

Air Quality-Related Public Health Benefits of 100% Renewable Madison

Prepared by David Abel, PhD, University of Wisconsin – Madison, Nelson Institute Center for Sustainability and the Global Environment, COWS dwabel@wisc.edu

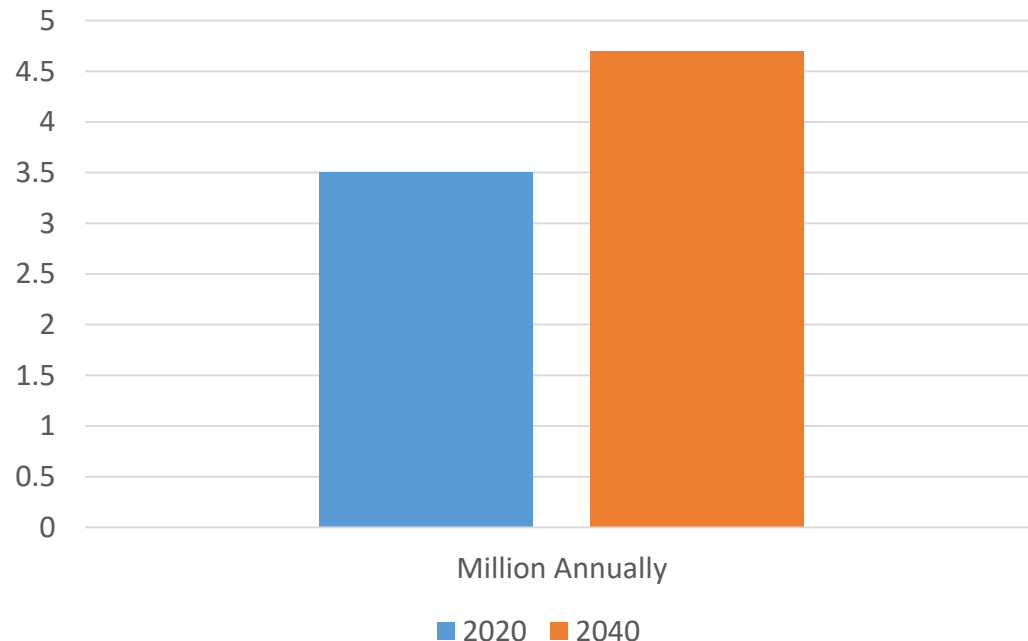
Josh Arnold, Navigant Consulting, Inc., contributed to this report. josh.arnold@navigant.com

Source: <https://madison.legistar.com/View.ashx?M=F&ID=7096701&GUID=C74335CB-087A-47EB-B120-58F782494B21>

100% Renewable Madison will save dollars and lives through reductions in air pollution

Changes to City Operations

\$3.5 - \$4.7 Million in Regional Benefits



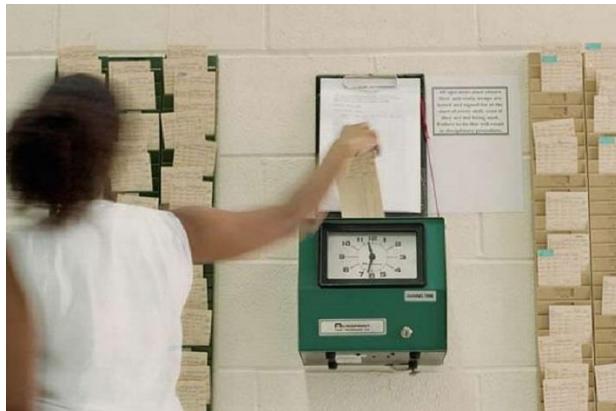
\$14-\$18 Annually Per Capita



100% Renewable Madison will save dollars and lives through reductions in air pollution

Changes to City Operations

25-32 work-loss days avoided per year



150-190 mild reduced-activity days avoided per year



One avoided premature death every 2-3 years



100% Renewable Madison will save dollars and lives through reductions in air pollution

Emissions Benefits	2020	2025	2030	2035	2040
Direct NO _x reduced (lbs)	16700	43900	57500	57700	57900
Direct SO ₂ reduced (lbs)	8100	17100	14600	14400	14300
Direct PM _{2.5} reduced (lbs)	1000	2200	2300	2300	2200
Direct NO _x reduced + RECs (lbs)	63600	84000	99600	99900	100300
Direct SO ₂ reduced + RECs (lbs)	69000	69200	69400	69400	69400
Direct PM _{2.5} reduced + RECs (lbs)	6100	6600	6900	6900	6900

Table 2: Emissions reductions by pollutant for key years in implementation.

“A significant portion of the benefits are from emissions avoided through investment in RECs, and thus the RECs should be purchased from sources within the regional electric grid whenever possible to maximize the benefit to Madison residents.”

Future studies to account for additional criteria pollutants and sources are warranted.

