

Industrial Greenhouse Gas Regulatory System

Carbon Competitiveness Incentive Regulation

Air & Waste Management Association
Canadian Prairie and Northern Section

May 9, 2018

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Climate Leadership Plan November 2015

CLP Key Commitments:

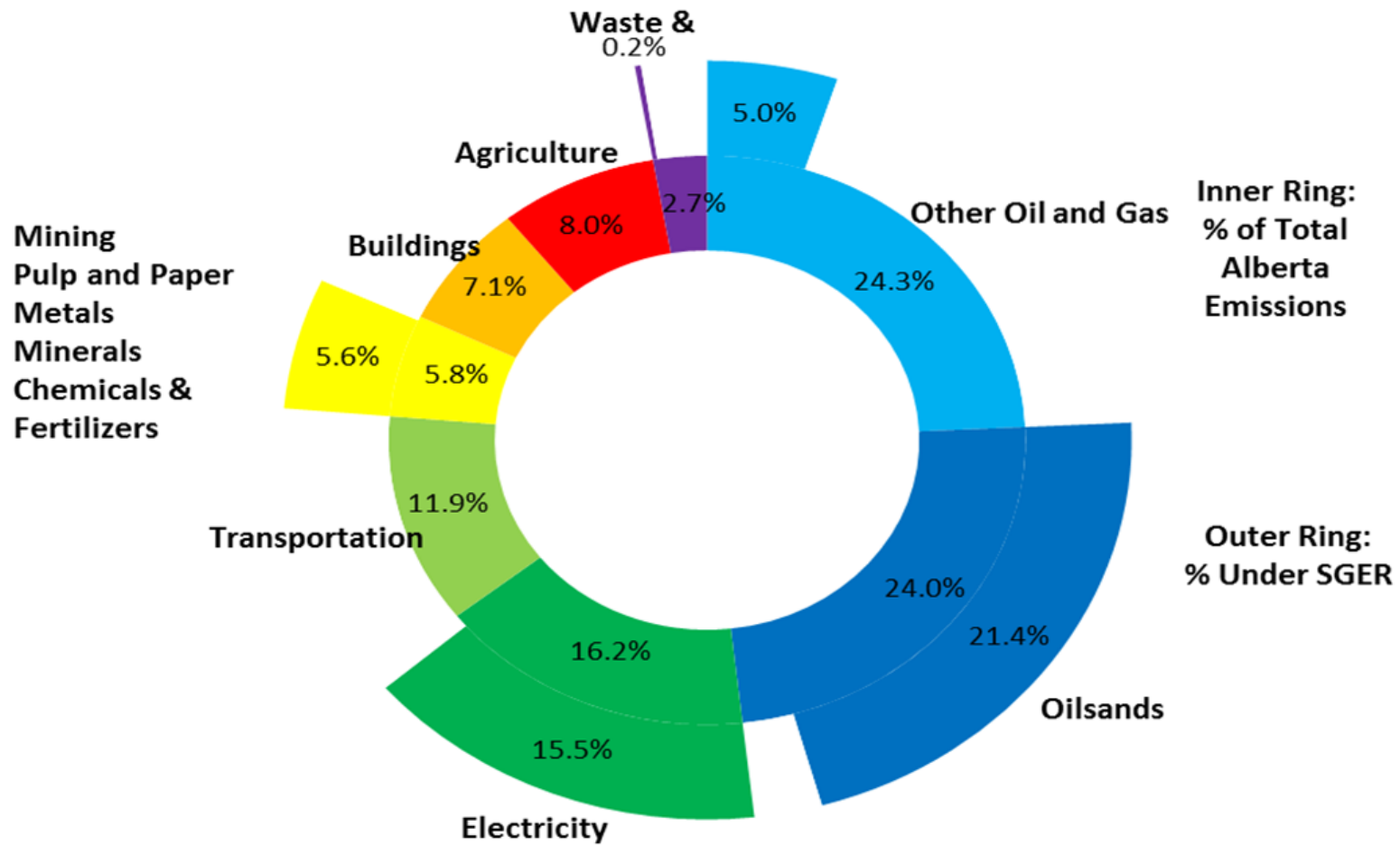
- Coal Phase Out
- Energy Efficiency
- Oil Sands Emissions Limit
- Methane
- Carbon Pricing



Alberta GHG Emissions

Alberta 2014 Greenhouse Gas Emissions by Economic Sector

Total 274 Mt



Carbon Competitiveness
Incentive Regulation
The Essentials

What Is the CCIR?

