



2022 Sustainability Report - Orrville

As a member of AMP, you choose the power supply resources to best provide cost-competitive and reliable electricity to your customers. This Sustainability Report is focused on the source and emissions from the electricity your municipal electric system produced or procured. It does not include emissions from fleet vehicles, or any other fuels used for heating and cooling (such as natural gas).

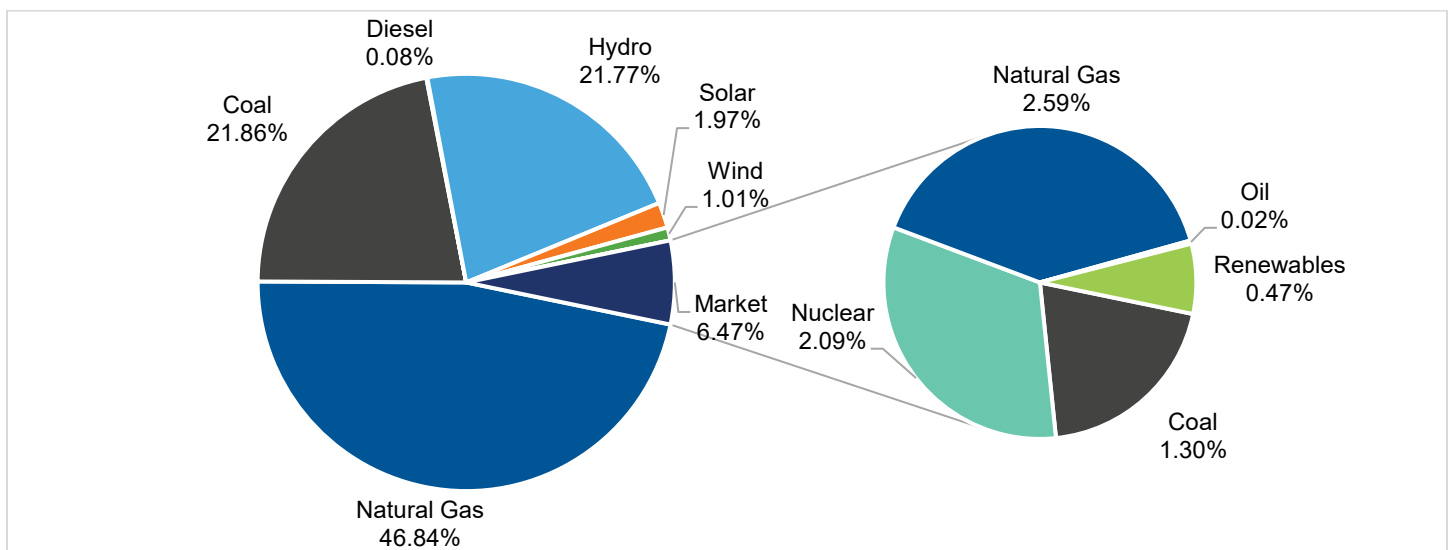
Resource Profile

The graphs below show Orrville’s resource portfolio organized by fuel type. It includes all wholesale power sources known by AMP (projects subscribed to or owned, power purchase agreements (PPA), and market power purchases). Orrville’s ability to claim that the energy used by its customers is renewable is affected by sales and purchases of Renewable Energy Certificates (REC’s).

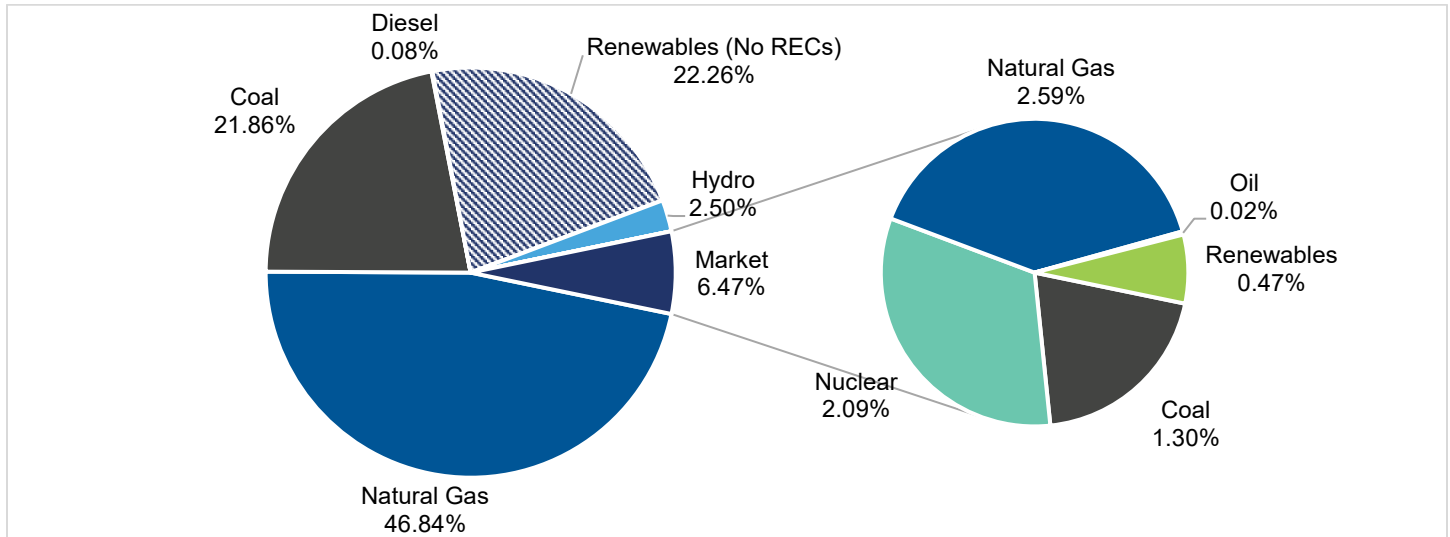
Total MWh, based on 2022 data (prior to REC transactions) = 313,375

