

REGIONAL ENERGY ACTION PLAN **FOR THE COLUMBUS REGION**



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About the National Association of Regional Councils

The **National Association of Regional Councils** is a 501(c)(3) non-profit membership organization and public interest group that advocates for building regional communities through the representation of multi-purpose, multi-jurisdictional regional councils and metropolitan planning organizations. As a recognized authority and leading advocate for regional planning organizations and regional solutions, the organization conducts research, training sessions, conferences, workshops and webinars for its members: regional councils, regional planning and development agencies, and metropolitan planning organizations.

Of the 39,000 local governments in the United States (counties, cities, townships, etc.), 35,276 are served by regional councils. NARC's membership covers 97 percent of the counties and 99 percent of the population in the country. NARC's agenda includes, but is not limited to, transportation, economic and community development, environment, homeland security, and public safety and regional preparedness. NARC serves as the national voice for regionalism by advocating for regional cooperation as the most effective way to address cross-jurisdictional community planning and development opportunities and issues.

The Project Team

For this project, NARC subcontracted with the Colorado Energy Group, the Mid-Ohio Regional Planning Commission, and the Edison Welding Institute's Advanced Energy Center.

The **Colorado Energy Group**, advises local and state governments and private sector clients across the U.S. on energy efficiency; renewable energy; energy security and energy assurance issues; as well as strategies for building more resilient, reliable power supplies.

The **Mid-Ohio Regional Planning Commission** serves as the regional planning agency for more than 54 local governments and organizations representing more than 2 million citizens in the Columbus Region. MORPC is the federally-designated metropolitan planning organization for Franklin, Delaware and portions of Fairfield and Licking counties in Central Ohio. The Commission conducts programs in transportation, energy, housing, land use, regional development, government affairs, energy and environment, and economic prosperity.

The **Edison Welding Institute's** (EWI) Advanced Energy Center furthers industry efforts on the ground in Ohio. EWI is an industry association representing the entire advanced energy industry; the EWI Energy Center works to increase U.S. independence, security and competitiveness through energy-smart manufacturing.

Through the course of this project, the Project Team set out to undertake the first regional effort to assess the regional economic, social and policy realities as they relate to developing an energy roadmap for the Columbus Region.

Executive Summary

Energy issues top the national, state and local agenda due to rising demand and cost; availability of new, cleaner energy sources; significant changes in the traditional mix of coal and natural gas-supplied electricity; the need to create and maintain new jobs; and a growing public desire for safer and more efficient energy. The greatest impact for managing these cross-cutting issues is at the regional level, where local jurisdictional boundaries intersect and many federal, state and local programs are conducted. Additionally, energy issues encompass the realities of resource scarcity, increased environmental demands and ongoing economic and workforce demands.

Regional planning organizations provide a new lens through which to discuss these important issues. State policy is often too sweeping and disaggregated, and local policy too jurisdictionally specific for effective energy analysis to be conducted. The regional scale is the perfect fit to tie jobs to employers, create new educational opportunities, promote scientific advances and secure energy availability. Regions around the country are recognizing the crucial role that energy plays in advancing regional economic competitiveness. Understanding and proactively aligning planning, investment and development priorities with regional energy needs can propel communities to economic success.

However, until this effort, no thorough understanding of the interplay between a single region's energy economy and other regional development efforts existed. Support from the Federal Government for planning for energy investment and resilience does not exist in a coordinated or comprehensive program aimed specifically at regional planning organizations. Billions of dollars are programmed annually through regional planning organizations that affect and are affected by energy investment decisions in transportation, economic development, workforce development, housing and other core community programs. Energy is one facet of community development with no similar federal relationship. Additionally, as a nation, we lack comprehensive information on how coordinated investment can support energy security, energy assurance and regional resilience, and renewable energy applications. Therefore, regions need support and expertise to provide energy planning information in the context of statewide and regional investment, policy and programs related to business attraction and development, workforce education and training, transportation, housing, land-use, environmental remediation and permitting, and the many other areas that can and will influence energy choices.

There is a vast array of activity and investment surrounding energy choices across the nation, but the impact of these efforts on a region's aggregate economy often remains unclear. The Project Team, with Energy Foundation support, set out to undertake the first effort to assess the regional economic, social and policy realities related to developing an energy roadmap for the Columbus Region, published here, in this *Regional Energy Action Plan for the Columbus Region (Report)*.

Importance of a Regional Energy Economy to the Columbus Region

Energy impacts and drives regional economic competitiveness. The economic magnitude of planning for and building a sound energy economy can be measured in tens of billions of dollars nationally and billions locally.

