

Measuring & Managing Greenhouse Gas Emissions

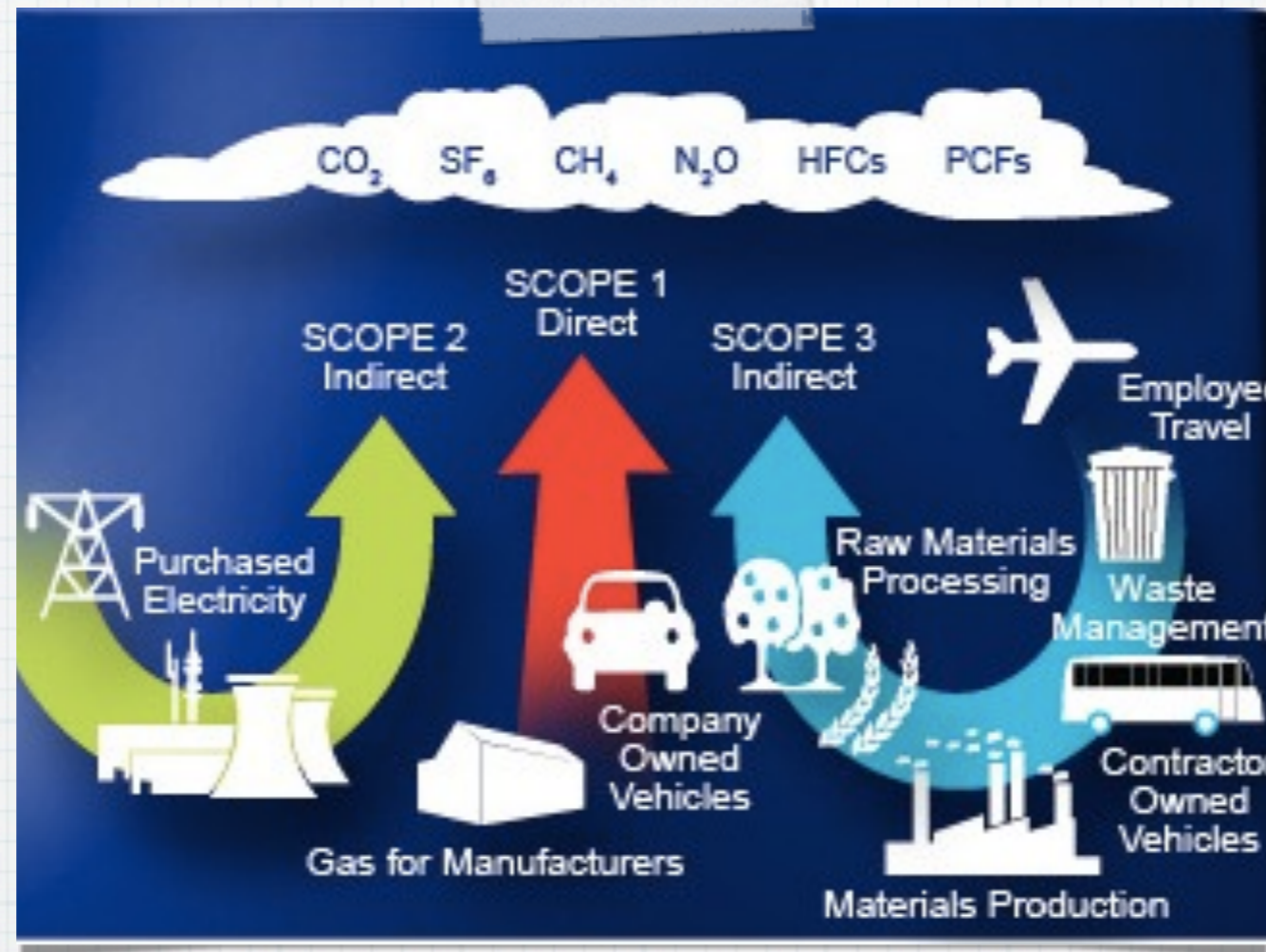
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What is a Greenhouse Gas Inventory?

- * Definition: an accounting of greenhouse gases (GHGs) emitted to (or removed from) the atmosphere over a period of time
- * Go to source: World Resources Institutes' Greenhouse Gas Protocol Corporate Standard
 - * policy/program neutral
 - * foundation for nearly every GHG standard and program in the world

Why does it matter?

- * Helps set targets for reductions or improvements
- * I.D. cost reduction opportunities
- * Public reporting and voluntary GHG reporting programs
- * Participation in mandatory reporting programs
- * Recognition for early voluntary action



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Categorizing corporate GHG emissions
 Scopes 1, 2, & 3
 (What are we measuring?)

