


*Evaluating government
plans and actions to
reduce GHG emissions in
Canada: **The state of play
in 2016***

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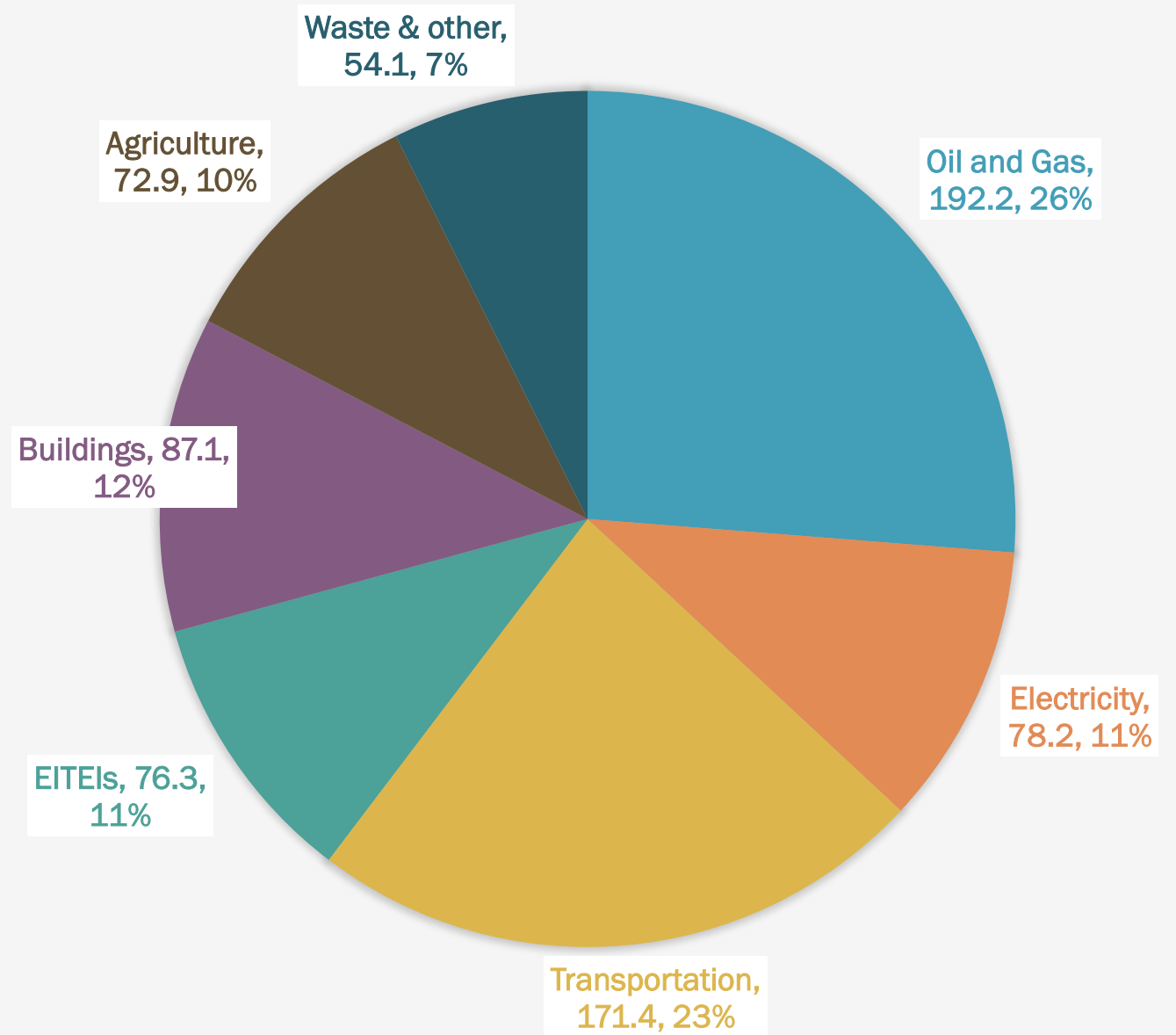
1. Context: a snapshot of GHG emissions and energy use in Canada
 2. Update on federal and provincial climate policies
 3. Update on GHG emission reduction targets
 4. Summary
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GHG Emissions in Canada (total)

By source (Mt CO₂e, 2014)

