



Challenges & Opportunities for Improving and Integrating Air Quality Initiatives in Prince George

**Clean Air Forum
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Vancouver**





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Google



Municipal Authority

- Municipalities are limited to establishing bylaws for:
 - Woodburning Appliances
 - Open burning
 - Recreational Fires
 - Fugitive Dust
 - New industrial development through land use zoning
 - Idling
- Prince George's Clean Air bylaw addresses the top 4 - problems enforcing the bylaw



Revising the Clean Air Bylaw

- Further restrictions to recreational fires and open burning
- Further restrictions on woodburning appliances
- “Nuisance Clause” (...cause of injury or damage...)
 - Opacity testing?



PG AIR

- City member of Prince George Air Improvement Roundtable Society (PGAIR)
- Multidisciplinary committee – broad representation
- 3 working groups - research, ambient monitoring and education
- Society status allows more access to funding programs and provides “independence”

Improvements – Highlights (PGAIR & City)

- Burning was eliminated from local beehive burners
- Reductions in pulpmill particulate emissions including the Canfor upgrade of Intercon power boiler, and lime kiln scrubber
- Hard surfacing portion of industrial roads to reduce dust emissions
- Improved City sweeping practices including purchase of a vacuum sweeper



- Year 2 of the Woodstove Exchange and Burn it Smart education programs underway
- Anti-idling campaign and vehicle emission testing clinic (2008)
- “Emitter-pay” system of funding or ambient monitoring stations
- PGAIR hired a dedicated Air Quality Coordinator to keep projects and committee moving



Major Milestone – a Target!

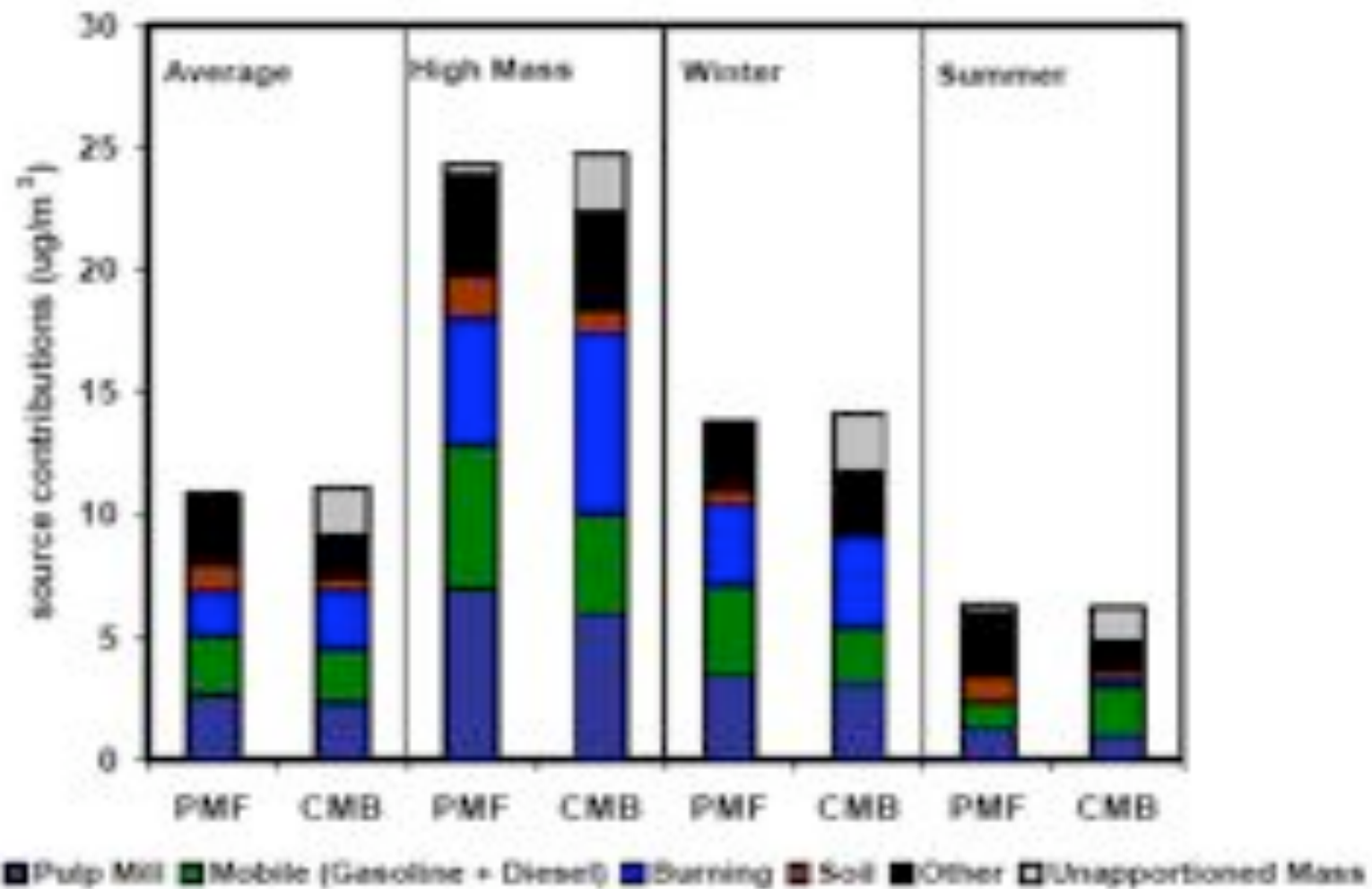
- Voluntary emission targets set
- Uses proposed BC standard for PM2.5
- Sets date for achieving target (2013)
- Addresses what to do if targets are not met
- Sets a longer term (2016) aspirational target (40% of ambient)