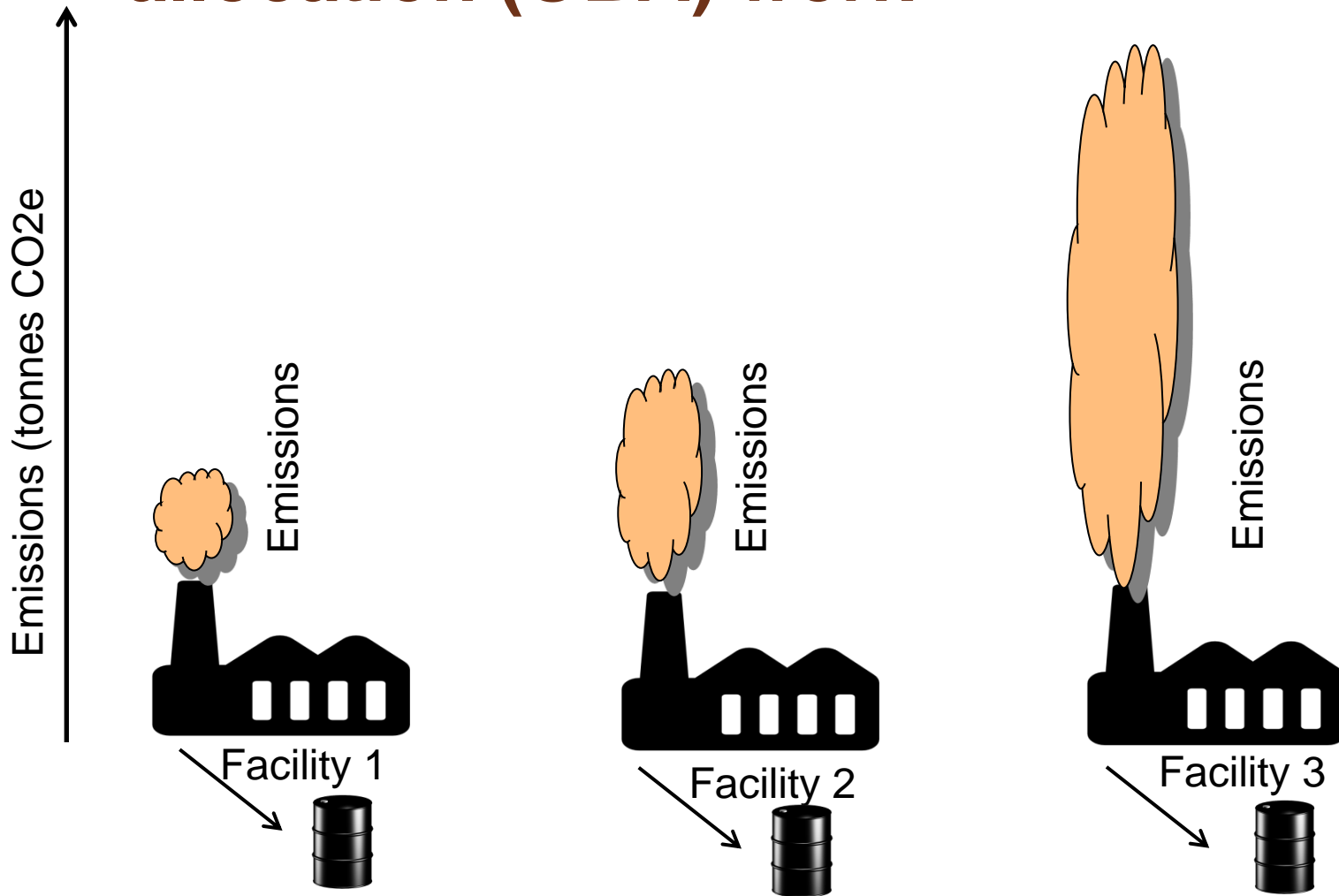
The Carbon Competitiveness Incentive Regulation (CCIR) has two significant components:

- An output-based allocation regulatory system designed to apply the carbon price on emissions from our larger industrial facilities.
- Compliance flexibility and revenue recycling to further reduce greenhouse gas emissions in Alberta.

Key Intent:

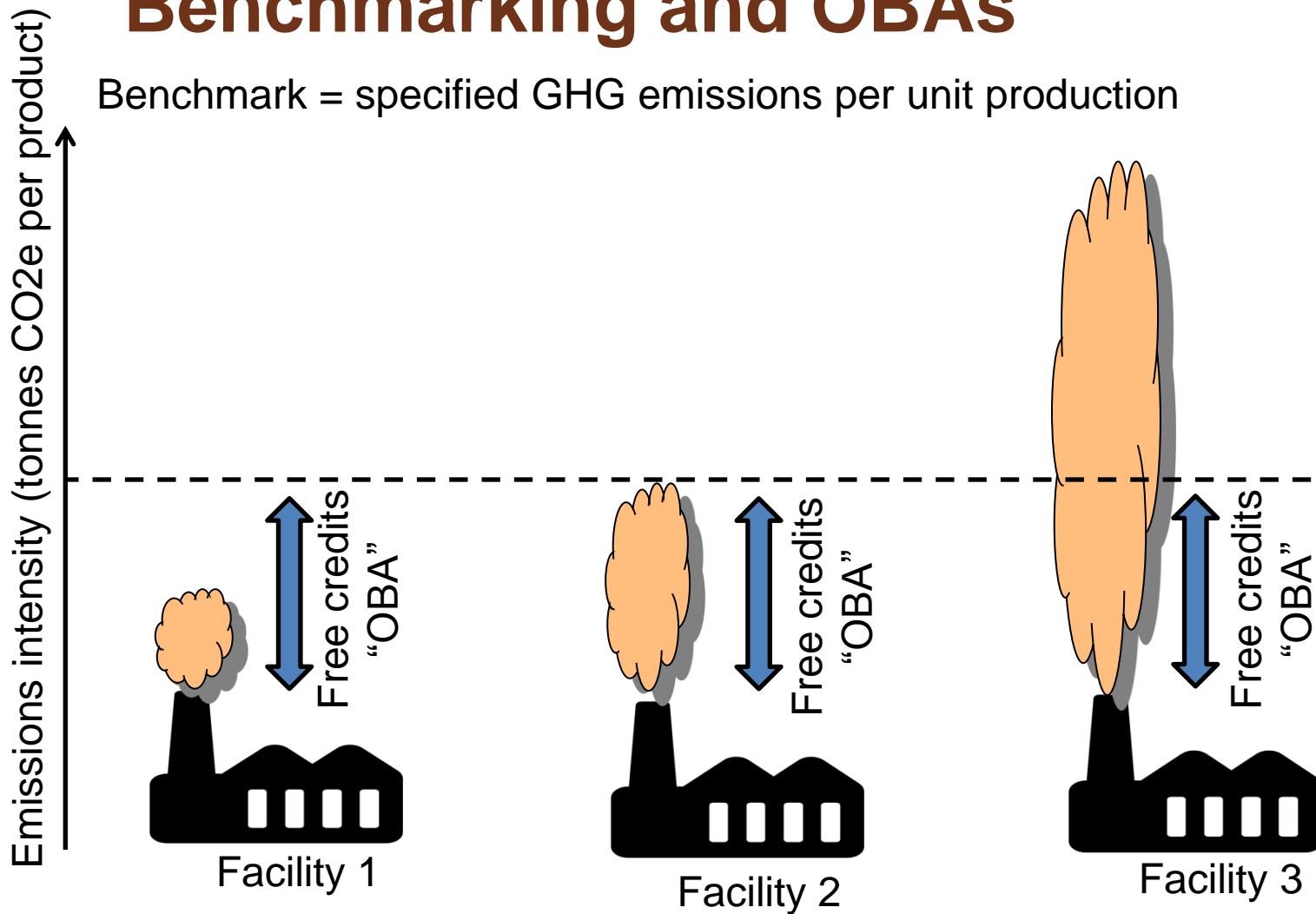
- Encourage meaningful GHG reductions by:
 - Creating a “race to the top” by benchmarking facilities against their cohort
 - Sending a price signal to influence future investments
- Reduce impacts on competitiveness and carbon leakage by providing a portion of free allocations to regulated sectors and facilities