Reference: Environment Canada, *National Inventory Report 1990-2014* (2016)

Canada's 732 Mt of GHG emissions account for 2% of the global total

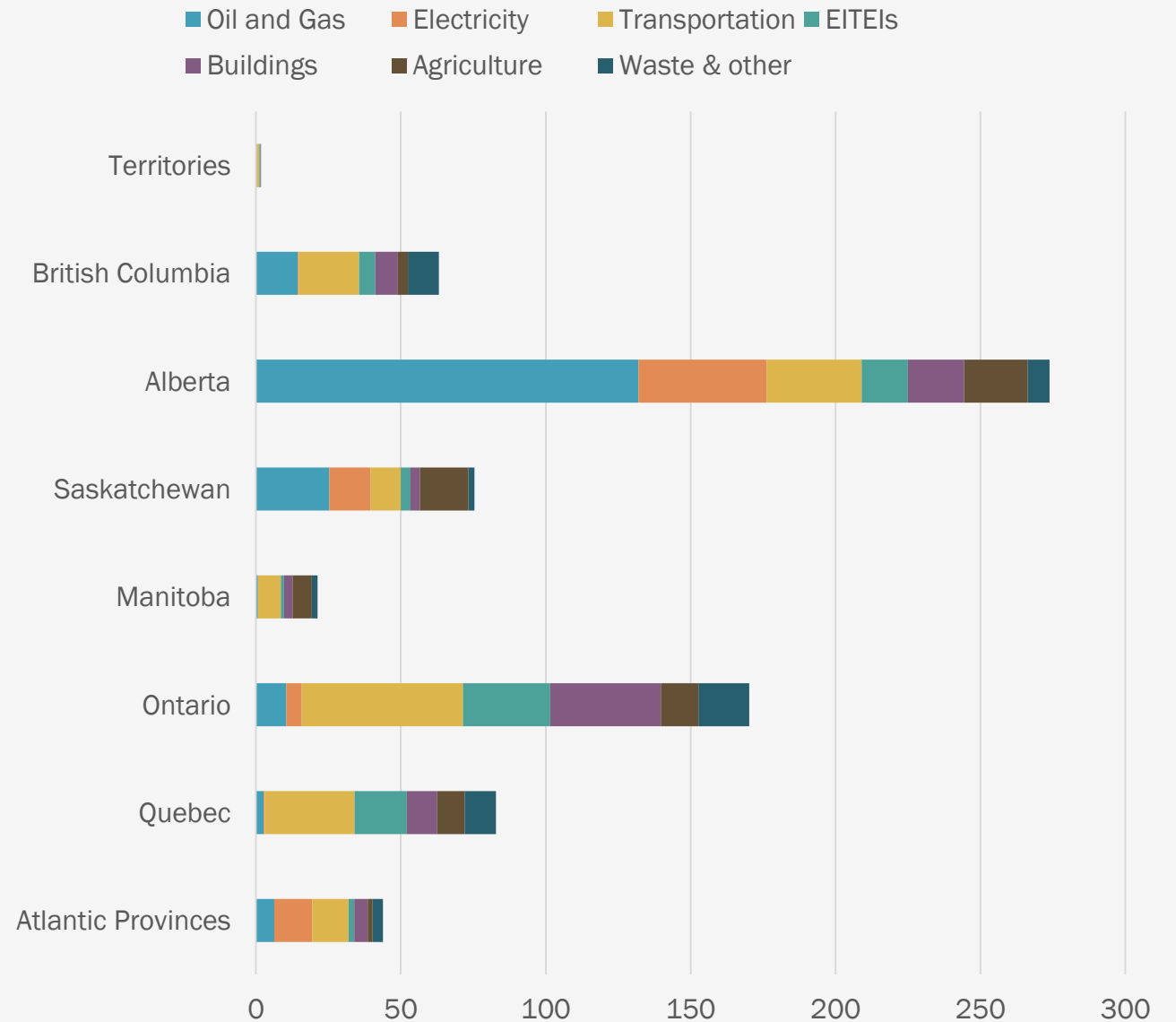


GHG Emissions in Canada (total)

By jurisdiction and source (Mt CO₂e, 2014)

Reference: Environment Canada, *National Inventory Report 1990-2014* (2016)

GHG emissions are concentrated in specific sectors in specific regions (the five largest blocks account for 41% of total emissions)

