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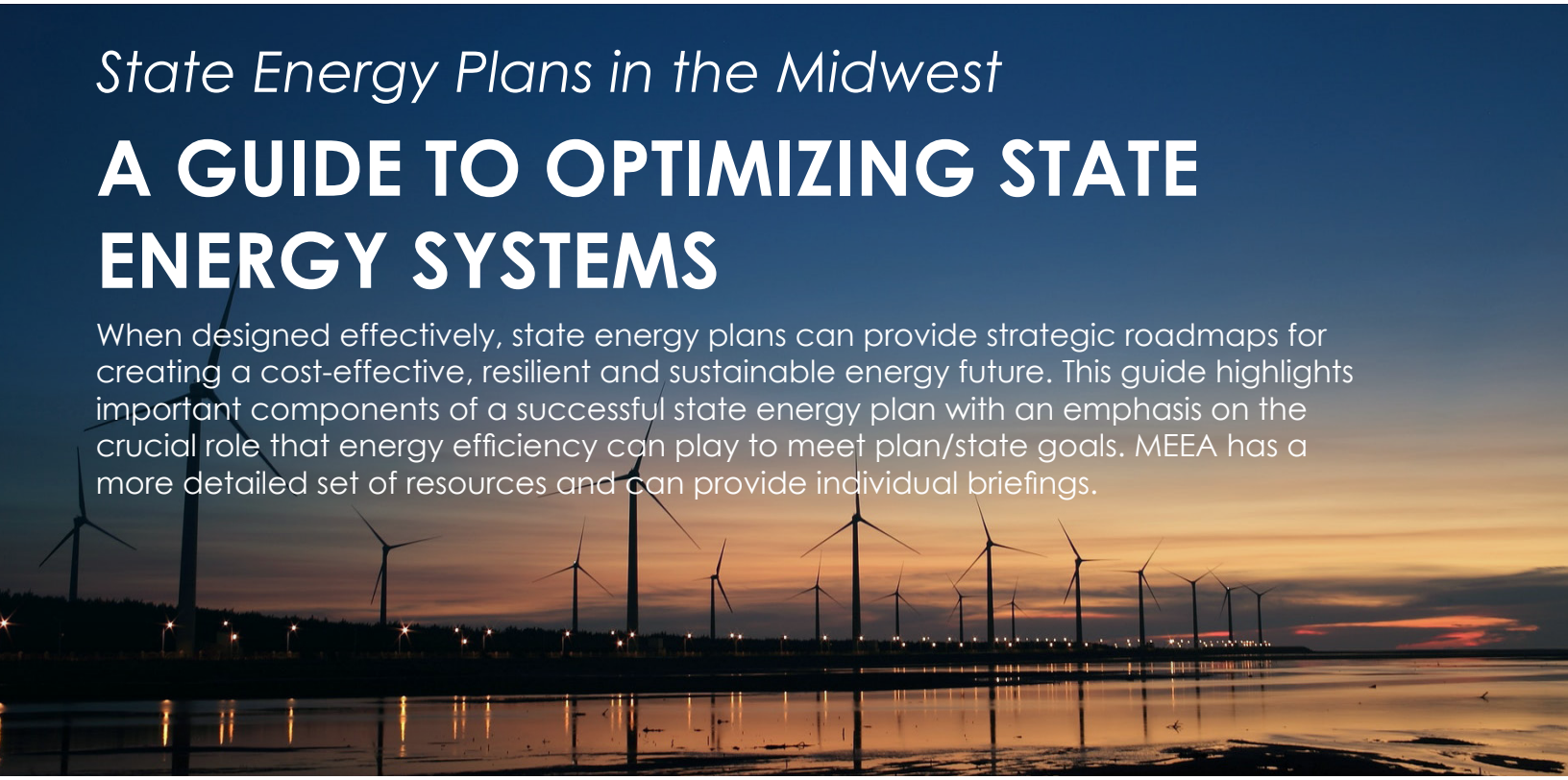

State Energy Plans in the Midwest

A GUIDE TO OPTIMIZING STATE ENERGY SYSTEMS

When designed effectively, state energy plans can provide strategic roadmaps for creating a cost-effective, resilient and sustainable energy future. This guide highlights important components of a successful state energy plan with an emphasis on the crucial role that energy efficiency can play to meet plan/state goals. MEEA has a more detailed set of resources and can provide individual briefings.

What is a state energy plan and why does it matter?

A state energy plan analyzes all aspects of the current energy system, including emerging challenges and opportunities, and provides an actionable strategy for reaching energy policy goals. It is a critical tool for helping policymakers determine how to achieve both energy consumption and emissions reduction targets, integrate emerging clean energy technologies and promote sustainable economic development in their communities.

Why is energy efficiency so important?

Energy efficiency is a key component in a state energy plan because it is often the lowest-cost resource and creates economic, environmental and health benefits. It also helps to sustainably mitigate energy affordability challenges that are prevalent in under-resourced communities (i.e., low-income, rural, seniors, BIPOC, etc.). In essence, it is both a tool for addressing energy inequities and for strengthening the overall energy system.