Current Research

- **Source Apportionment Study**

conducted by Sonoma Technology (STI) (2008),
commissioned by MOE in Victoria

- Collected 138 PM_{2.5} filter samples to trace back to the source using chemical markers



- PMF- Positive Matrix Factorization
- CMB – Chemical Mass Balance
- 25% split between pulpmill, burning, vehicles and “other” PM2.5 sources

- **Dispersion Modeling** - PGAIR-led project in conjunction with UNBC
- Micro-emission inventory combined with modeling of data between 2000-2005
- Draft results at this point with study going for third party review shortly
- Will these results agree with STI's research outputs?

- Odour emission inventory
 - What are the sources?
 - What chemical compounds make up the smell?
 - Once sources are identified, how do you eliminate them?

- Mobile Monitoring
 - Starting soon – where are the hotspots around the City?
 - Which neighbourhoods have higher particulate levels from woodburning and vehicles?

Using the Research

- Developing Phase III Action plan
- Confirming our focus to ensure efficacy
- Strategies for the individual versus collective
- Monitoring – is the effort providing the benefits

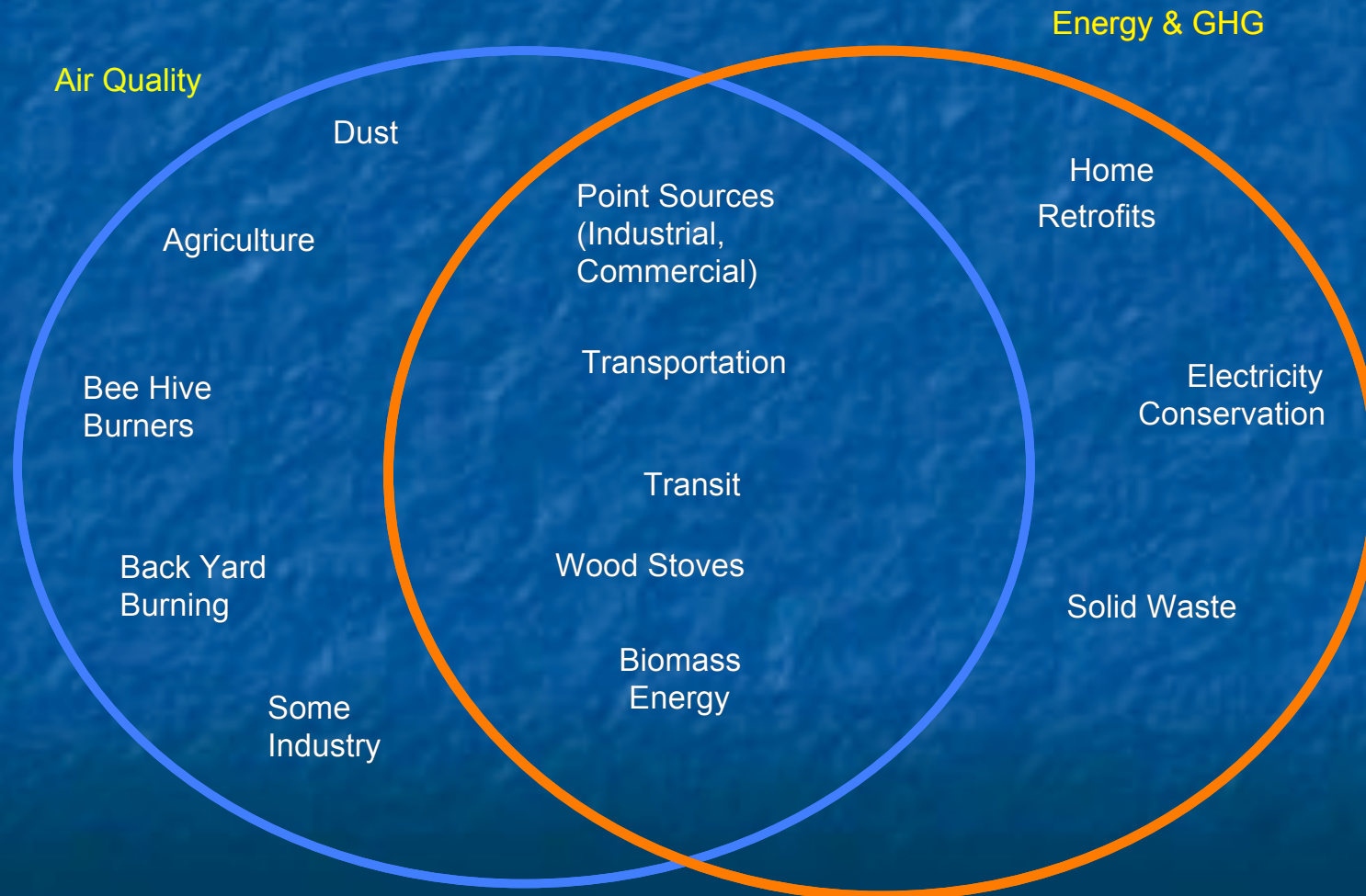
What Has Helped

- Solid public advocacy and commitment from Council
- Collaborative approach – voluntary context
- Funding – (e.g. MOE, Health Authority, Industry, City of Prince George)
 - Woodstove exchange
 - Anti-idling
 - Vehicle testing clinic
 - PGAIR
 - Monitoring
 - Research

Looking at Integration

- City also focusing on GHG reduction, carbon neutral strategy (2012), energy reduction, climate change risk and adaptation;
- We need to know:
 - Where are there beneficial links (AQ-GHG-Energy)?
 - What strategies might conflict – where do AQ strategies trump GHG strategies?
 - What can we focus on that will hit more than one program delivery?

