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## The New Energy Consumer

APRIL 24 & 25, 2018 HALIFAX, NS - PIER 21

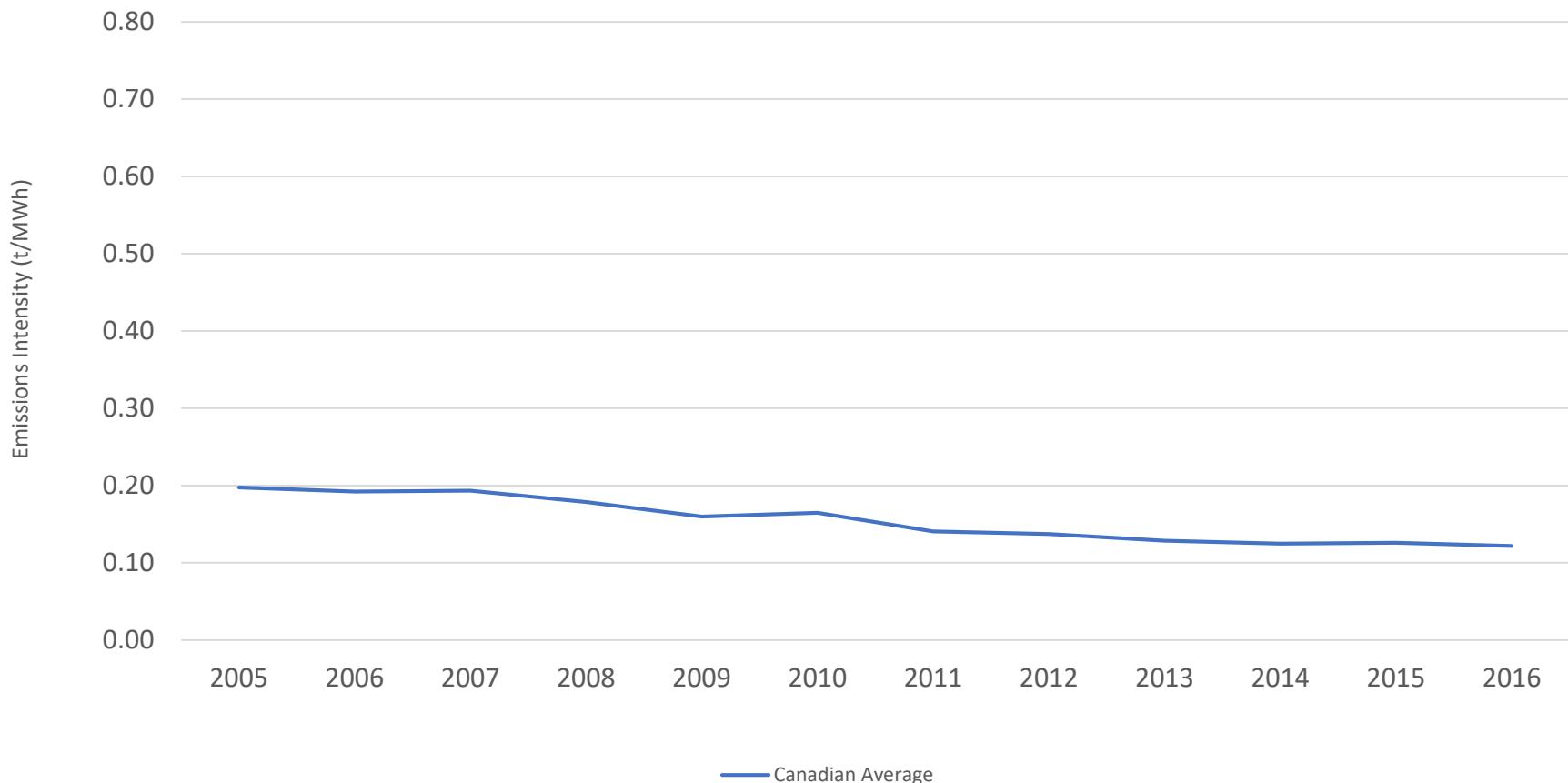
# Solar Serving New Energy Consumers: Evolving Policy & Regulatory Frameworks

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# Canada's Electricity Grid = 80% Non-Emitting