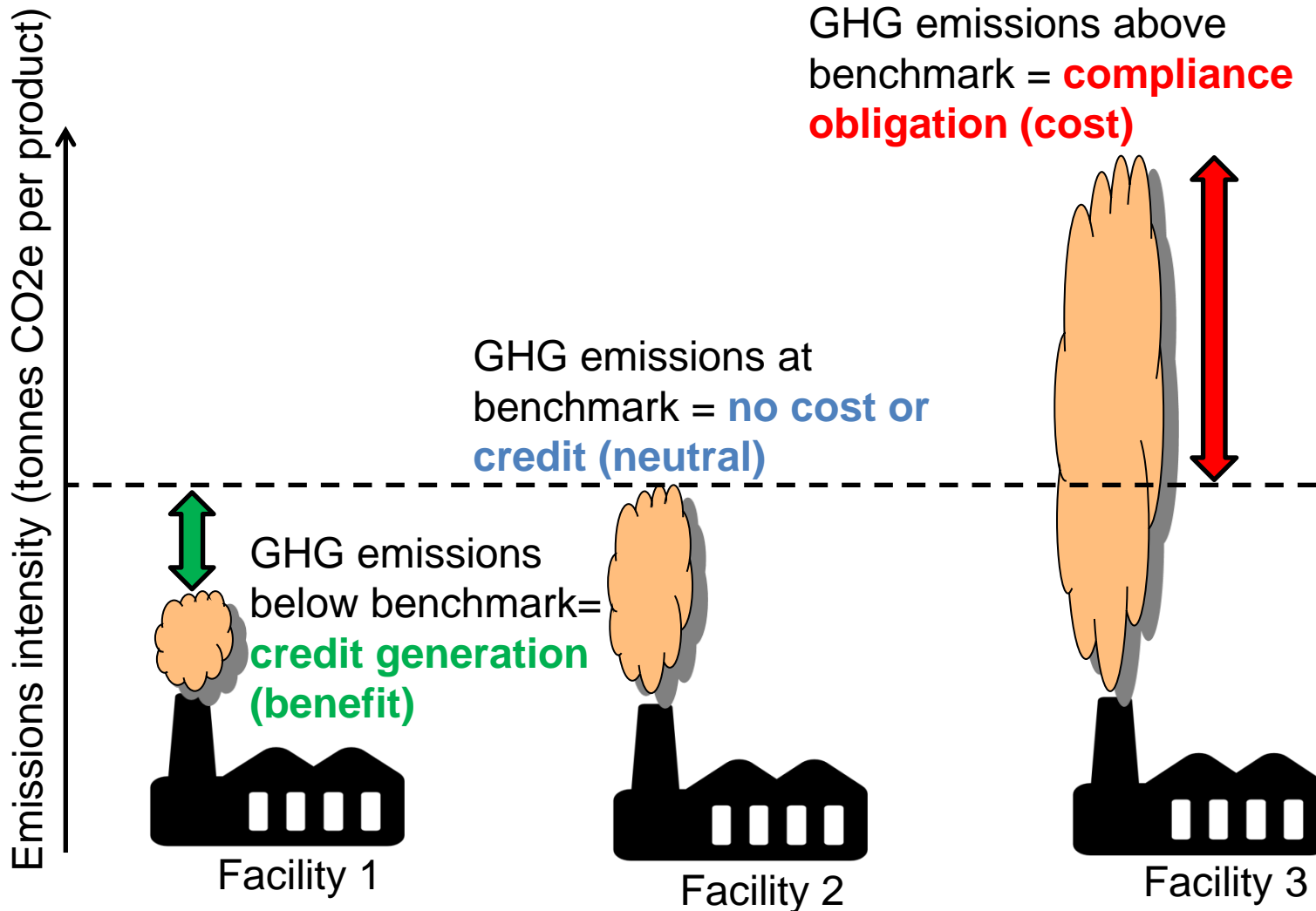
How benchmarking and output-based allocation (OBA) work



