



Daniel P. Wolf, Executive Secretary

STATE OF MINNESOTA PUBLIC UTILITIES COMMISSION

NOTICE OF UPDATED ENVIRONMENTAL EXTERNALITY VALUES

Issued: June 16, 2017

**In the Matter of the Investigation into Environmental and Socioeconomic Costs
Under Minn. Stat. §216B.2422, Subd. 3**

PUC Docket Number/s: E-999/CI-93-583 and E-999/CI-00-1636

Project Background: In its May 3, 2001 Order Updating Externality Values and Authorizing Comment Periods On CO₂, PM_{2.5}, And Application of Externality Values To Power Purchases, Docket No. E-999/CI-00-1636, the Commission used the Gross Domestic Product (GDP) Price Deflator Index to update the externality values adopted in its January 3, 1997 Order in Docket No. E-999/CI-93-583, and indicated that the values will continue to be updated as data becomes available from that index. The environmental externality values have been updated using the 2016 GDP Deflator index values published by the United States Department of Commerce on May 26, 2017. Further, the Commission is currently investigating the externality values in Docket No. E999/CI-14-643. A copy of the updated environmental externality values has been attached to this notice.

Full Case Record: All documents filed in this docket are available at mn.gov/puc, select *Search eDockets*, enter the year (00) and the docket number (1636), select *Search*.

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ENVIRONMENTAL EXTERNALITY VALUES

UPDATED THROUGH 2016¹

URBAN

Original (1995 \$/ton)

Inflation Adjusted Values

GDPIPD (2016 \$/ton)

Range of Values

Range of Values

Low

High

Low

High

SO ₂	112	189	0	0
PM ₁₀	4462	6423	6665.65	9594.88
CO	1.06	2.27	1.59	3.38
NO _x	371	978	554.22	1460.97
Pb	3131	3875	4677.19	5788.60
CO ₂	0.3	3.1	0.44	4.64

Environmental Externality values have been updated using United States Department of Commerce, Bureau of Economic Analysis 2015 Price Indexes for Gross Domestic Product (Table 1.1.9) released May 27, 2016.

METROPOLITAN FRINGE

Original (1995 \$/ton)

Inflation Adjusted Values

GDPIPD (2016 \$/ton)

Range of Values

Range of Values

Low

High

Low

High

	Low	High	Low	High
SO ₂	46	110	0	0
PM ₁₀	1987	2886	2968.25	4311.21
CO	0.76	1.34	1.13	2.00
NO _x	140	266	209.13	397.35
Pb	1652	1995	2467.82	2980.19
CO ₂	0.3	3.1	0.44	4.64

RURAL

Original (1995 \$/ton)

Inflation Adjusted Values

GDPIPD (2016 \$/ton)

Range of Values

Range of Values

Low

High

Low

High

SO ₂	10.00	25.00	0.00	0.00
PM ₁₀	562.00	855.00	839.52	1277.21
CO	0.21	0.41	0.30	0.61
NO _x	18.00	102.00	26.89	152.37
Pb	402.00	448.00	600.52	669.22
CO ₂	0.30	3.10	0.44	4.64

WITHIN 200 MILES OF MINNESOTA

Original (1995 \$/ton)

Inflation Adjusted Values

GDPIPD (2016 \$/ton)

Range of Values

Range of Values

Low

High

Low

High

SO ₂	10.00	25.00	0.00	0.00
PM ₁₀	562.00	855.00	839.52	1277.58
CO	0.21	0.41	0.30	0.61
NO _x	18.00	102.00	26.89	152.37
Pb	402.00	448.00	600.52	669.22
CO ₂	0.00	0.00	0.00	0.00

NOTE REGARDING THE USE OF SO₂ VALUES: In the January 3, 1997 Order Establishing Environmental Cost Values the Commission found that SO₂ damages would be internalized after 2000 and applying externality costs would be unwarranted. In Docket E-999/CI-14-643, the Commission is examining further updates of these values.

*****Revise***NOTE REGARDING THE USE OF CARBON DIOXIDE VALUES:** In its August 5, 2016 Order Establishing 2016 and 2017 Estimate of Future Carbon Dioxide Regulation Costs, pursuant to Minn. Stat. §216H.06, in Docket No. E-999/CI-07-1199 the Commission established an

estimate of the likely range of costs of future carbon dioxide regulation on electricity generation of \$9/ton to \$34/ton for CO₂ emitted in 2022 and thereafter. This range of values will be updated annually. A utility need not apply the CO₂ externality values in the above tables established pursuant to Minn. Stat. §216B.2422, subd. 3, in any year to which the utility applies the CO₂ costs derived pursuant to Minn. Stat. §216H.06.