Neither the U.S., nor the Columbus Region, is energy efficient. The U.S. wastes about 86 percent of total energy generated.¹ Translated locally, this magnitude of waste imposes a huge array of costs that constrains the overall robustness of local economic activity costing the Columbus Region \$1 to \$2 billion annually. Additionally, the Project Team discovered that the cost of energy is low in the region, pushing usage upwards. Very little energy is produced locally, which builds instability into long-term energy pricing and resilience. The Project Team also found that the workforce in the region is not being trained at a scale to capture energy-related jobs such as solar and wind system manufacturing and service, nor is the region currently poised to capture benefit from large-scale shale gas production. These findings and others detailed throughout the Report led the Project Team to propose a comprehensive set of recommendations.

Significant Findings and Recommendations for the Columbus Region

The Columbus Region has a unique opportunity through regional energy planning to integrate and implement initiatives through a set of recommendations that increase the general economic competitiveness of the area. Based on the research and study of experiences in the region, this Report identifies several possibilities that might lead to a faster energy economy transition and greater results in environmental conservation, job creation, entrepreneurial and industrial expansion, academic research and development, and quicker technology commercialization.

- 1. Create and implement a new economic development-focused Regional Energy Planning Initiative.** Encourage collaboration between local government and regional planning and economic development organizations that incorporates a shared vision for the energy economy, goals for energy efficiency, and approaches for clean energy as central components of the regional strategic planning process. Utilize relevant studies, pilots, and initiatives

at the state and local level to serve as vehicles for truly integrating planning efforts and implementing advanced manufacturing, technology, and training in the region.

Focus efforts on the engagement of emerging energy sectors and continued improvements in the current energy use in non-traditional sectors. Four industry sectors have been identified that deserve more attention in building the region's economic future – energy storage, data warehousing, building efficiency, and agriculture. The first two offer the region new opportunity to leverage intellectual and manufacturing capital, and increase efficiency. The third offers the opportunity to increase the safety, comfort and cost-effectiveness of the Region's building stock while investing in the businesses that are suppliers to this industry. The fourth offers the region an opportunity to engage farms to implement new energy strategies in the food-chain system to lower overall energy use, business costs, and create potential opportunities in clean energy production.

Explore establishing MORPC as the primary convener of regional stakeholders and thought leaders, coordinating the creation of a regional energy vision to promote clarity around roles, responsibilities and action steps for various public and private stakeholders. The region should aim to foster mutually beneficial relationships with nearby regions and states to achieve the energy goals of the Columbus Region.

2. **Engage the region's network in a major new job development effort.** Involving the Governor's Office of Workforce Transformation, area Workforce Investment Boards (WIBs), private-sector utilities and existing energy technology companies is critical to ensuring that the Columbus Region will capture the energy jobs of the future. Coordinated efforts should focus on developing workforce training programs that prepare the local workforce for energy efficiency and renewable energy jobs and guide efforts around emerging and growing regional sectors including shale gas, energy storage and solar. Strengthening the regional energy industry cluster can promote research, development and capital investment while creating incentives to prepare the local talent pool to capture energy jobs through educational and workforce development opportunities.
3. **Start a new regional energy assurance effort as part of regional energy planning and assess weak links in the region's economic, infrastructure, and social fabric.** This effort will increase resilience—in both local government and the private sector—to energy supply shortages while helping the region prioritize new energy investments in distributed renewable energy and energy efficiency technologies. MORPC should explore the development of a diversified energy portfolio employing energy efficiency, renewable energy and cleaner fossil fuel use to help the region address any energy supply issue by mid century. Assured reliability of energy is a competitive regional advantage and can sustain emergency preparedness and response efforts. Disrupting the energy supply results in enormous social and business costs, and local governments will be critical during periods of crisis in responding to their residents and business needs and ensuring reliability of services.
4. **Embrace and exploit the region's access to, and distribution of, shale gas, but also prepare for environmental and social challenges.** The Region should recognize the importance of shale gas as a transitional energy source as coal plants are retired. The Region should also capitalize on the expectations for shale gas production and workforce opportunities in Ohio over the next two decades, as well as study adverse effects of hydraulic fracturing, and move to mitigate adverse environmental impacts. MORPC should explore partnerships with similar entities, such as the Eastern Ohio Development Alliance and Ohio Mid-Eastern Governments Association, which are working with local chambers, academic institutions as well as local, state and federal agencies on economic and community shale projects.
5. **Build strong transportation-focused industry collaborations focusing on warehouse and logistics support.** The Columbus Region has significant geographic and competitive advantages given its status as a transportation hub. The development of shale gas in eastern Ohio and wind resources in western Ohio can be leveraged with the Region's assets in rail, air and truck transport along with its warehousing and final parts assembly. Additionally, the Region is home to dozens of colleges and universities including The Ohio State University, one of the country's largest academic institutions involved in fuel research. The Columbus Region is uniquely poised to become a national leader in fuel efficiency and alternative fuel generation. The Region can set an example of public-private cooperation in fleet and fuel management.
6. **Embrace the economics of green.** The Region can drive forward an energy economy through its capacity of intellectual capital and assets in transportation, banking, insurance and regulation. The Region should target green companies as part of its business development efforts along with focusing on strategies to manage its energy costs to ensure long-term stable energy prices and supplies. Innovative financing models should be implemented that fill the gaps in project development for energy efficiency, alternative energy, and clean fuel technologies. Energy and cost savings from projects, especially savings in life cycle operating costs, should be highlighted as a benefit. Further, the reduction of the "soft costs" with energy projects, is needed and can be accomplished through streamlining processes that involve permitting, zoning, inspections and insurance.