Benchmarking and OBAs

Benchmark = specified GHG emissions per unit production





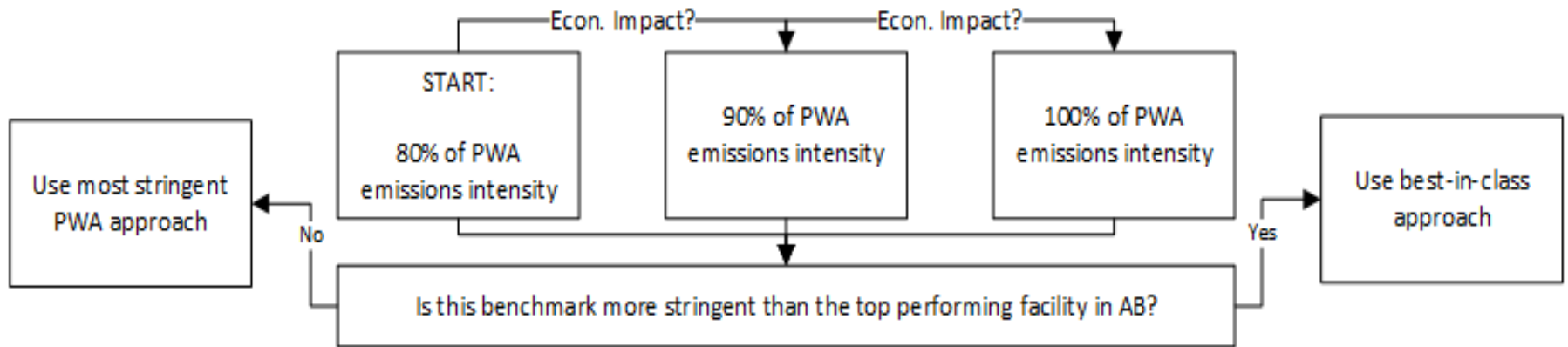
Carbon Competitiveness Incentive Regulation - *The Details*

Product Categories

- Product categories are the basic building blocks of the regulation that facilitates comparison of emissions performance.
- The CCIR follows a “One Product, One Benchmark” principle where possible.
- Product categories have been established for facilities previously regulated under SGER.
- New product categories may be added in future for emissions intensive and trade exposed sectors.

Benchmarking

- Maintain Climate Leadership Panel recommendations for:
 - Good-as-best-gas standard for electricity.
 - Top-quartile production-based for in situ and mined bitumen.
- For other sectors:
 - CCIR followed the following process map to guide benchmark setting.



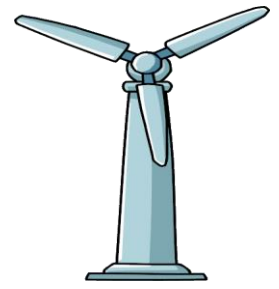
- There are a few rare exceptions to these benchmark setting methods.



Pay into the Fund

and/or

Purchase Offset and/or EPC



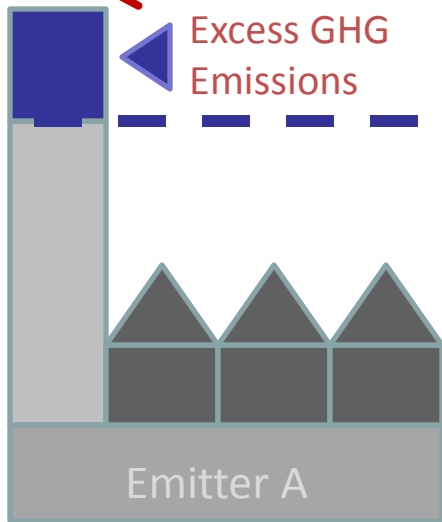
Reduction at non-regulated Facility (offset)

Bank or Sell EPC

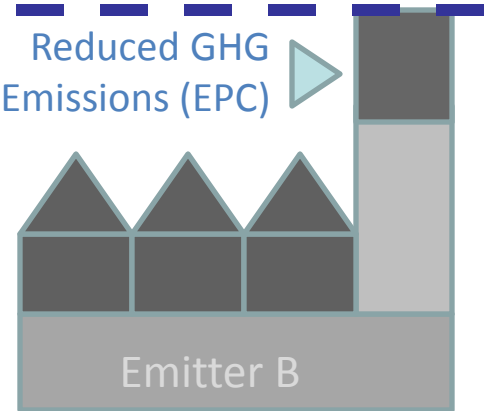
Benchmark

Excess GHG Emissions

Reduced GHG Emissions (EPC)