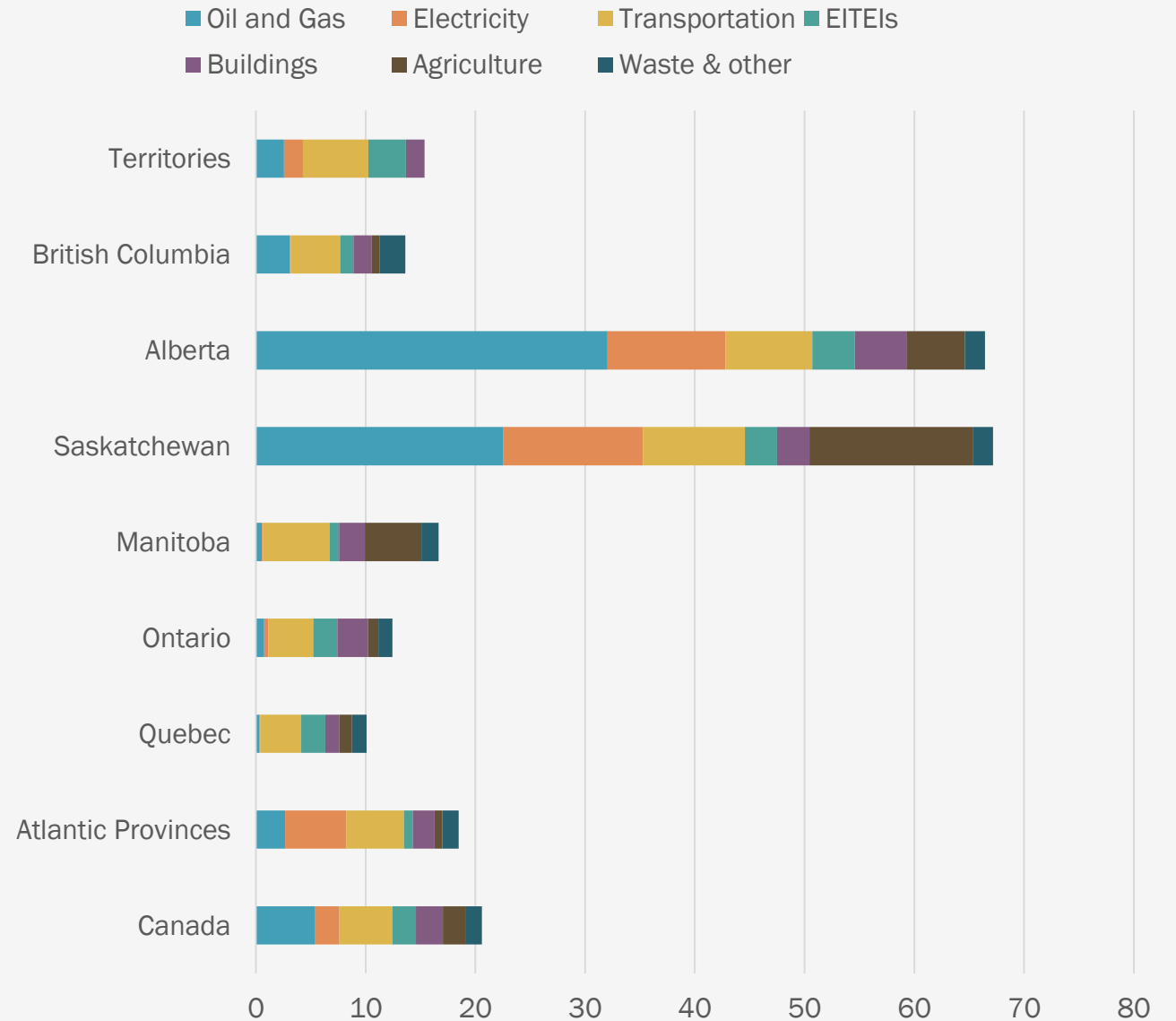


GHG Emissions in Canada (per capita)

By jurisdiction and source (tonnes CO₂e
per person, 2014)

Reference: Environment Canada, *National
Inventory Report 1990-2014* (2016) and
Statistics Canada, CANSIM Table 051-
0001

Provincial GHG emissions differences
are not primarily determined by
population size