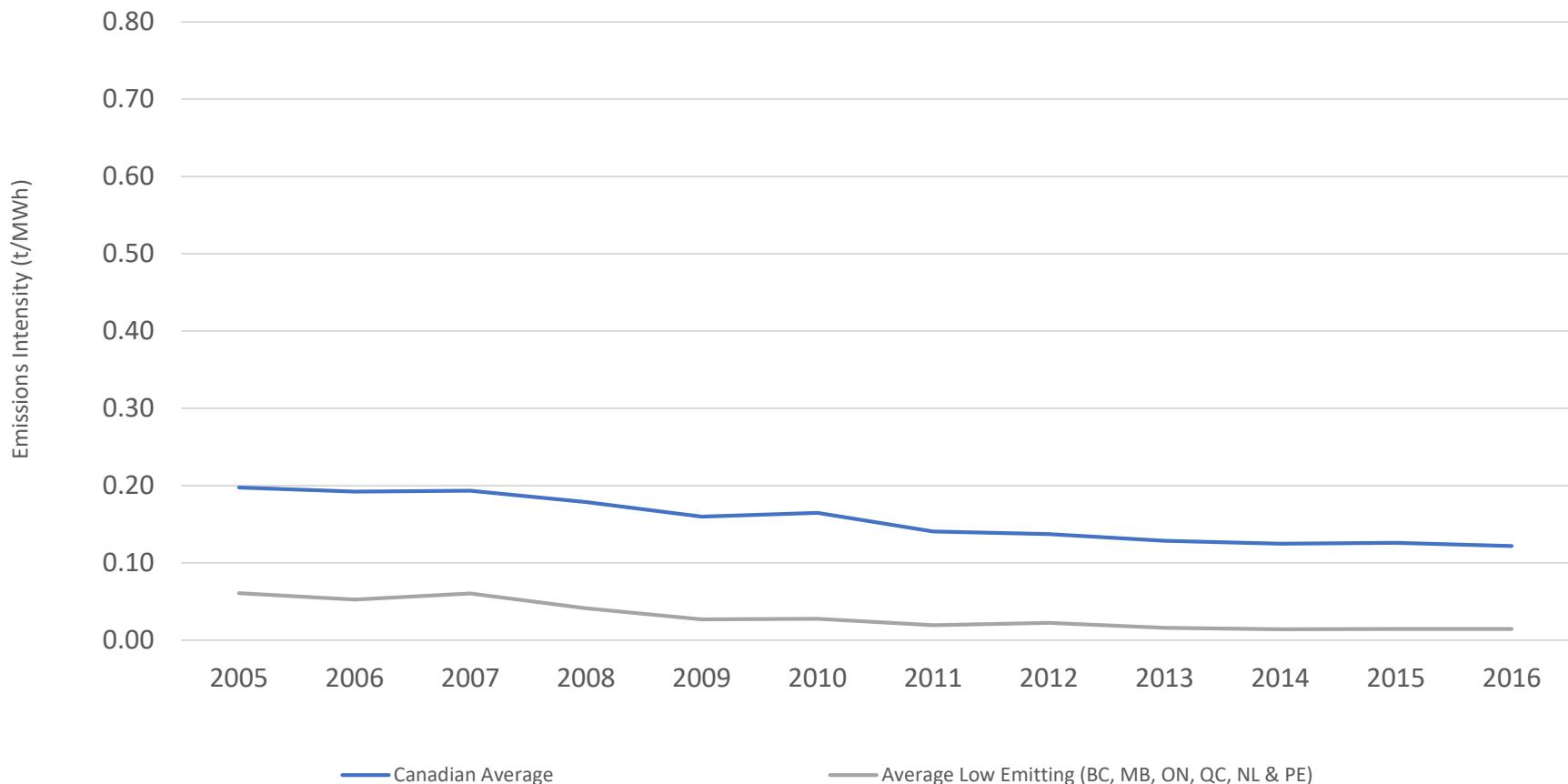


GHG Data from Environment Canada Preliminary 2016 Inventory Data.

Electricity Generation Data from Cansim Table 127-0007.