Emitter A

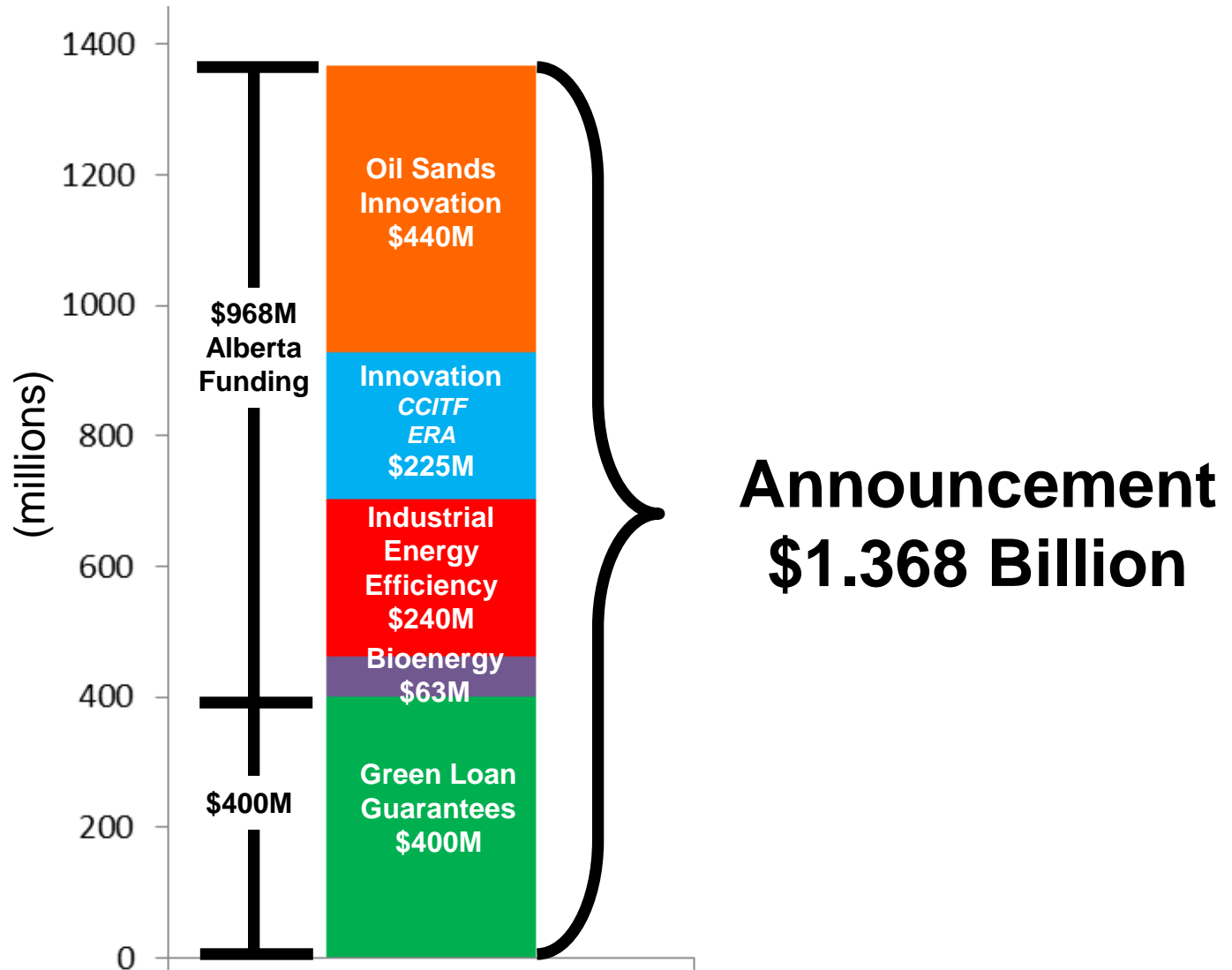


Emitter B

CCIR Overview

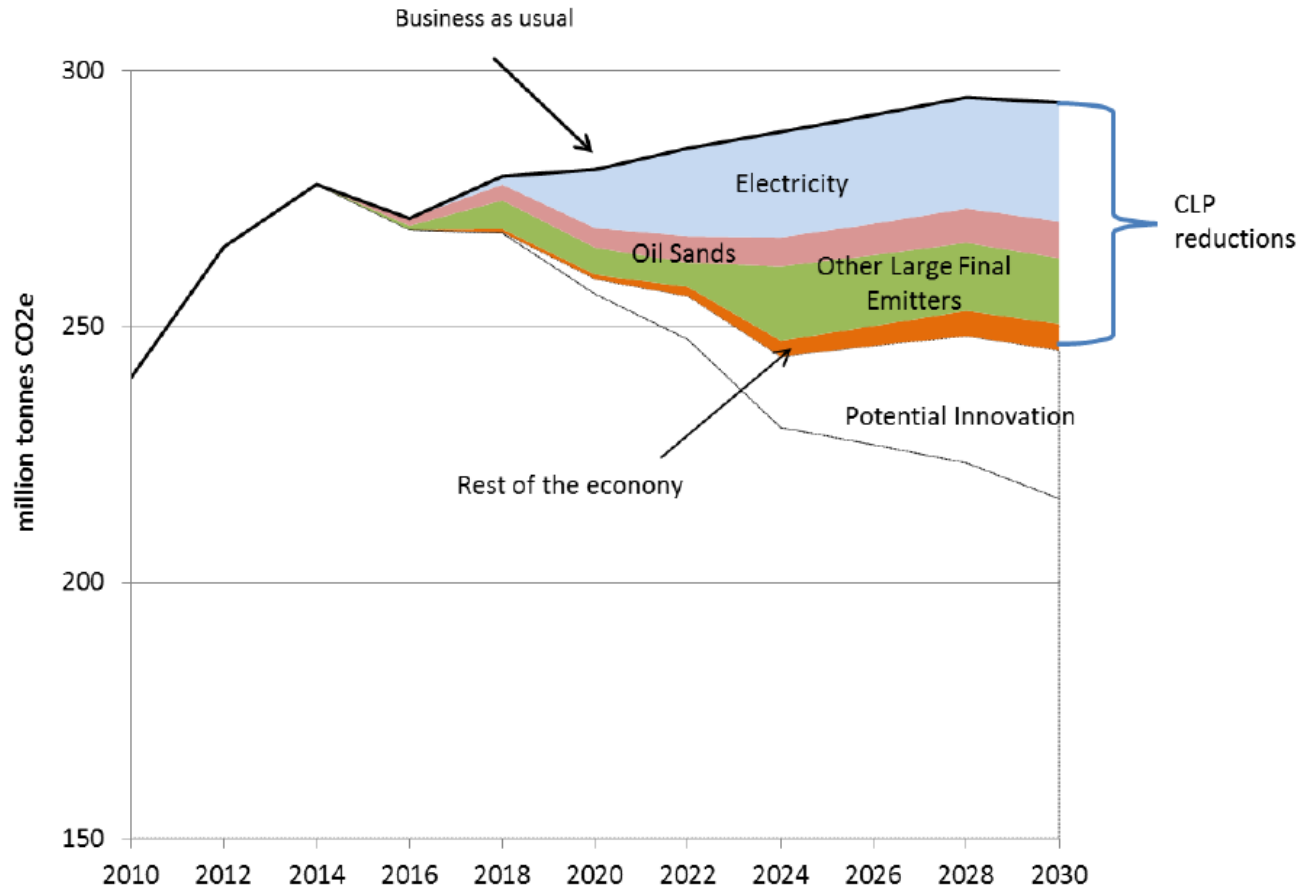
- Additional key elements of the CCIR:
 - Phase-in:
 - 2018 & 2019 as bridge to full compliance in 2020.
 - Tightening Rate
 - Annual reductions in free allocations by 1% per year starting in 2020.
 - Review Period
 - Regulatory review every 5 years. One-time implementation review 2020.
 - Emissions Coverage
 - SGER-plus: Industrial Process emissions, Indirect emissions
 - Exclusion of biomass CO₂ from regulation (but must be reported).
 - Opt-in/ Opt-out
 - EITE & over 50 000 tonnes OR compete with a facility that's already regulated
 - Cost Containment
 - Provides support to facilities experiencing substantial hardship.

