



OREGON
DEPARTMENT OF
ENERGY

Roadmap to 2035 (TIGHGER) Update

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- Roadmap to 2035
- TIGHGER Overview
- OGWC's Role
- Key Analyses
- Consultant Scope of Work and Schedule
- Completion/Next Steps

ROADMAP TO 2035

- Evaluate additional actions to achieve GHG goals
- Supplement other state efforts (e.g., CPP, HB 2021)

WHAT IS THE TIGHGER PLAN?

TRANSFORMATIVE INTEGRATED GHG EMISSIONS REDUCTION PLAN

Goal is to analyze and develop options for action across all sectors to serve as inputs for consideration by the Governor, Legislature, and policy-makers to develop a plan for Oregon



TIGHGER WORK

1. Identify Emission Reduction and Sequestration Actions (ERSAs)
2. Analyze the cost and GHG reductions of each ERSA
3. Develop sector-based MAC Curves
4. Determine and analyze the co-benefits for each ERSA
5. Score and rank the ERSAs using agreed upon evaluation criteria
6. Create a new “Roadmap to 2035” to meet our goals

ROLE OF OGWC AS A STEERING COMMITTEE

- Overall oversight and guidance
- Critical input (review and comment on draft memos)
- ODOE's role—analysis, support, project management



GRANT FOR ANALYSIS

- Supports the first four steps of the TIGHGER Plan
- Working with *Center for New Energy Economy (CNEE)*
- Support from *Sustainability Solutions Group (SSG)* and *WhatIf? Technologies*
- Analyze costs/per ton and identify bundles of ERSAs
- Analyze Co-Benefits of ERSAs



CONSULTANT SCOPE OF WORK

1. Gather and Review Background Information
2. List of Potential ERSAs by Sector
3. MAC Curves by Sector
4. Co-Benefits Analysis

1. Gather Background Information

- Review relevant documents
- Confer with 8 state agencies
- Confer with stakeholders (2 public meetings)
- Draft memo and seek **guidance from OGWC**



2. Develop List of Potential ERSAs by Sector

- ERSAs for Oregon's sectors:
 - Transportation
 - Electricity
 - Natural gas
 - Residential
 - Commercial
 - Industrial
 - Natural And Working Lands
 - Waste
 - Wastewater
 - Landfills
 - Land-use
 - Other
- Confer with state agencies, and stakeholders
- Draft memo and seek **guidance from OGWC**

3. Develop MAC Curve by Sector

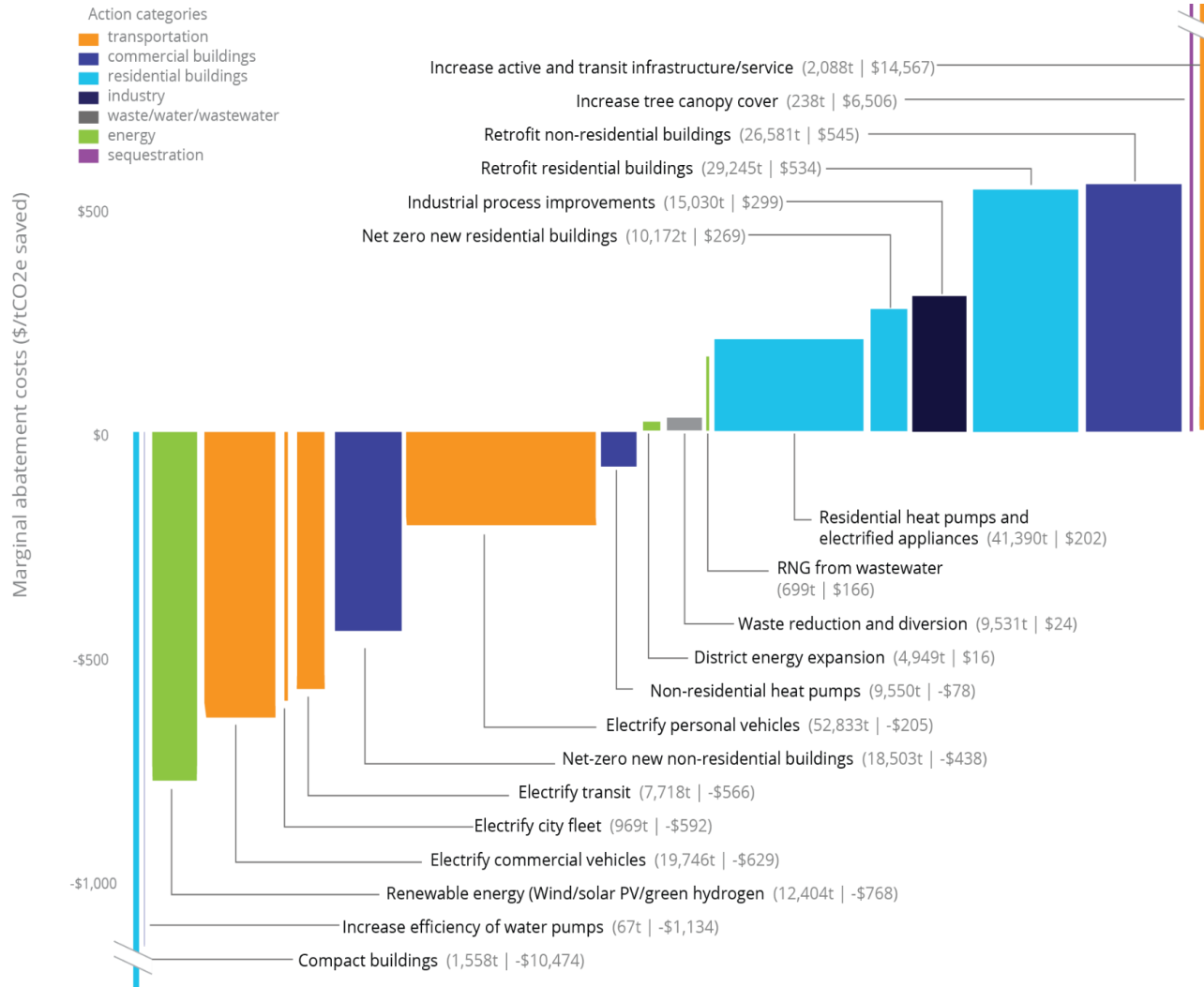
- The time frame is through 2035
- Focus on commercially available technology
- Consistent with the recent DEQ Climate Protection Program analysis
- Seek **guidance from OGWC** on key assumptions and methodologies