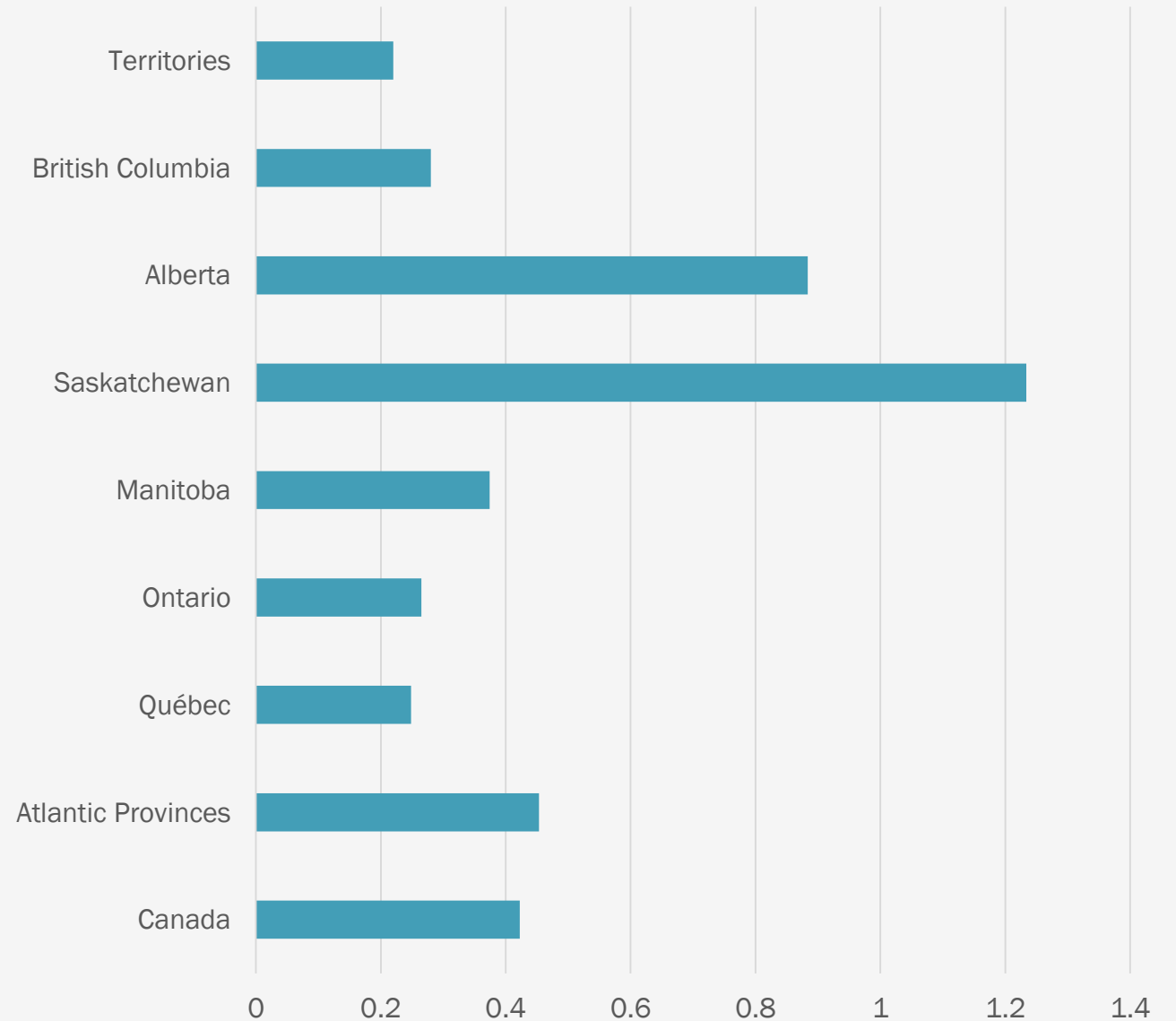


GHG Emissions Intensity in Canada

By jurisdiction (Mt CO₂e per \$1 billion GDP, 2014)

Reference: Environment Canada, *National Inventory Report 1990-2014* (2016) and Statistics Canada, CANSIM Table 384-0038

Provincial GHG emissions differences are not primarily determined by overall economic activity

