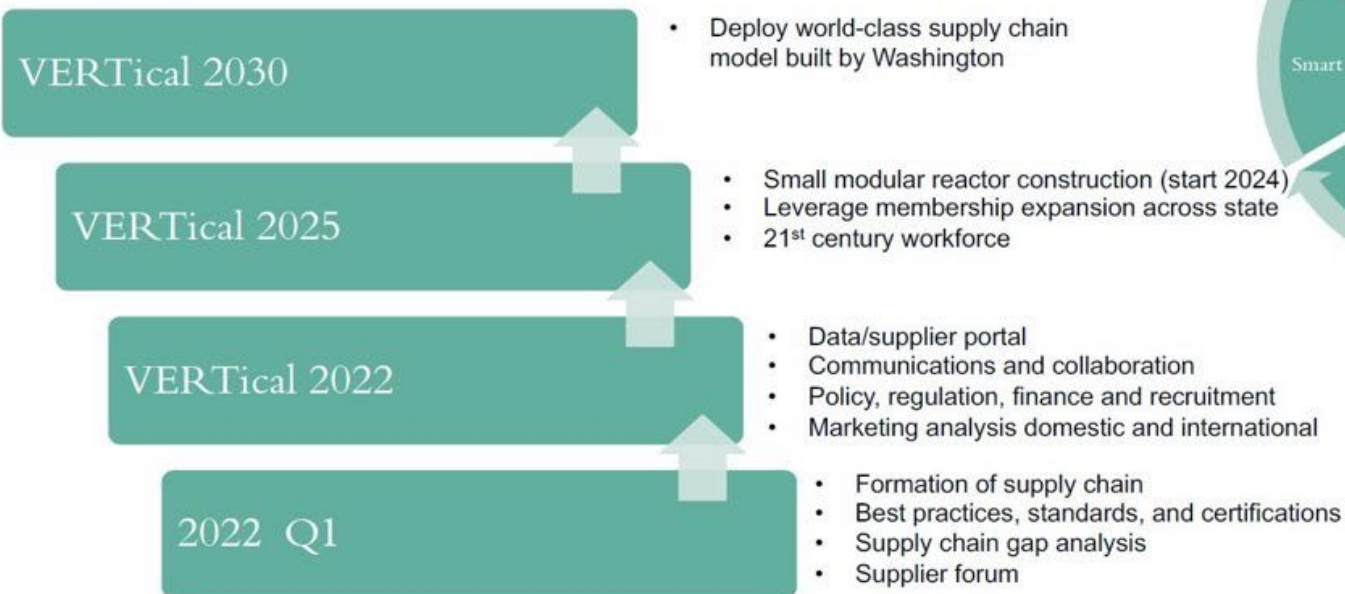
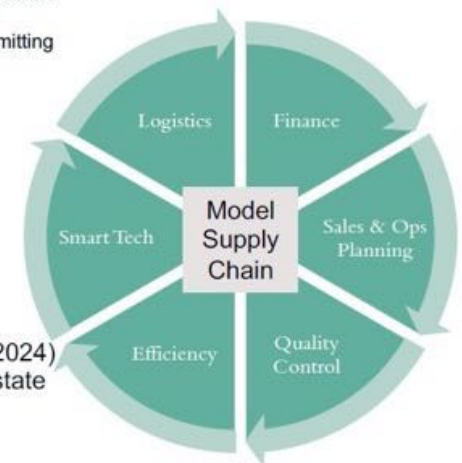
Overview

Vision: Develop a new global supply chain to accelerate the development of emerging clean energy technologies; implement the Washington Clean Energy Transformation Act and federal sustainability goals through a model supply chain framework leveraging secure domestic exportable production.

Mission: Accelerate decarbonization, drive innovation and grow businesses through first-of-a-kind solutions.

Clean Energy Transformation Act Timeline

- **2025** Utility removal of coal energy generation
- **2030** Standard greenhouse gas neutral
- **2045** Utilities 100% renewable or non-emitting