Program Support



Projected Outcomes

Alberta's Projected GHG Emissions with CLP Estimated Reductions



Questions?

Further information on detailed policy elements is available in the Standard for Establishing and Assigning Benchmarks available at:

<https://www.alberta.ca/carbon-competitiveness-incentive-regulation.aspx>

Carbon Pricing

Alberta's Hybrid Carbon Pricing System

- Carbon pricing puts a price on greenhouse gas emissions to incentivize individuals and organizations to reduce fuel use and become more energy efficiency.

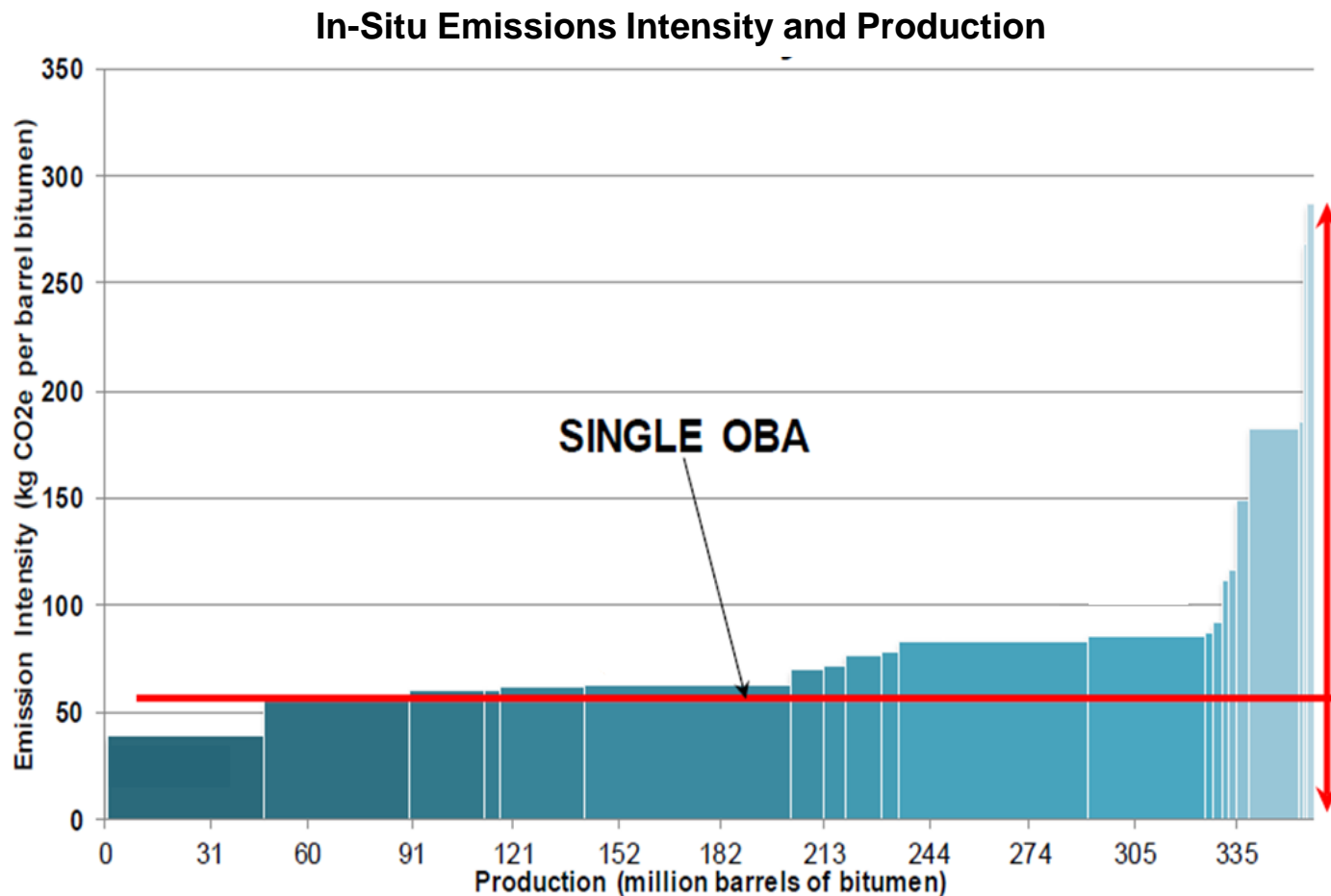
Carbon Levy	Carbon Competitive Incentive Reg.
Economy-wide – some exempted sectors and fuel uses	Large Industry – Emissions Intensive Trade Exposed Sectors
Applies to purchased, used or imported transportation & heating fuels, i.e. propane, natural gas, diesel, coal, etc	Applies to reported CO ₂ e emissions over a product-based emission intensity benchmark
The levy rate applies the \$30 carbon price to the amount of CO ₂ e released when fuel is combusted	\$30 per tonne of CO ₂ e with global warming potentials
Albertans can lower carbon levy costs through reducing their fuel use	Facilities can eliminate their carbon compliance costs or earn even credits