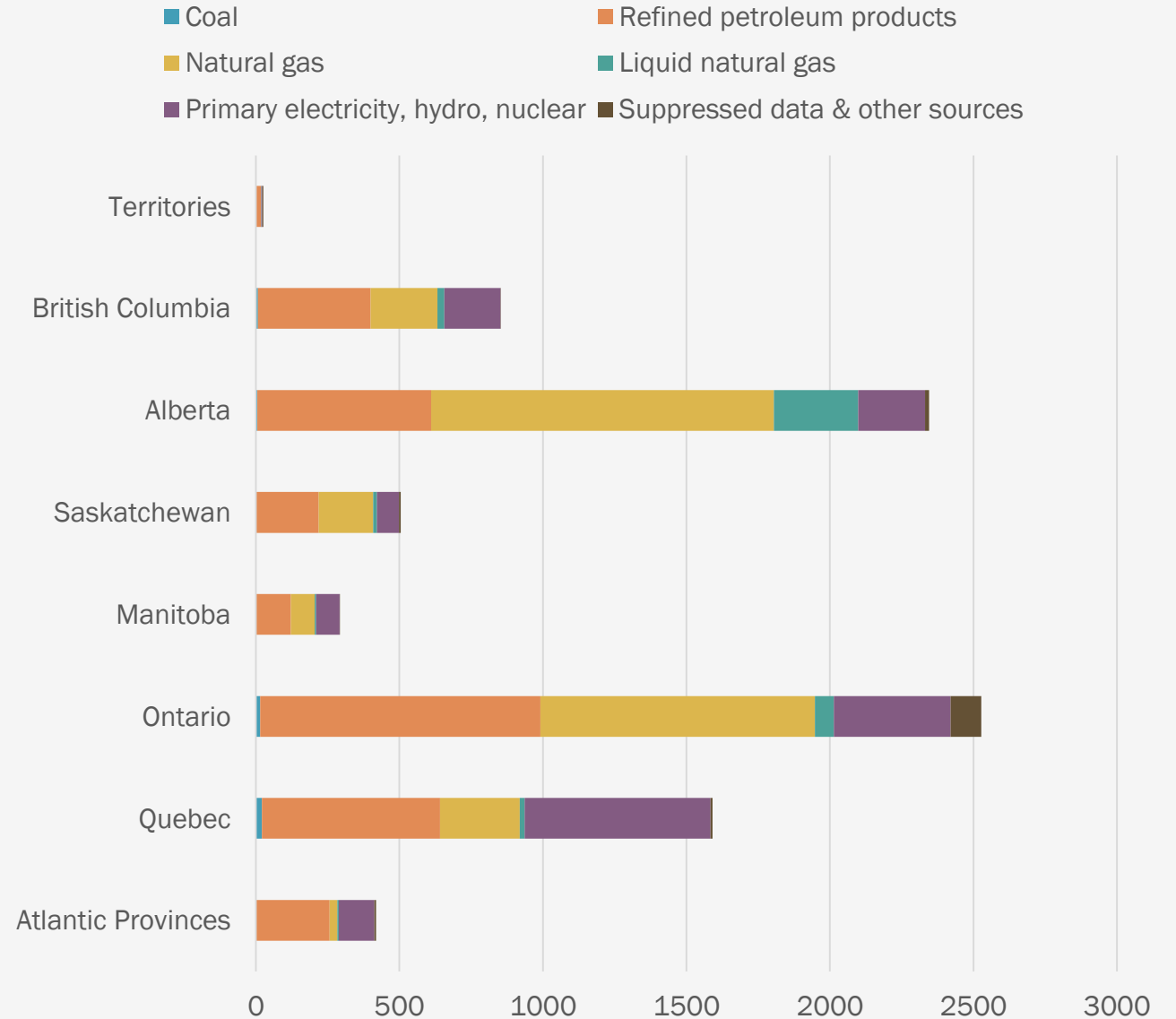


Energy Use in Canada (total)

By jurisdiction and source (petajoules,
2014)

Reference: Statistics Canada, CANSIM
Table 128-0016 & author's estimates

Overall consumption of fossil fuels is significantly correlated with total GHG emissions in any given province