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GETTING STARTED: SETTING A FOUNDATION

State energy plans often begin with an initial data collection effort to establish baseline metrics and understand the "current state" of the state's energy sector.

Energy sources:
Identify the state's current and projected fuel mix, including electricity generation/procurement, natural gas supply and annual consumption for each, plus delivered fuels and transportation fuels

Energy industry:
Understand the in-state energy industry, including generation, distribution, and transmission, as well as system operators and maintenance entities and the respective workforces

Energy demand:
Understand the historical and projected trends in energy demand, as well as granular analysis of seasonal load shapes and key large energy users

Levelized energy cost:
Understand the historical and projected trends in cost of energy and trends in the underlying variables that impact cost

Policy inventory:
Identify what current energy-related policies or regulations exist that will likely influence plan implementation

Energy efficiency potential studies:
Understand the technical, economic and achievable potential for a state to reduce its energy demand/usage of both electricity and natural gas in all sectors

INTEGRATING EE INTO OVERARCHING POLICY OBJECTIVES

State energy plans typically focus on a set of overarching policy goals generally centered on reduced consumption, increased resiliency and cleaner energy sources that are advanced by enacting the plan. Integrating EE into state energy plans is one pathway for achieving such goals.

Energy System Resilience

Energy efficiency supports two key aspects of resilience—energy reliability and energy affordability—by reducing overall energy demand and demand during peak hours to stave off excess generation, energy import, transmission and distribution costs. Energy efficiency helps to "right-size" the grid and free capital for investments that enhance system resilience.

Economic Development

Low-cost and reliable energy benefits consumers economically and contributes to business competitiveness and attractiveness. Energy efficiency jobs constitute at least 70% of the clean energy workforce and one of the largest parts of the overall energy workforce. They are permanent local jobs and workforce programs can be designed to recruit talent from under-resourced communities, expanding access to economic opportunity.

Equity

Energy efficiency presents a direct opportunity to address environmental, economic, housing and energy-related inequities across racial, urban/rural and socioeconomic lines. In one example, energy efficiency can be advanced through investment in existing housing infrastructure to improve energy affordability and reduce the energy burdens of renters and homeowners alike. Energy efficiency programs are nimble and, with regulatory support, enable targeted investment in specific communities or populations.

Environmental Protection

Energy efficiency supports improvement of both indoor and outdoor air quality and is among the most cost-effective and high-impact ways to reduce greenhouse gas (GHG) emissions. By reducing pollution from emissions, energy efficiency also helps alleviate health issues, such as respiratory and heart diseases, thereby improving public health and reducing costs.

STRATEGIES FOR EE INTEGRATION

Energy efficiency is relevant to every energy-consuming sector and type of infrastructure.
The following strategies describe ways to incorporate energy efficiency into state energy plans, including around particular sectors of energy usage and/or types of intervention.

End-Use Energy Usage Sectors:

Building Infrastructure (Residential, Commercial and Publicly-Owned)

% total end-use consumption nationally: **28**

EE strategies for all types of building stock, new and existing, create immediate and long-term energy savings. Building energy efficiency can be incorporated into state energy plans through:

Policies
- Energy codes
- Building performance standards
- Energy benchmarking

Initiatives for emerging technologies:
- Building electrification
- Grid-interactive efficient buildings

Transportation

% total end-use consumption nationally: **37**

Transportation is intertwined with many critical socio-economic and equity issues. Energy efficiency can be integrated into transportation system strategy through:

- Electrification initiatives
- Fuel efficiency standards
- Multimodal transportation infrastructure policy

Industry (Manufacturing, Mining, Construction)

% total end-use consumption nationally: **35**

About 40% of national energy efficiency potential resides in the industrial sector and the greatest opportunities for industrial efficiency are in heavy manufacturing states, including:

- Illinois
- Indiana
- Kentucky
- Michigan
- Ohio

Improving industrial energy efficiency is a key pathway to a robust state energy plan and essential to meeting clean energy goals.

Types of Interventions:

Utility-System Interventions: Various incentives can drive utilities to innovate to improve efficiency related to electricity, natural gas and the energy-water nexus. In terms of general approaches, there are policies (e.g., Energy Efficiency Resource Standards), planning tools (e.g., Integrated Resource Plans) and other technical aids (e.g., National Standard Practice Manual for Distributed Energy Resources) that can help facilitate the integration of EE into short- and long-range utility energy planning decisions.

Public Sector Interventions: Public sector leaders and decisionmakers can prioritize EE through lead-by-example programs targeting publicly-owned infrastructure and assets. For example, they can improve energy efficiency in public building stock and public transportation and incorporate behavioral energy efficiency strategies to curtail their own consumption. They also can act as a clearinghouse for information and data, becoming a source of technical assistance for other non-public actors.