The Region can incorporate other leading regional programs and emulate best practices, such as PACE, energy aggregation, and coordinated regional stakeholder groups. These lessons can be leveraged with MORPC's Central Ohio Green Pact, which can be the framework for a regional collaborative effort in the Columbus Region. By having the right tools, partners and resources in place, the Columbus Region will gain the competitive advantage through growth and innovation.

7. **Availability of regional energy data – Establishment of a data consortium and immersion in big data.** Underpinning good planning and development efforts is access to comprehensive, relevant, and digestible data. A limiting factor in the creation of this report and recommendations was access to free and relevant data. The Project Team recommends a Data Consortium be created around regional energy planning to identify, develop, and maintain a data set that is currently non-existent, difficult to find, cost-prohibitive, inconsistent or too generalized. Further, energy benchmarking programs could be considered that allow building owners to disclose their energy data and to compare their energy consumption with comparable neighbors. Publicly-owned buildings can lead by example in this effort, especially with implementation of energy improvements to provide the before and after effects.
8. **Proactively advance and insert regional policy priorities at the State and Federal level.** The energy economy of the Columbus Region will be built upon advocating energy policies that can sustain the Region's growth and success. Certainty in the marketplace is key for businesses to continue making strategic investments. Existing energy policies, such as Ohio's alternative energy and energy efficiency portfolio standards, should be maintained to preserve ongoing investments in the Region's energy economy. Additionally, the Region should ensure key community sectors, such as small businesses, are fully benefiting from the energy policies and initiatives, including the demand side management programs offered through energy utilities. With a focus on the full utilization and acceleration the clean energy policies and programs, MORPC has the ability to gather and engage the stakeholders across the region, including local government officials who can be key allies in reaching the targeted members of their community. Furthermore the Region must anticipate federal regulatory action such as Section 111(d) of the Clean Air Act to regulate and control emissions of greenhouse gases around application of new standards and technology.

Implementing the eight recommendations can help Columbus Regional leaders understand how much more productive the region can be if energy is used more efficiently and investments are planned around energy infrastructure, training, technology, and the built environment. Smart energy planning, an appropriately trained workforce, and competitively priced energy can attract and retain companies and create jobs.

Creating an Energy Strategy for the Columbus Region

This energy and economic framework for the Columbus Region was achieved after collecting more than 60 sets of state and local data. The datasets were gathered from a diverse group of public and private sources and stakeholders across a wide array of relevant regional sectors and analyzed through an energy lens.

To arrive at the outlined recommendations, NARC developed a Regional Energy Action Plan process intended to guide mapping and analysis of energy assurance and economic investment through partnerships and coalition building, data analysis, and assessments of a region's current and emerging energy and economic capacities. Through the course of this project, the Project Team provided technical support to ongoing efforts in the Columbus Region, evaluating the effectiveness and opportunities in energy planning activities and providing a series of local recommendations, and building a framework for other regions to implement similar planning and investment processes.

The *Regional Energy Action Planning* efforts in Columbus Region involved four separate phases.

- **Phase I** — Identify appropriate regional partners and organizations with access to information key to understanding local energy and economic opportunities; conduct extensive outreach to obtain necessary information.
- **Phase II** — Conduct in-depth analysis of the Columbus Region's regional infrastructural, social, cultural, economic and energy assets, challenges and opportunities. Compile existing local, regional and state energy policies to provide a baseline from which to develop conclusions, recommendations and an energy-planning framework.
- **Phase III** — Holistically assess data gathered during Phases I and II. Develop a report identifying the major challenges, successes and lessons learned during the research phase, as well as the potential broader regional impacts and methods of the Regional Energy Action Plan for use by other regional planning agencies and local governments nationwide. Conduct a peer review of the draft report with state and regional energy experts.
- **Phase IV** – Reconvene stakeholders after the *Report's* release, gain consensus on the recommendations and develop a strategy for moving forward.

More on the methodology used in developing the Columbus Region's *Regional Energy Action Plan* is available in Appendix A.

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