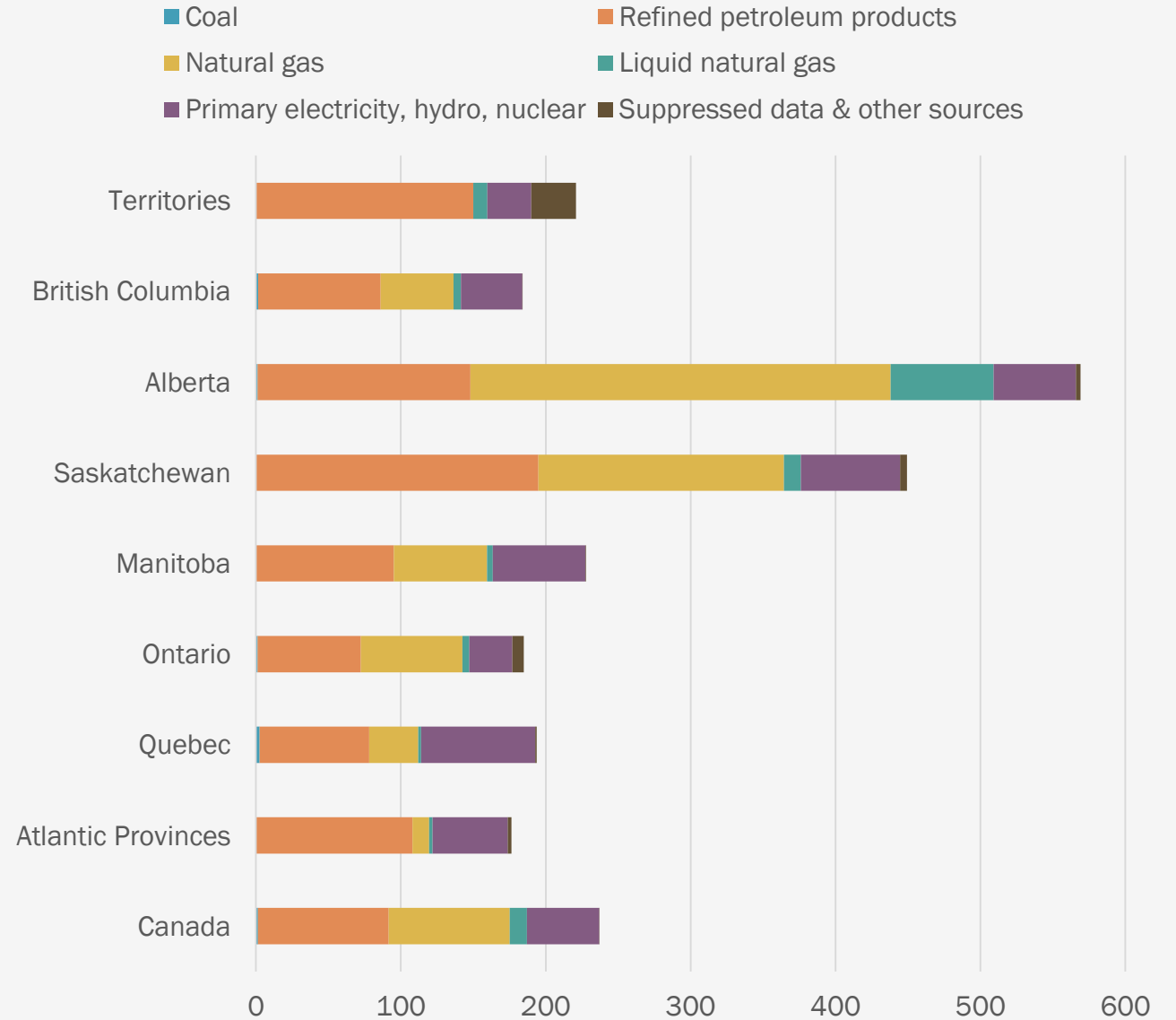


Energy Use in Canada (per capita)

By jurisdiction and source (megajoules per person, 2014)


Reference: Statistics Canada, CANSIM Table 128-0016 (and author's estimates) and CANSIM Table 051-0001

Average "individual" fossil fuel consumption reflects the energy/economic system, not necessarily household decisions



GHG emissions in Canada are closely tied to fossil fuel consumption (and, indirectly, to fossil fuel production)

Differences between provinces cannot be explained away by population size or economy activity