Source %	Projects
Coal 21.86%	Prairie State, Muni Coal
Diesel 0.08%	Muni Diesel
Hydro 21.77%	AMP Hydro, Greenup, Meldahl, NYPA
Market 6.47%	
Natural Gas 46.84%	AFEC
Solar 1.97%	AMP Solar Phase II
Wind 1.01%	Blue Creek Wind

Fuel Types (prior to REC transactions) = 25% renewable



Fuel Types (post REC transactions) = 2.5% renewable



Emissions Profile

Each fossil-fueled source of energy in a power supply portfolio emits greenhouse gas emissions (aka CO₂e¹), and other pollutants. The table below shows the estimated emissions from your energy supply. For generation projects in which renewable energy certificates (RECs) were sold, market emission factors were used.

Emissions prior to REC transactions	CO ₂ e	SO ₂	NO _x
Emission Estimate (metric tons)	144,728	731.71	99.71
Emission Rate (lbs./MWh)	1,018	5.15	0.70

Emissions post REC transactions	CO ₂ e	SO ₂	NO _x
Emission Estimate (metric tons)	170,602	747.21	119.20
Emission Rate (lbs./MWh)	1,200	5.26	0.84

**All of the data and estimates in this report pertain only to wholesale power sources known by AMP and are shown in the resource profile.*

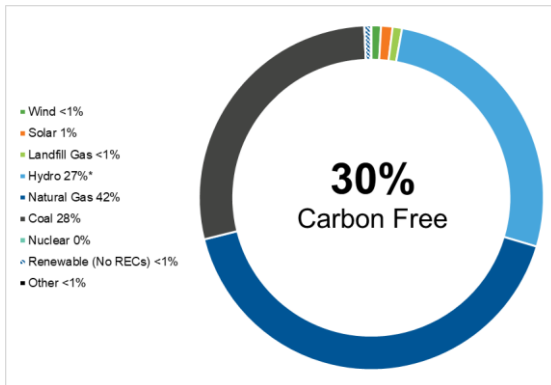
¹Carbon dioxide equivalent or CO₂e means the number of metric tons of CO₂ emissions in addition to other greenhouse gases with the same global warming potential as one metric ton of CO₂ (methane, nitrous oxide, fluorinated gases).

AMP and PJM Market Benchmark

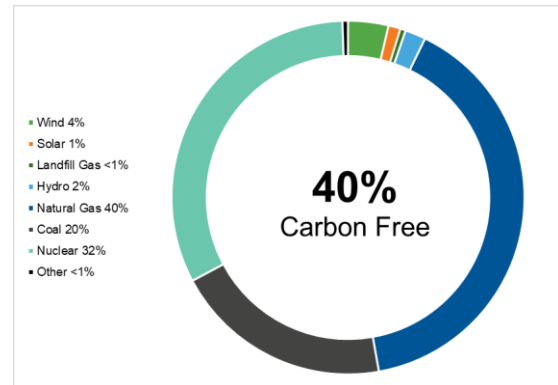
Resource and Emissions Profile

The table and charts below show the respective emission rate and resource profiles for AMP PPA's and the net generation of assets AMP owns (in whole or part) prior to project participants sale of RECs. This information is compared to power generated within PJM. The information is meant for comparative purposes. Note that while AMP has a higher percentage of renewables (approx. 30% compared with 7% in PJM), PJM currently has a large percentage of nuclear power (32%) which may be reduced in the future due to planned retirements.

AMP 2022**



PJM (State of the Market Report, 2022 Table 3-62)



*includes Greenup (48.6%), Meldahl, Cannelton, Smithland, Willow Island, SEPA, and NYPA (not Cleveland)

** AMP fuel mix is prior to any REC transactions

Emission Rates	CO ₂ e	SO ₂	NO _x
AMP Emission Rate (lbs./MWh)	943	0.36	0.20
PJM Emission Rate (lbs./MWh)	818	0.49	0.37

Emission Factors

All emission estimates are based on the emission factors below.

Source	CO ₂ e lbs. / MWh	SO ₂ lbs. / MWh	NO _x lbs. / MWh
AMP Fremont Energy Center (combined cycle natural gas)	841	0.00	0.07
Prairie State Energy Campus (AMP share, excludes scheduling deviations)	2,287	0.89	0.34
Solar, Wind, Landfill gas to energy, Hydropower	0	0.00	0.00
Muni Diesel	1,321	0.01	25.12
Muni Coal	3,027	52.73	6.14
PJM Interconnect, LLC (eGrid 2021)	818	0.49	0.37

*If present, Muni diesel and Muni gas units are estimated.

If you have questions about your report, please contact Corey Hawkey, director of member programs and sustainability at chawkey@amppartners.org or 614-307-9432.