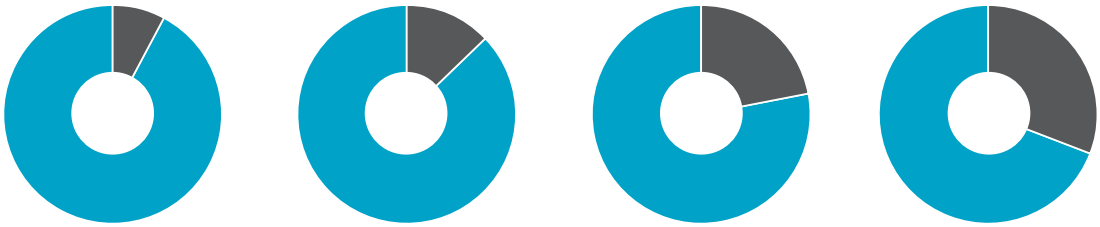
Renewable Energy

Renewable Energy in Our Electricity Supply



Our Approach

Renewable energy sources play an important role in our diverse energy supply and the responsible transition to a more sustainable energy future. As an early adopter of wind and solar energy, we are well positioned to meet the renewable standards of the states we serve, but our interest goes beyond these requirements. Our customers and the communities we serve want and expect more. They look to Xcel Energy to meet their clean energy needs in the most economical, reliable way. To that end, we continue to seek cost-effective opportunities to acquire new renewable energy sources and to offer customers additional program options that fulfill their interests.

Xcel Energy Renewable Energy Portfolio

2015 Renewable Energy Capacity (in MW-AC)										
	Wind	Hydro	Solar					Biomass	RDF/ Landfill	Total
			Large Universal	Community Gardens	On-site		Total Solar			
					Solar Rewards	Non-Solar Rewards				
Colorado	2,566	66	137	14	222	3	376	—	3	3,011
Southwest	1,775	—	50	0	7	—	57	—	—	1,832
Upper Midwest	2,216	312	5	<1	15	6	26	189	109	2,852
Total	**6,557**	**378**	**192**	**14**	**244**	**9**	**459**	**189**	**112**	**7,695**

Compliance with State Renewable Energy and Portfolio Standards

Xcel Energy is on pace to surpass renewable energy requirements in the states we serve through at least 2030. New Mexico is an exception, where the company anticipates meeting the state's wind energy requirement through 2024 and has requested a waiver for acquiring additional solar energy from large, universal solar power plants due to constraints under the state's Reasonable Cost Threshold (RCT).

Summary of State Renewable Energy and Portfolio Standards

Colorado Renewable Energy Standard	30 percent of retail sales by 2020, with 3 percent from distributed generation (DG), including at least 1.5 percent from retail net-metered DG resources and up to 1.5 percent from wholesale DG resources (defined as resources ≤30 megawatts located in Colorado)
Michigan Renewable Portfolio Standard	10 percent by 2015
Minnesota Renewable Portfolio Standard	18 percent in 2015. 30 percent by 2020 with at least 24 percent of sales from wind; 1.5 percent of sales from solar energy by 2020, with at least 10 percent of this from on-site solar under 20 kW
New Mexico Renewable Portfolio Standard	20 percent by 2020
North Dakota Renewable Portfolio Objective	10 percent by 2015 (no objective beyond 2015)*
South Dakota Renewable Portfolio Objective	10 percent by 2015 (no objective beyond 2015)*
Texas Renewable Portfolio Standard	Based on statewide capacity, Xcel Energy's requirement is 3.42 percent of retail sales in 2015
Wisconsin Renewable Portfolio Standard	Statewide goal of 10 percent by year-end 2015, and each utility must increase renewable energy 6 percent over its baseline; for Xcel Energy this is 12.89 percent in 2015

*Indicates the state has a voluntary renewable energy objective rather than a mandated standard

Renewable Energy Credits

A renewable energy certificate or credit (REC) is created for every megawatt-hour of renewable electricity generated (1 REC = 1 MWh). RECs are created by statute or voluntary trading programs to promote market-based, cost-effective development of renewable energy. RECs can be disaggregated or separated from the underlying renewable energy and sold separately to utilities and other consumers.

Xcel Energy uses RECs to confirm or validate compliance with state renewable energy standards throughout our service territory. Our company carefully tracks its REC ownership and works to comply with the rules and best practices around renewable energy claims. Only parties that own or retire RECs can claim to use the renewable energy, according to the Federal Trade Commission's Green Guides. Although, renewable energy separated from or without the associated REC can retain its value and be used for compliance with environmental regulations.

We continue to look for ways to increase the value of the renewable energy on our systems through the sale of RECs. In several states, Xcel Energy has more renewable energy on its system than is needed for compliance with renewable energy standards. Based on market opportunities and the anticipated expiration of RECs, we sell some of our RECs. In 2015, we sold nearly 1.3 million RECs, about 279,000 more than in 2014. The renewable energy that generated these RECs came from Colorado, New Mexico, Texas and the Upper Midwest. Our customers benefit by sharing in any profits associated with the sales. REC sales make up a minor portion of our REC holdings. For example in 2015, we sold about 5 percent of the RECs that we generated for that year.

Consistent with The Climate Registry protocols, Xcel Energy does not presently adjust its carbon dioxide emissions reporting for REC sales. However, because the treatment of carbon dioxide attributes associated with REC sales under future greenhouse gas reporting protocols is uncertain, we have calculated that under an alternative carbon-reporting scenario emissions associated with REC sales would add less than 1 percent of emissions to our total carbon dioxide emissions for 2015. This alternative assumes the avoided carbon emissions related to renewable energy are added back to the company's overall emissions when RECs are transferred.

2015 REC Sales Transactions by Vintage Sold

	2009	2010	2012	2013	2014	2015	2016	Total
Colorado			—	—	5,600	660,228	206,847	872,675
Southwest			—	—	37,000	300,000	—	337,000
Upper Midwest			59,400	550	20,000	—	—	79,950
Total			**59,400**	**550**	**62,600**	**960,228**	**206,847**	**1,289,625**

Renewable Development Fund

Xcel Energy's Renewable Development Fund (RDF) supports the startup, expansion and attraction of renewable electric energy projects and companies in Minnesota. The RDF also stimulates research and development into renewable electric energy technologies. Our RDF efforts are designed to increase the market penetration of renewable electric energy resources at reasonable costs, which benefits customers. RDF is financed by our Minnesota and Wisconsin electricity customers.

Projects that receive an RDF grant award are evaluated by a seven-member advisory board consisting of two representatives of environmental organizations, one representative of the Prairie Island Indian Community, an industrial/commercial customer representative, a residential customer representative and two Xcel Energy representatives. Xcel Energy recommends projects for the MPUC to approve.