



INTEGRATION OF THE AIR POLLUTANT EMISSIONS INVENTORY WITH THE NATIONAL GREENHOUSE GAS INVENTORY FOR THE TRANSPORT

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Change Canada

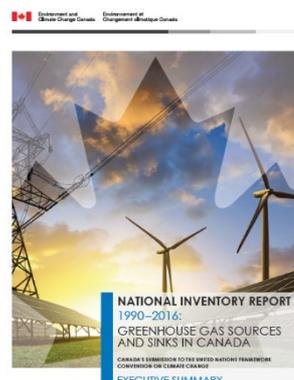


INVENTORY REPORTING AT ECCC SCIENCE AND TECHNOLOGY BRANCH

Greenhouse Gas Inventory
Air Pollutant Emissions Inventory
Black Carbon Inventory
Facility-reported Greenhouse Gas data



Canada



Canada



Canada



Canada



Environment and
Climate Change Canada

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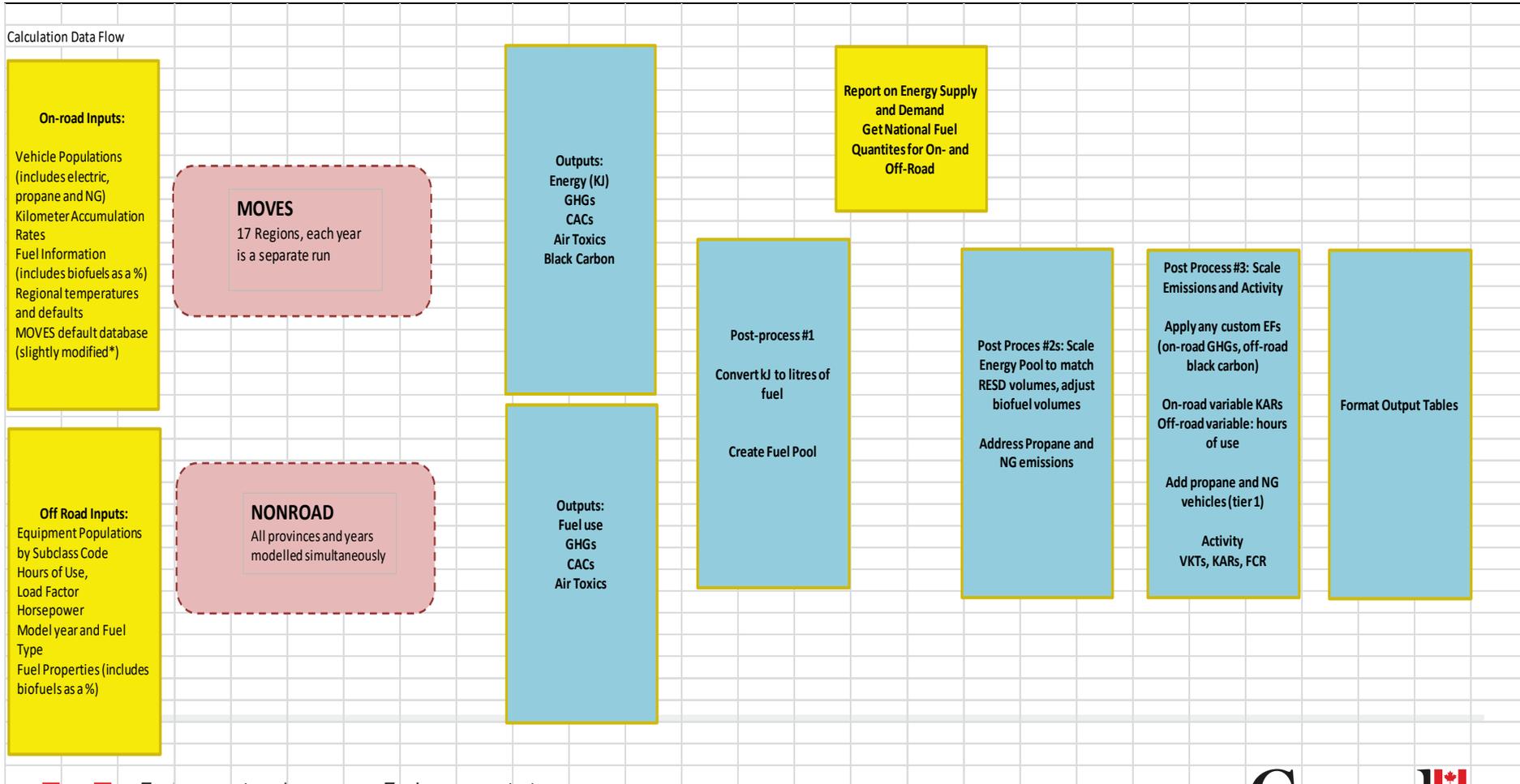
Canada

PROJECT

- Historically air pollutants and GHGs estimates were developed independently from each other in the National Inventory Report and the Air Pollutant Emissions Inventory
- Wanted to make the process more efficient and consistent
- **Opportunity:** Could we create a model that satisfies international reporting requirements as well as support domestic policy, regulatory work and projections?
- Combined, reviewed of all key inputs and models
 - vehicle fleets, distance travelled, biofuels, mileage, off-road equipment, modeling approach
 - validation and “road test” phase



PROCESS – PRODUCTION ENVIRONMENT



HARMONIZING BETWEEN TOP-DOWN AND BOTTOM-UP METHODS

- “Top down” refers to applying compiled fuel data to emission factors (info on underlying sources are either known or unknown)
- “Bottom up” refers to an activity based estimate built up from individual units.
- IPCC good practice considerations: (1) develop higher tier methods (i.e., bottom up) and (2) align fuel use with the national energy balance



-vehicle
population (#)
-driving rate
(km/yr)
-fuel efficiency
(l/100 km)



-equipment
population (#)
-hours of use (hr)
-brake-specific
horsepower (l/hp-
hr)



-flights (#)
-Origin-
Destination
(km)
-Fuel burn
rate (l/km)



Need to
compare
with fuel
volume
statistics



RESULTS AND BENEFITS

- Divide the work year into two parts:
 - Production
 - Revised annually
 - Continuous Improvement
 - Implemented once complete
- Production efficiencies have allowed us to focus on longer term improvements
 - Off-road hours of use, NONROAD model update, sector by sector review
 - Bottom up marine model
 - In-house development of fleet characteristics (VIN decoding)