Update on Federal Climate Policies

- Vancouver Declaration (March)
 - Commitment to complete pan-Canadian framework by December 2016 and implement in early 2017
- Federal Budget (March)
 - More than \$10 billion in green infrastructure and climate-related spending over five years
- “Mid Century Long-Term Low-GHG Development Strategy” (November)
 - New GHG target of 80% below 2005 levels by 2050
- New policies on the horizon?
 - National carbon price (announced in September)
 - Accelerated coal phase-out (announced in November)

Update on Provincial Climate Policies

- Manitoba Climate Change Plan (December 2015)
 - New GHG emission reduction targets (using 2005 as baseline) of 33% by 2030, 50% by 2050 and 100% by 2080
 - Commitment to adopt cap-and-trade system (now at risk)
- Alberta Climate Leadership Plan (April)
 - New carbon tax of \$20/tonne in 2017 (\$30/tonne in 2018)
 - Coal phase-out by 2030
 - Oil sands emissions cap of 100 Mt
 - New methane target (45% reduction by 2025) but no economy-wide carbon emission reduction targets
- Ontario Climate Change Plan (June)
 - Commitment to implement WCI cap-and-trade system (2017)
 - New electric vehicle infrastructure and consumer incentives
 - Additional \$3 billion to improve energy efficiency in buildings
 - “Net zero” standard for new buildings by 2030

Update on Provincial Climate Policies

- British Columbia Climate Leadership Plan (August)
 - “Targeted, sector-specific actions” rather than major cross-cutting policies
 - Most reductions come from improved forest sequestration
 - Ignored principal recommendation of Climate Leadership Team to increase carbon tax
- Saskatchewan White Paper (October)
 - Rejects Canadian climate change mitigation efforts (especially carbon pricing) for failing to significantly reduce global emissions
 - Promotes “innovation and technological development” as economically productive alternative

2020 Targets vs. Forecasts

Target GHG emissions compared to projected GHG emissions (Mt CO₂e)

*Adjusted to account for plans announced since September 2015

**Not adjusted for new plan

***Never formally adopted

Reference: Environment Canada,
*Canada's Second Biennial Report on
Climate Change (2016)*

| | Target | Forecast | Difference |
|-------------------------|------------|---------------|--------------|
| Newfoundland & Labrador | 8.6 | 9 | 0.4 |
| Prince Edward Island | 1.8 | 2 | 0.2 |
| Nova Scotia | 18.0 | 15 | 3.0 |
| New Brunswick | 14.8 | 17 | 2.2 |
| Quebec | 71.3 | 85 | 13.7 |
| Ontario | 154.5 | 161.2* | 6.7 |
| Manitoba | | 22** | |
| Saskatchewan | 56*** | 75 | 19.0 |
| Alberta | | 280.3* | |
| British Columbia | 43.1 | 68.4* | 25.3 |
| Canada | 620 | 738.0* | 118.0 |

2030 Targets vs. Forecasts

Target GHG emissions compared to
projected GHG emissions (Mt CO₂e)