Pan-Canadian Framework

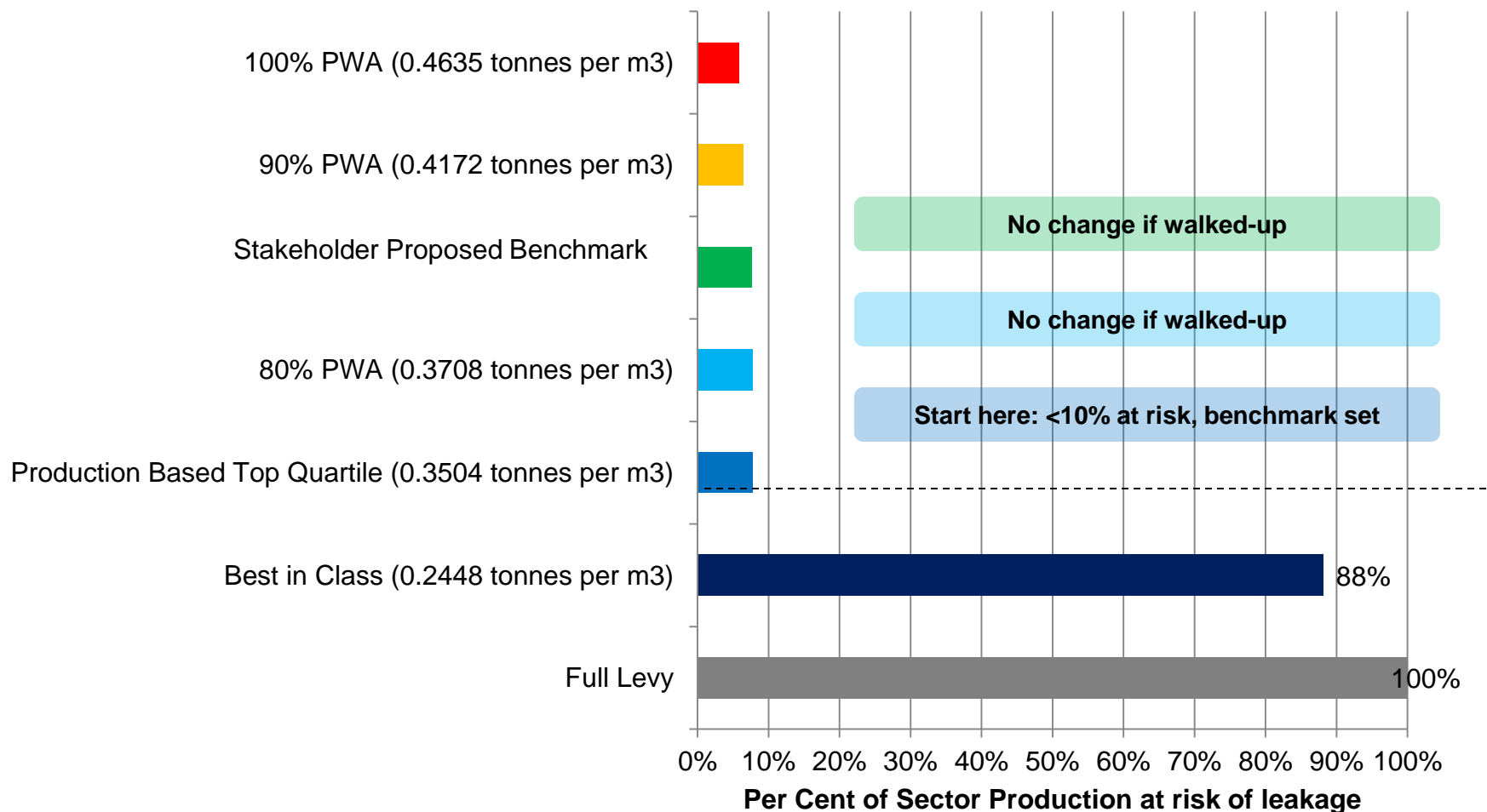
- Federal government requirement for provincial carbon pricing is anticipated by end of 2018. The federal approach requires:
 - An explicit carbon price or a cap and trade system
 - Coverage equal to British Columbia's carbon tax system
 - \$50 per tonne by 2022 for carbon price systems
- Jurisdictions with no system will be subject to federal “backstop” price-based system
- Alberta pricing system is designed to protect Alberta's interests

Benchmarking – Example #1: In-Situ

- Production-based Top-quartile



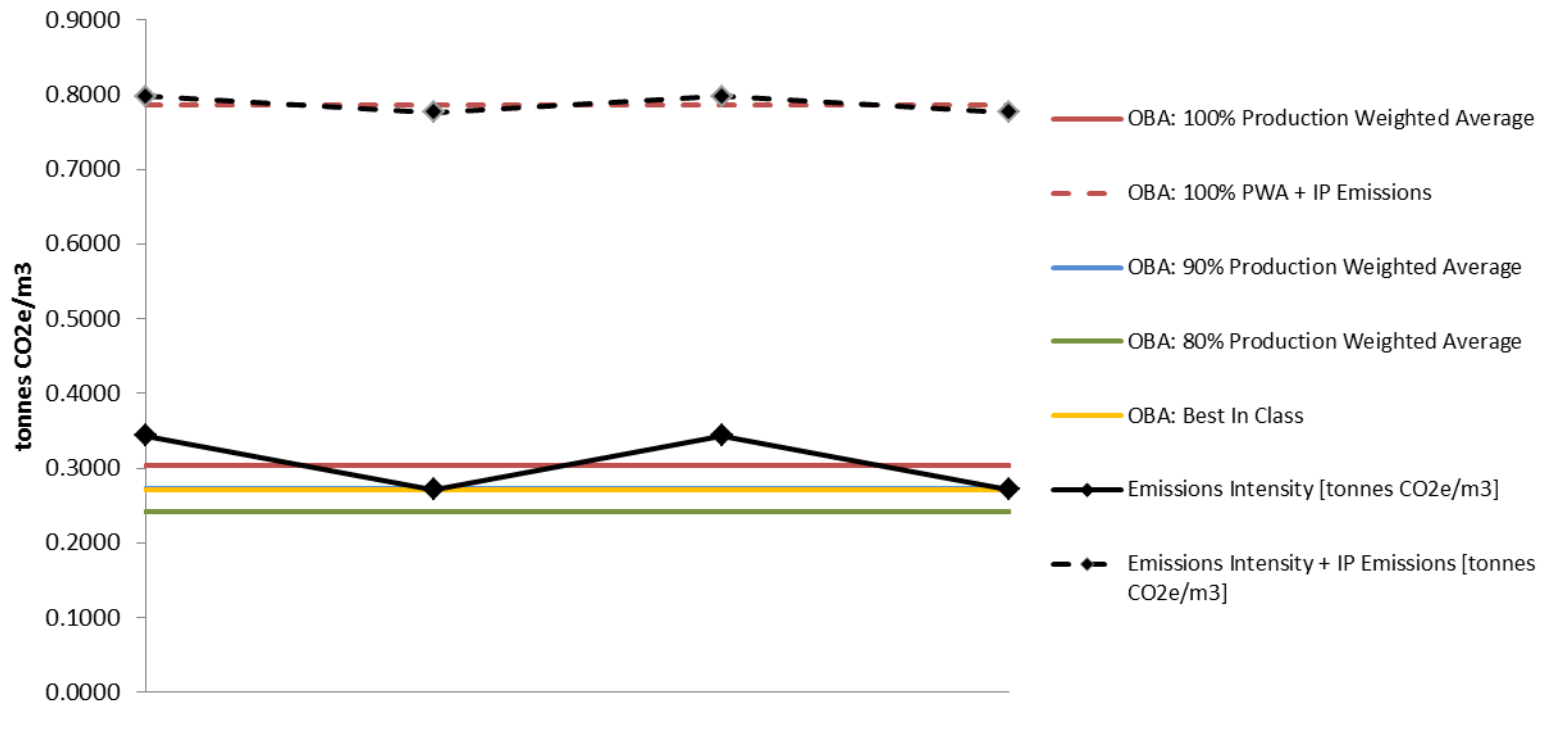
Benchmarking – Example #1: In-Situ Results of Economic Analysis