The Process

- * Getting started:
calculate the
“Base Year”
- * Reduction
Activities
- * Assessment



Image from: <http://www.brandeis.edu/campussustainability/climate/ghginventory.html>

Calculating Emissions

- 1) Identify sources within your boundaries
- 2) Select calculation approach
- 3) Collect activity data & choose emission factors
- 4) Apply calculation tools
- 5) Roll up to corporate level

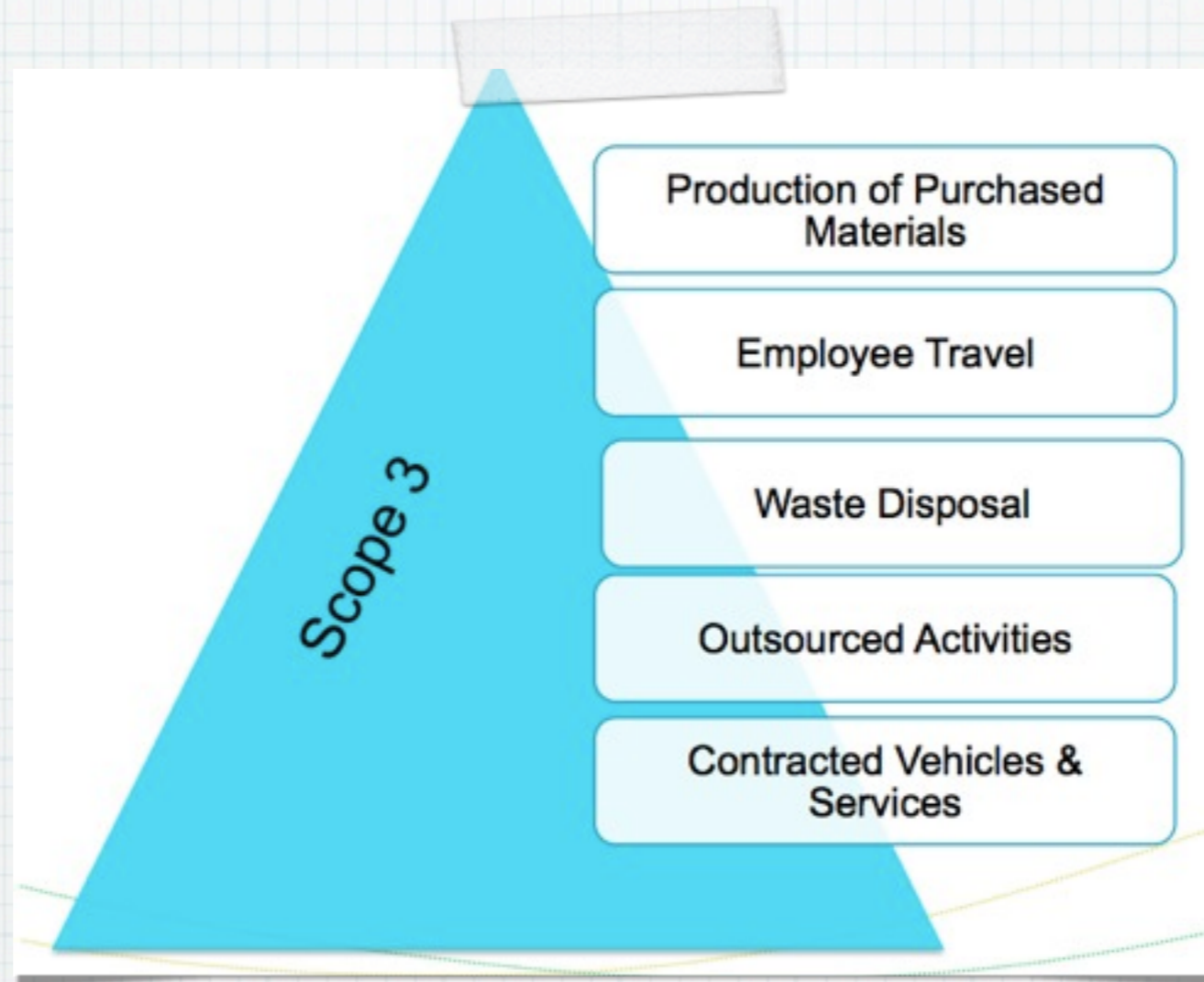
Practice...

A business in Hood River, OR wants to calculate emissions from its purchased electricity use (scope 2) for its headquarters facility.



Practice...

- * Grab your electricity bills (1 full year is ideal)
- * Figure out annual kWh or MWh (9,000 MWh/year for our example)
- * Decide on emission factor (for electricity it is based on region, OR is in the WECC)
- * Take emission factor x total electricity use
- * Using spreadsheet through WRI, come up with 3,703 tonnes of CO₂e



Scope 3 Emissions; Consider Lifecycle Analysis

Management & Reduction Activities

- * Set a reduction goal
- * Manage your inventory (institutionalize the process)
- * Achieve internal reductions (EE projects, onsite renewables, process/fugitive emissions reductions)
- * Purchase Green Power or Carbon Offsets