*Adjusted to account for plans announced
since September 2015

**Not adjusted for new plan

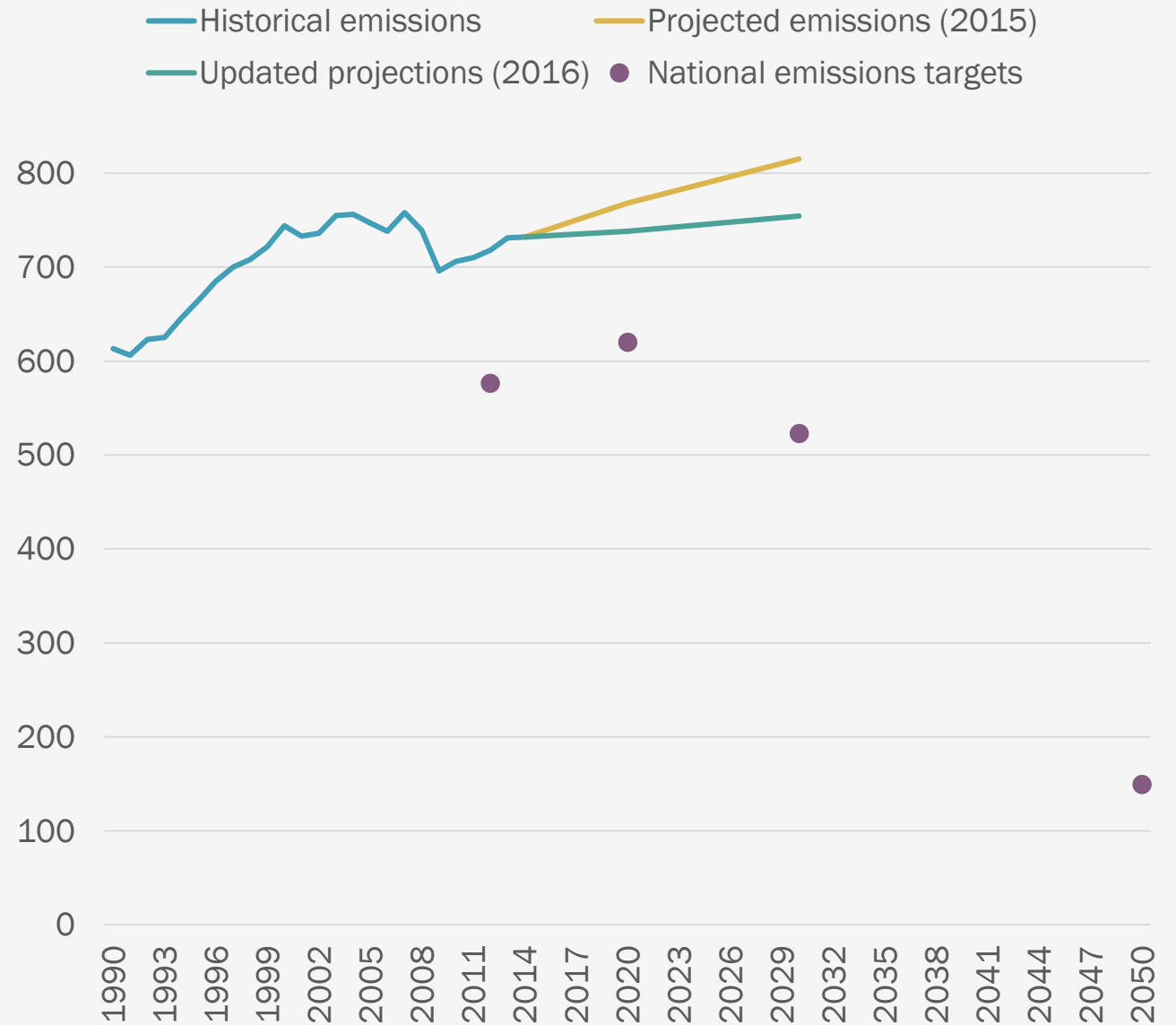
Reference: Environment Canada,
*Canada's Second Biennial Report on
Climate Change* (2016)

| | Target | Forecast | Difference |
|-------------------------|--------------|---------------|--------------|
| Newfoundland & Labrador | 5.3 | 8 | 2.7 |
| Prince Edward Island | 1.1 | 2 | 0.9 |
| Nova Scotia | 13.0 | 14 | 1.0 |
| New Brunswick | 10.7 | 16 | 5.3 |
| Quebec | 55.7 | 90 | 34.3 |
| Ontario | 114.5 | 171.2* | 56.7 |
| Manitoba | 13.8 | 24** | 10.2 |
| Saskatchewan | | 73 | |
| Alberta | | 270* | |
| British Columbia | | 72.3* | |
| Canada | 522.9 | 754.3* | 231.4 |

GHG Emissions Forecasts vs. National Targets

Historical and projected GHG emissions compared to emissions targets (Mt CO₂e)

Reference: Environment Canada, *National Inventory Report 1990-2014* (2016) and Environment Canada, *Canada's Second Biennial Report on Climate Change* (2016) with author's adjustments



Summary

- Total GHG emissions are principally tied to fossil fuel consumption, not population or economic growth
 - Important climate policies were announced in 2016
 - Pro: new policies target the greatest individual sources of emissions (e.g. Alberta oil and gas, Ontario transportation)
 - Con: new policies lack the ambition and coordination to drive deep emissions reductions
 - Total emissions are projected to exceed almost every single federal and provincial/territorial target between now and 2050
 - New pan-Canadian climate framework will clearly establish the level of ambition for future federal and provincial policy... for better or for worse
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