

INTEGRATED RESOURCE PLANNING

Basics of an Effective Resource Plan

In response to volatility in the fuel market and concerns over generating capacity, many states in the 1980s began requiring electric utilities to develop **Integrated Resource Plans (IRPs)**. IRPs examine both energy supply and demand and identify risks that could prevent utilities from meeting their customers' long-term energy needs at reasonable costs.

An IRP is a planning tool – it is neither a metric nor a measure to achieve particular goals. A basic IRP covers the following topics:

- Reliability
- System demand
- System growth
- Fossil and renewable energy resources
- Baseload and peaking generation
- Strategies to enhance energy security
- Energy efficiency policies and programs
- Applicable federal and state laws/policies
- Strategies to minimize costs for customers

Utility Long-Term Planning in the Midwest



Among the thirteen Midwest states, **nine** engage in traditional IRPs, while **four** have another type of planning process. Each state's planning processes vary by filing requirements and frequencies.

Not All IRPs Are Created Equal

IRPs that result in more cost-effective energy efficiency usually include the following additional features:

- An up-to-date energy efficiency potential study is incorporated as the basis for evaluating demand-side management (DSM) resource options.
- Energy efficiency is configured as a selectable resource in planning models, rather than 'baked in' to load forecasts.
- Supply and demand-side resources are allowed to compete fairly on a cost basis in capacity expansion models.
- The IRP cycle is staggered with the DSM planning cycle, so the results from one process inform the following cycle of the other process, and so on.

Policy in Brief

MINNESOTA

IRP process requirements are found in states with and without energy efficiency resource standards. Long-term targets for energy savings can be incorporated into a utility's IRP as load reduction from DSM measures, as is the case in Minnesota.

In 2007, the Minnesota Legislature established the Conservation Improvement Program and amended it in 2021 with the Energy Conservation and Optimization (ECO) Act. **The ECO Act mandates that investor-owned electric utilities must save 1.75% of sales each year.** While utilities are permitted to request a lower target, that target can be no lower than 1% per year for IOUs. Utilities have consistently achieved greater savings than the minimum required by statute. Recently released plans show that utilities are projecting to save 2.26% (Xcel), 2.84% (Minnesota Power) and 3.01% (Otter Tail) in 2024.



Furthermore, in 2023, the Minnesota Legislature mandated that the state's electric utilities must generate or procure 100% carbon-free resources by 2040. This mandate is likely to significantly impact future IRPs.

Changing Landscape of Gas Planning

Historically, only electric utilities have engaged with this kind of formalized long-term planning process. Following the lead of Washington, Oregon and Idaho, some Midwestern states have begun to consider if and how gas utilities should think about integrated resource planning. The Minnesota Public Utilities Commission has opened dockets on alternative gas resources and the future of natural gas, both of which are informing its ongoing workshop series on what a future gas IRP could look like. Between renewable natural gas, hydrogen, electrification and other alternative gas resources, gas utilities have more to consider in future planning than ever before.

Utility Resource Planning in the Midwest

Integrated Resource Plans

STATE	PLANNING HORIZON	FREQUENCY	POLICY DETAILS
IN	20 Years	Every 3 years	Indiana's IRP rules require consideration of both supply- and demand-side resources and strong stakeholder engagement.
KS	Utility-specific	Utility-Specific	Kansas does not have general IRP requirements, but the Kansas Corporation Commission has ordered IRPs in specific cases. Individual utilities run internal resource planning processes.
KY	15 Years	Every 3 Years	Kentucky IRPs must consider conservation, load management and demand-side measures in the utility's plan to meet future energy needs.
MI	5, 10 & 15 Years	Every 5 Years	The Michigan Public Service Commission provides statewide baseline modeling assumptions and required common scenarios for utility IRPs. Utilities must demonstrate that plans meet energy waste reduction requirements.
MN	15 Years	Every 2 Years	Minnesota's IRPs must consider demand-side resources, including conservation and demand response.
MO	20 Years	Every 3 Years	Missouri IRP rules require that demand-side resources are considered consistently to supply-side resources.
NE	20 Years	Every 5 Years	Nebraska directs utilities to incorporate demand-side and renewable resources in IRPs and to consider the life-cycle costs of resource options.
ND	15 Years	As Ordered	North Dakota's IRPs must include least-cost supply options and may not select resources based on carbon cost, emissions or other externalities. There are no requirements for demand-side resources to be selected, though they may be considered.
SD	10 Years	Every 2 Years	South Dakota requires electric utilities to submit a 10-year plan, including a statement of efforts towards "efficient load management."

Utility Resource Planning in the Midwest

Other Planning Processes

STATE	PLANNING HORIZON	FREQUENCY	POLICY DETAILS
IL	5 Years	Annually	Illinois IOUs submit annual procurement plans to the Illinois Power Agency that include assessment of potential cost-effective demand-side resources to meet annual energy savings goals.
IA	20 Years (electric); 5 years (gas)	Every 5 Years	Iowa does not require IRPs. When utilities file their 5-year energy efficiency plans, they must include an energy needs forecast with a horizon of 20 years for electric utilities and 5 years for gas.
OH	10 Years	Annually	Ohio's electric IOUs file an annual forecast report that includes a minimal resource plan and should discuss how demand-side programs can meet resource needs.
WI	4 Years	Every 4 Years	Wisconsin's commission undertakes a quadrennial planning process to set statewide goals for energy efficiency and renewables. It also conducts a biennial strategic assessment of supply adequacy and reliability.