THE 2013 CANADIAN AIR QUALITY MODELLING PLATFORM AND THE FUTURE BASE CASES USED FOR POLICY REGULATIONS

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Introduction
The Air Quality Modelling and Applications Section (AQMAS) of Environment and Climate Change Canada (ECCC) has upgraded its modelling platform used to assist Canadian air quality regulators in policy developments. The updated platform, based on year 2013, contains various changes and substantial improvements from the previous 2010 platform, notably the base case and the future business-as-usual (BAU) projections, based on the latest available emission inventories for transportation, industrial sectors and wildfires.

2013 Emission Inventory
This 2013 modelling platform includes three consistent emission sets: the 2013 base case and two future business as usual (BAU) projections 2025 and 2035. The BAU projections are based on the 2013 emission inventory and the 2015 economic forecast. They incorporate the current federal and provincial regulations without the controls.

Future Projections
The emissions projections baseline scenario is designed to incorporate the best estimation available about economic growth as well as energy demand and supply.

The projections capture the impacts of future production of goods, and services in Canada.

Industrial and Residential

Transportation

Future Projections

Open Sources

Wildfires

2013 Canadian platform packages

Conclusion

We have developed a new 2013 Canadian emissions inventory platform for air quality model applications. A transition from 2010 to 2013 includes several updates. These improvements in the generation of Canadian emissions modelling files allow greater flexibility in the design of air quality modelling scenarios

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Agricultural Emissions Inventory: NH₃ emissions for livestock and fertilizer application from NAESI, Spatially allocated using 54 surrogates. Monthly emissions.

Agricultural Emissions 2013: NH₃

Fugitive dust inventory includes buildings & road construction, paved and unpaved roads, agricultural dust and mine tailing. This sector is processed separately to allow for the application of a land use based transport fraction.

Fugitive dust 2013: PM₂.₅

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2013 Canadian platform packages

The 2013, 2025 and 2035 inventories will be available on ECCC ftp site.

It includes:
• Inventory files,
• SMOKE ancillary files and scripts,
• Canadian surrogates package,
• Documentation.

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