Average grid emissions -intensity = 0.122 t/MWh

# For 80% of Canadians, Grid = ~100% Non-Emitting

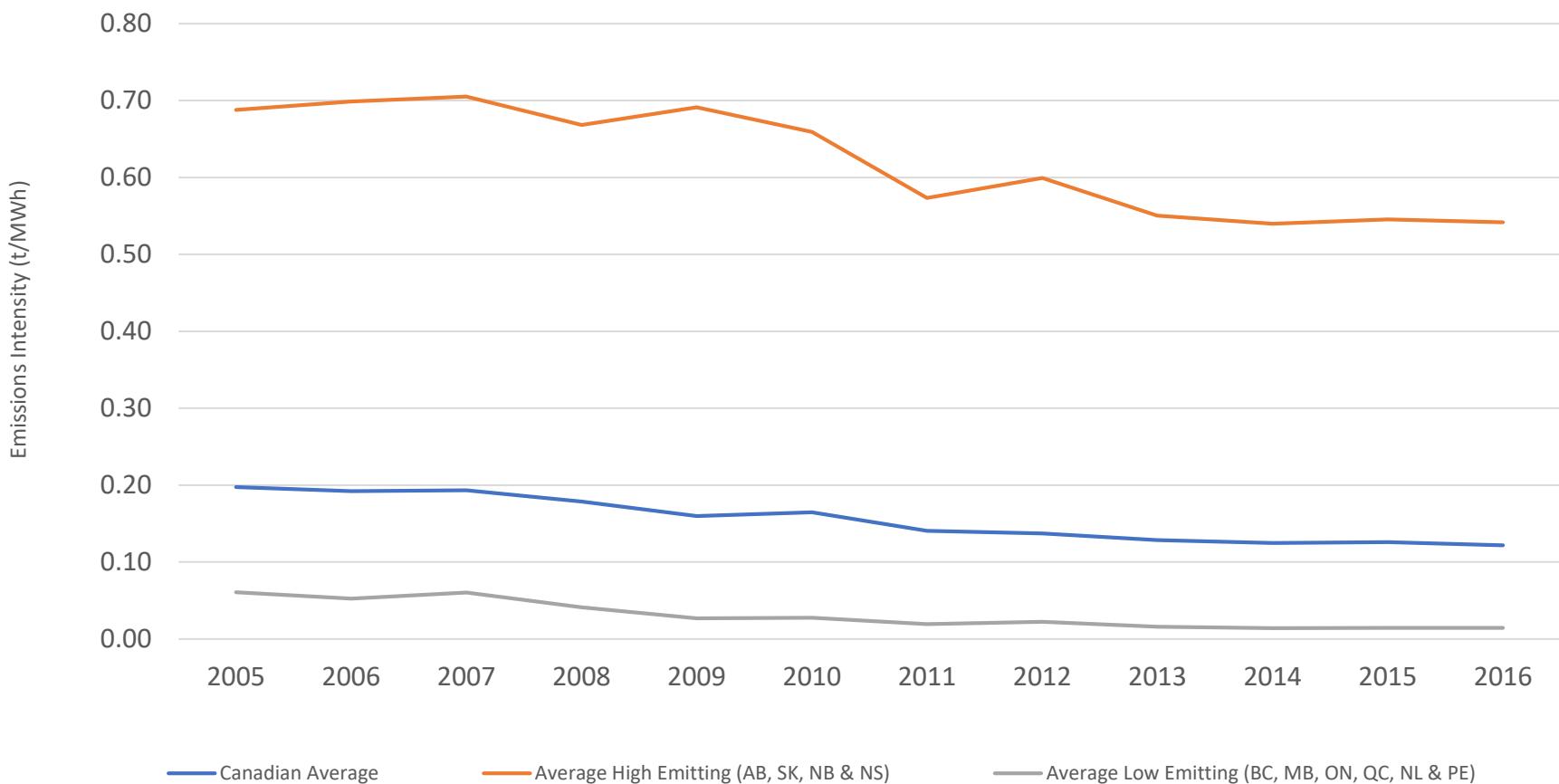


GHG Data from Environment Canada Preliminary 2016 Inventory Data.

Electricity Generation Data from Cansim Table 127-0007.

Average grid emissions -intensity = 0.014 t/MWh

# For 20% of Canadians, Grid = 25 – 90% Emitting



GHG Data from Environment Canada Preliminary 2016 Inventory Data.

Electricity Generation Data from Cansim Table 127-0007.