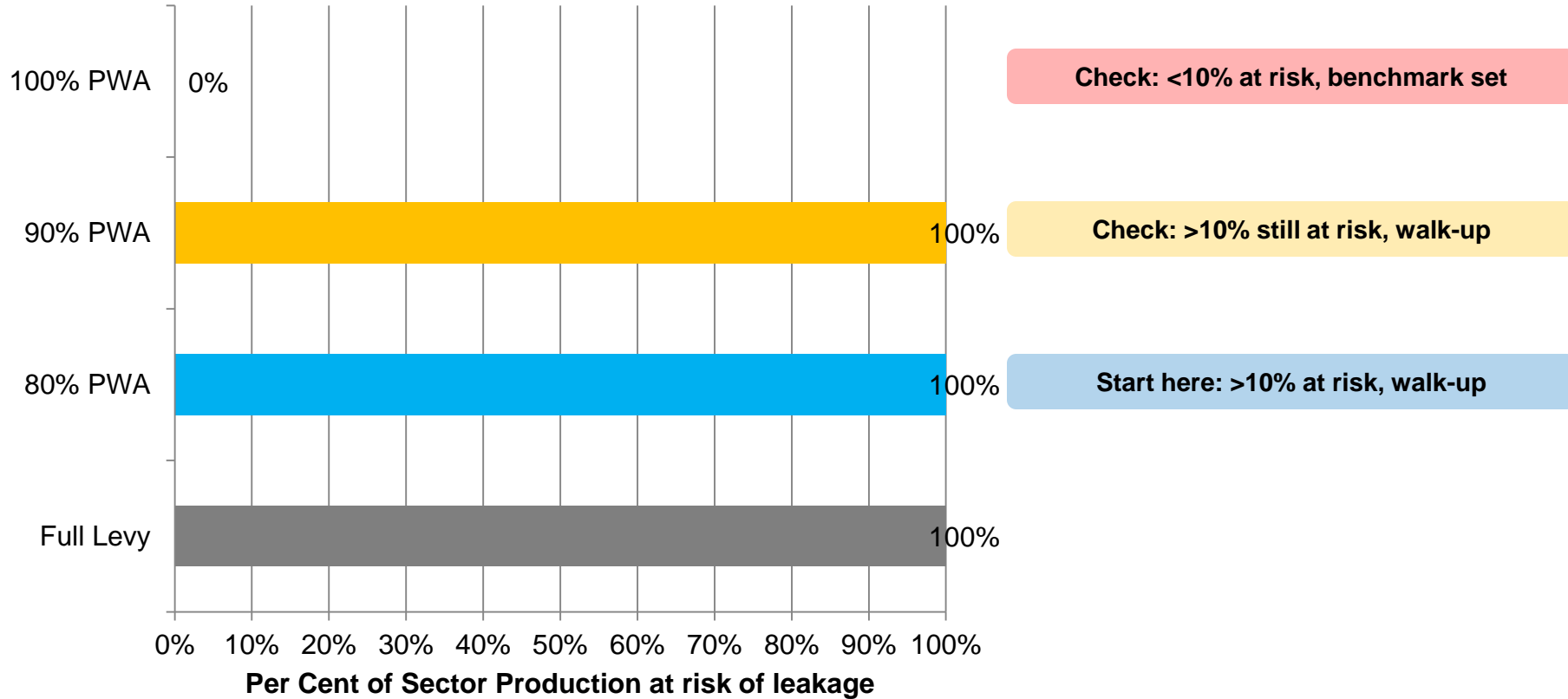
Benchmarking – Example #2

- Production-Weighted Average

Sector Emissions Intensity and Production



Benchmarking – Example #2: Results of Economic Analysis



What Is the Carbon Competitiveness Incentive Regulation (CCIR)?

Two significant components:

1. A new emissions pricing system for large industrial facilities
 - Key concepts: emissions benchmarks and output-based allocations (OBAs)
2. Compliance flexibility and revenue recycling to further reduce greenhouse gas emissions in Alberta

Key Intent:

- Minimizes competitiveness and employment impacts of carbon pricing
- Encourage meaningful GHG reductions:
 - Rewarding performance by benchmarking facilities against their cohort
 - Sending a price signal to influence future investments