Integration Possibilities Overlaps and Common Approaches



The Driver for Thinking About Integration

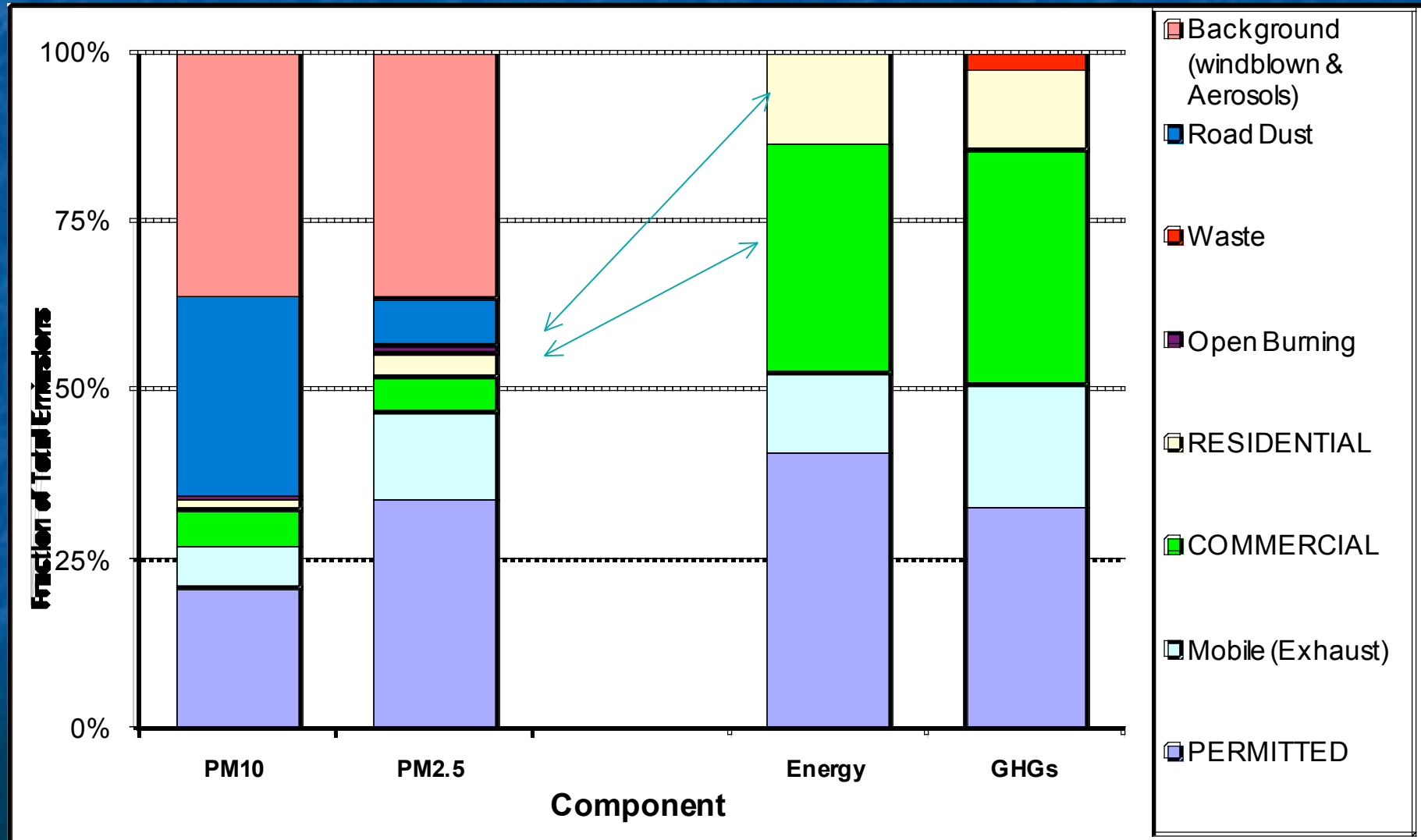
	CO	VOC	NOx	SOx	PM-2.5	GHG
Total Emissions	215,800	69,100	48,200	4,400	6,300	17,069,000
Energy Related Emissions	211,600	25,600	46,000	4,200	3,600	14,383,000
% Energy Related	98%	37%	95%	96%	58%	84%

Substantial Portion of BOTH CACs & GHGs are Energy Related

From GVRD, Phase 2 : Harmonized Measures for Reducing Greenhouse Gases and Air Pollution in the Lower Fraser Valley, Nov,

2001

Prince George Context: Key Concern is Particulate



Integration degrees

- | | |
|------------|---|
| ■ Starting | ■ Talking about it in the same document |
| ■ Medium | ■ Understanding the implications of an action on all the issues (E, AQ, GHG). |
| ■ Full | ■ Finding solutions that advance objectives for AQ, E, and GHGs at once |

