

Regression Analysis

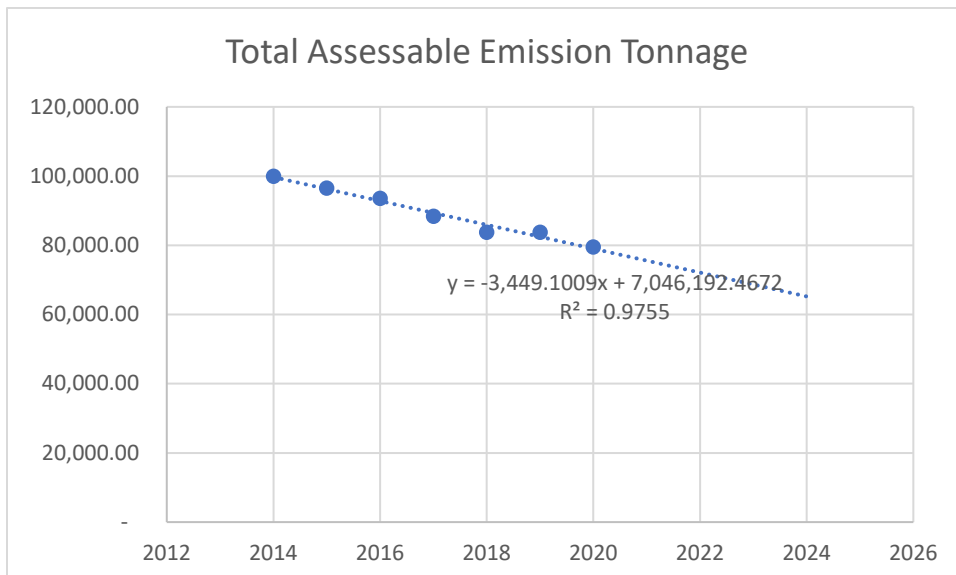
Approach

This report used a linear regression to project expected assessable emissions. The relationship between time and assessable emissions may not be strictly linear. However, the projection is short term, and is derived from the immediately preceding years, so linear regression provides a reasonable estimate.

This report is based on the linear regression of FY14 – FY20 data. Total units in the below table display actual assessed emissions by year. Division of these units into Title I and Title V Units is based on the 2018 EPA guidance document's clarification regarding Title I vs Title V stationary sources.

Actual Assessable Emissions			
Fiscal Year	Title I Units	Title V Units	Total Units
14	3,734.97	96,252.03	99,987.00
15	5,771.97	90,736.03	96,508.00
16	4,685.17	88,842.59	93,527.76
17	4,111.13	84,292.87	88,404.00
18	3,319.91	80,413.98	83,733.89
19	4,229.00	79,568.00	83,797.00
20	3,830.00	75,704.00	79,534.00

Application of linear regression to these data results in the following:



The regression analysis forecasts the following assessable emissions by year:

Forecast Assessable Emissions			
Fiscal Year	Title I Units	Title V Units	Total Units
21	3,641.99	71,918.01	75,560.00
22	3,475.70	68,634.30	72,110.00
23	3,309.46	65,351.54	68,661.00
24	3,143.23	62,068.77	65,212.00
25	2,976.98	58,786.02	61,763.00

Forecast Average*	3,326.97	65,697.29	69,024.26
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*Calculated at average of FY21 – FY25, with lowest forecast year given 3/4 weighting

Presuming the trend continues, the Department estimates the assessable emissions for those years as shown in the Forecast Assessable Emissions table. The assessable emissions projected for the next four years is 3,327 for Title I, and 65,697 for Title V.

The Department recommends using these average assessable emissions for use in setting the emission fee rates.