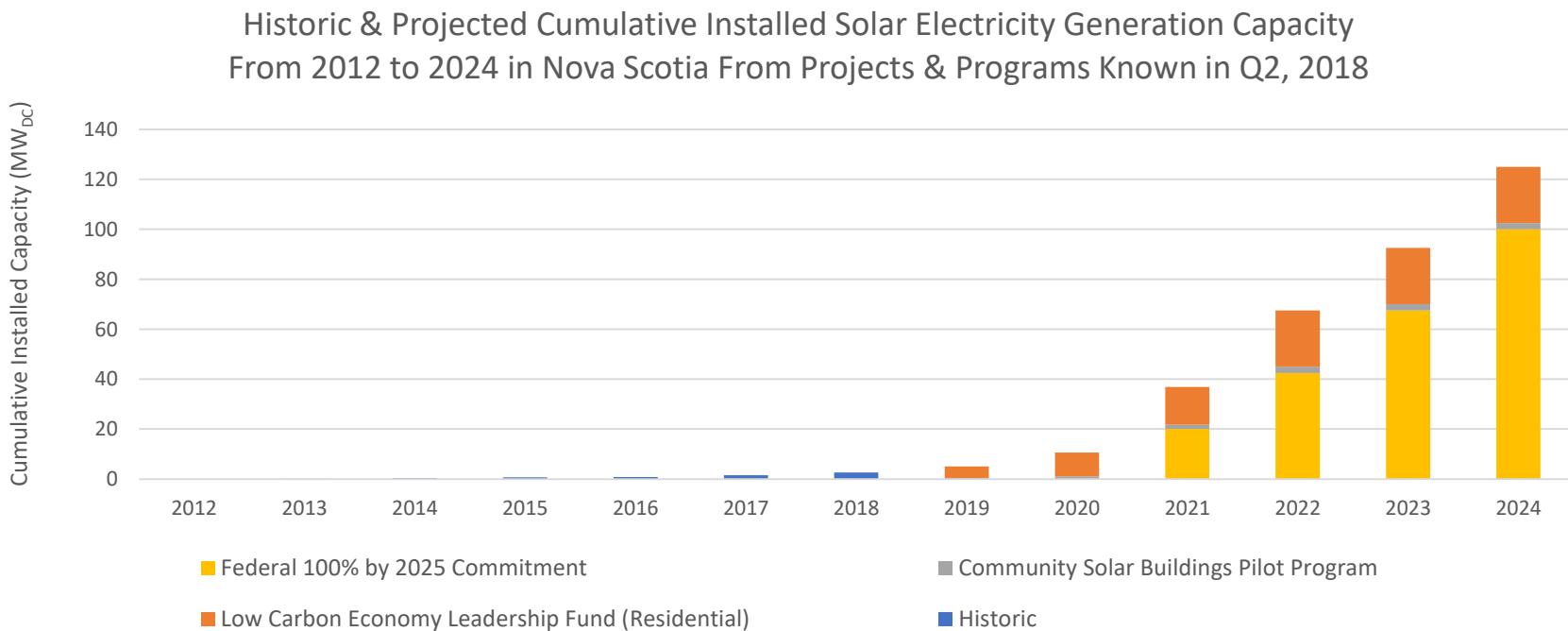
Average grid emissions -intensity = 0.542 t/MWh

# Nova Scotia (1/2)

- Grid de-carbonization must be central to province's long-term GHG reduction strategy:
  - Electricity sector GHG displacement; &
  - Electrification of transportation, buildings etc.
- Province is on right track with 25% by 2015 and 40% by 2025 targets renewable electricity targets.
- Next Integrated Resource Plan (IRP) will differ greatly from 2014's (e.g. solar/storage costs, carbon price).

# Nova Scotia (2/2)

- Solar energy (& storage) negligible to date, that will change slowly at first, then very rapidly:



# Regulatory Modernization

- How must policy & regulatory framework adapt to new paradigm with growing solar role?
  - Benefit & Cost Allocation.
  - Sizing & Siting Flexibility.
  - Access to (& cost of) Capital.
- Other considerations incl. grid-modernization & storage, hosting capacity, electric vehicles etc.

# Recommendations

- To facilitate this new paradigm, amend Net-Metering Regulation & address Rate Design to:
  - Ensure fair allocation of costs & benefits.
  - Allow for “virtual” settlement of generation/load.
  - Remove maximum system size & permit storage.
  - Clarify rules for “Third Party Ownership”.
- If Gov. of NS led-by example powering own operations with solar, NS would surpass >3% well before 2030.