WASHINGTON
VERTical

MCEI
MID-COLUMBIA ENERGY INITIATIVE
POWERED BY THE TRI-CITY DEVELOPMENT COUNCIL

 **ENERGY
NORTHWEST** **framatome**

DOE INITIATIVES

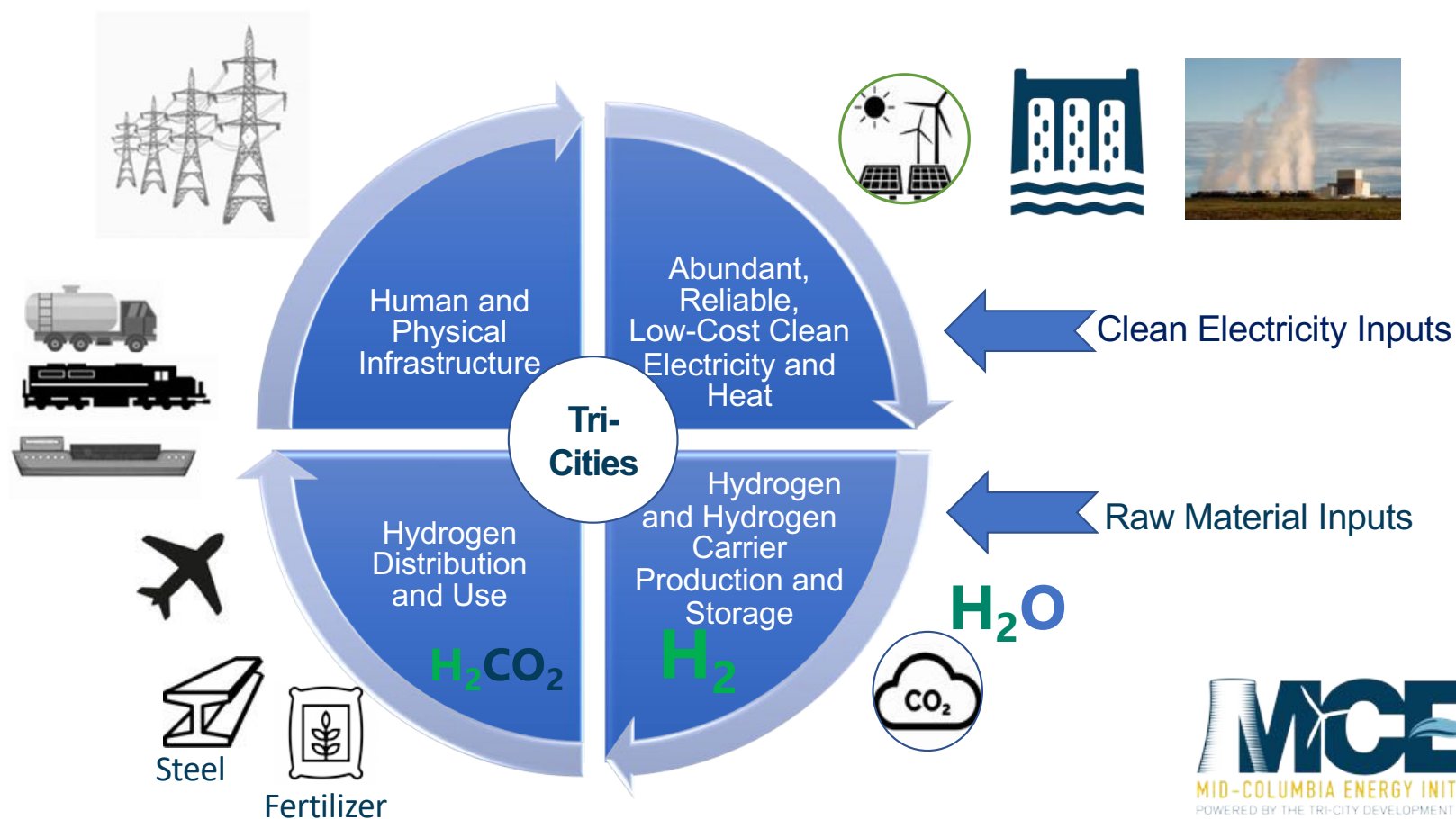
“Net-zero carbon emissions by 2050 by advancing cutting-edge clean energy technologies.”

- Hydrogen Hub
- DOE Energy Asset Repurposing
- BPA Transmission Investment
- Federal Facility Clean Energy Executive Order – Net Zero
- Transportation EV Federal Fleet and Community
- Pacific Northwest National Laboratory – Net-Zero Campus
- Advanced Reactors ARDP
- Place-Based Initiatives
- Professional, Technical and Skilled Workforce





TRI-CITIES: NUCLEUS OF NORTHWEST CLEAN ENERGY HUB





THIS IS THE PLACE – TRI-CITIES, WA



- **All Existing Major Clean Energy Resources (wind, hydro, solar and nuclear)**
- **Robust Transmission – BPA Investment**
- **Over 1,300 Acres**
- **Workforce-Ready (Over 100 Companies, 12,000 Within Energy Sector)**
- **Airports, Barge and Dual Class I Rail Access**





THIS IS THE PLACE – TRI-CITIES, WA



- **Horn Rapids Solar, Storage and Training Project**
- **Ruby Flats Solar Project (150 MW)**
- **HAMMER Federal Training Center**
- **Existing Industrial Agriculture, Food Processing & Logistics**
- **PNNL – WSU Joint Institutes**





SOLUTIONS LOCATION!

Key Opportunities:

- Office of Clean Energy Demonstration West Coast Headquarters
- Advanced Energy Asset Repurposing
- Accelerate local DOE projects to meet national objectives
- Ongoing collaboration with DOE program offices
- Successful ARDP deployment and Pacific Northwest Hydrogen HUB



*Clean Energy Innovation Hub
of the Pacific Northwest*



THANK YOU

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