Prince George Context: Processes

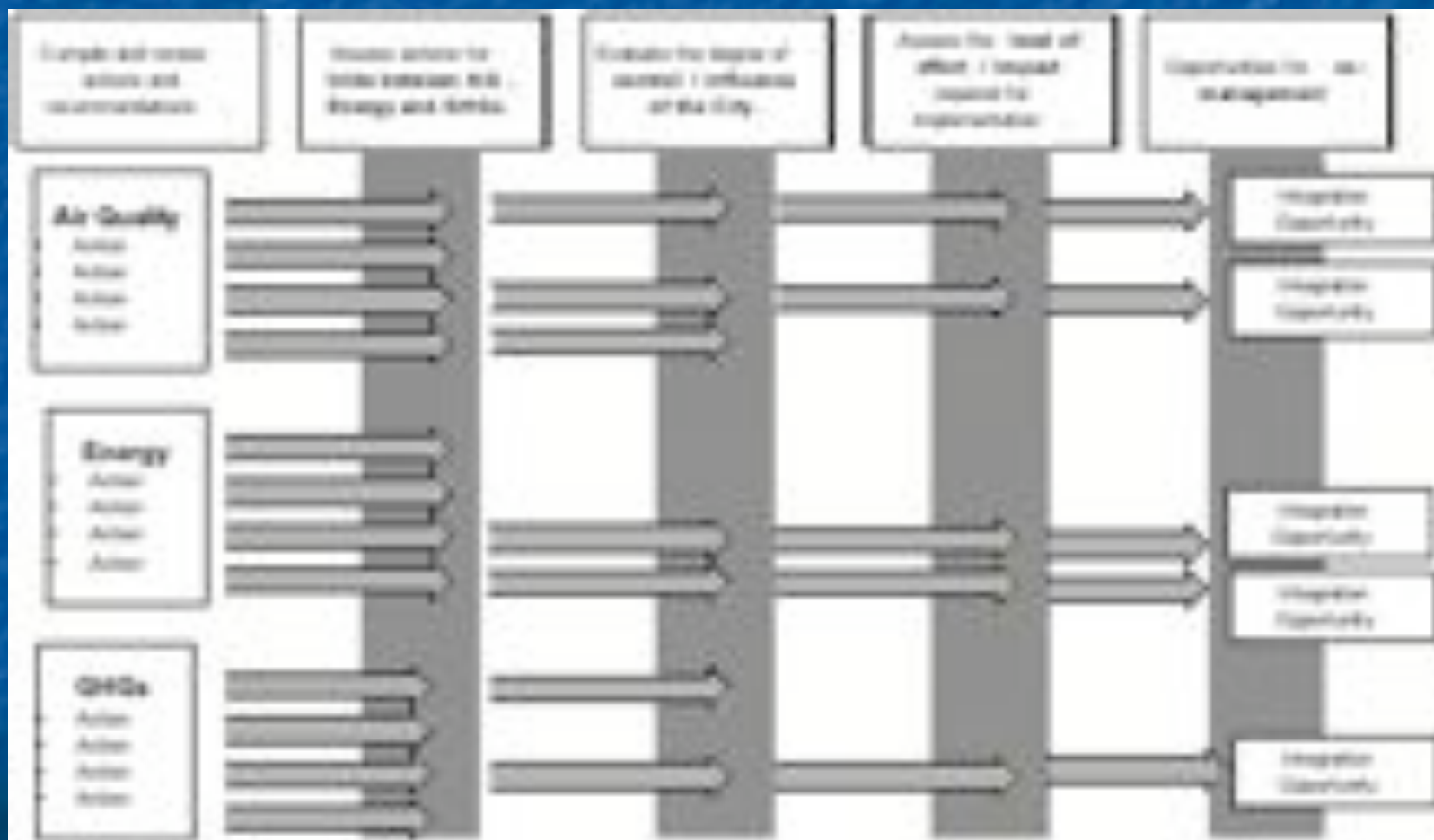
AQ Action

- Multi stakeholder
- Multi-funders
- City as a member

Energy and GHG

- City is the leader
- Partner funding
- Regulatory requirements (Bill 27)

Municipal Perspective: Screening GHG AQ Plan(s) Actions



Screening Results: Grouping

		Level of Impact on Emissions (relative)	
		Low	High
Effort (relative)	High	<p>Quadrant D</p> <p>“Foundational Act”</p> <ul style="list-style-type: none">•Coordination•Long term planning initiatives•Municipal Infrastructure	<p>Quadrant A</p> <p>“Lasting Legacies”</p> <ul style="list-style-type: none">• Long term planning initiatives• Municipal Infrastructure• Some Partnering Activities
	Low	<p>Quadrant C</p> <p>“Getting Traction”</p> <ul style="list-style-type: none">• Promotions•Funding partnerships•In kind support	<p>Quadrant B</p> <p>“Low Hanging Fruit”</p> <ul style="list-style-type: none">•Municipally Infrastructure•City driven activities – core control areas

Other Considerations

- AQ Agenda is a full plate
 - Concerns: Dilution of effort
Resources
Distraction of attention
- Role for City as Key Communication Link

What is the City Doing as a Result?

- Prepare a Report to Council for endorsement.
- Combined meeting of team leaders for GHG, Energy and AQ to develop a priority matrix and next steps
- Not likely leading to full integration under a single program – AQ is too big – needs to stand alone
- Will need to communicate between programs – City to take lead
- Will confirm current priorities and adjust some priorities

Thank you!

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