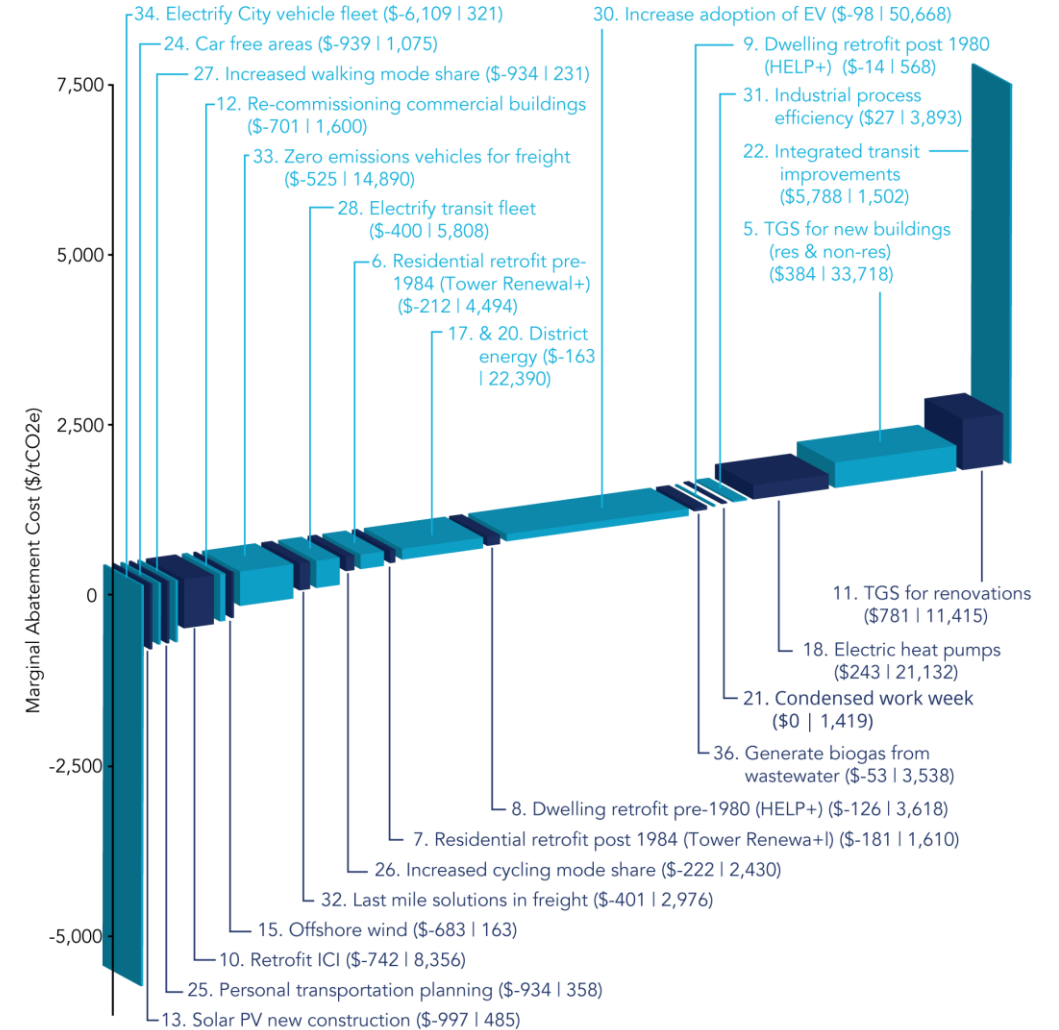
3. Develop MAC Curve by Sector (cont.)

- Cost-effectiveness analysis (net savings/cost)
- Annual and life-cycle GHG emission reductions (MTCO₂e)
- Compile into sector MAC Curves and one all-sector MAC Curve
- Draft memo and seek **comments from OGWC**

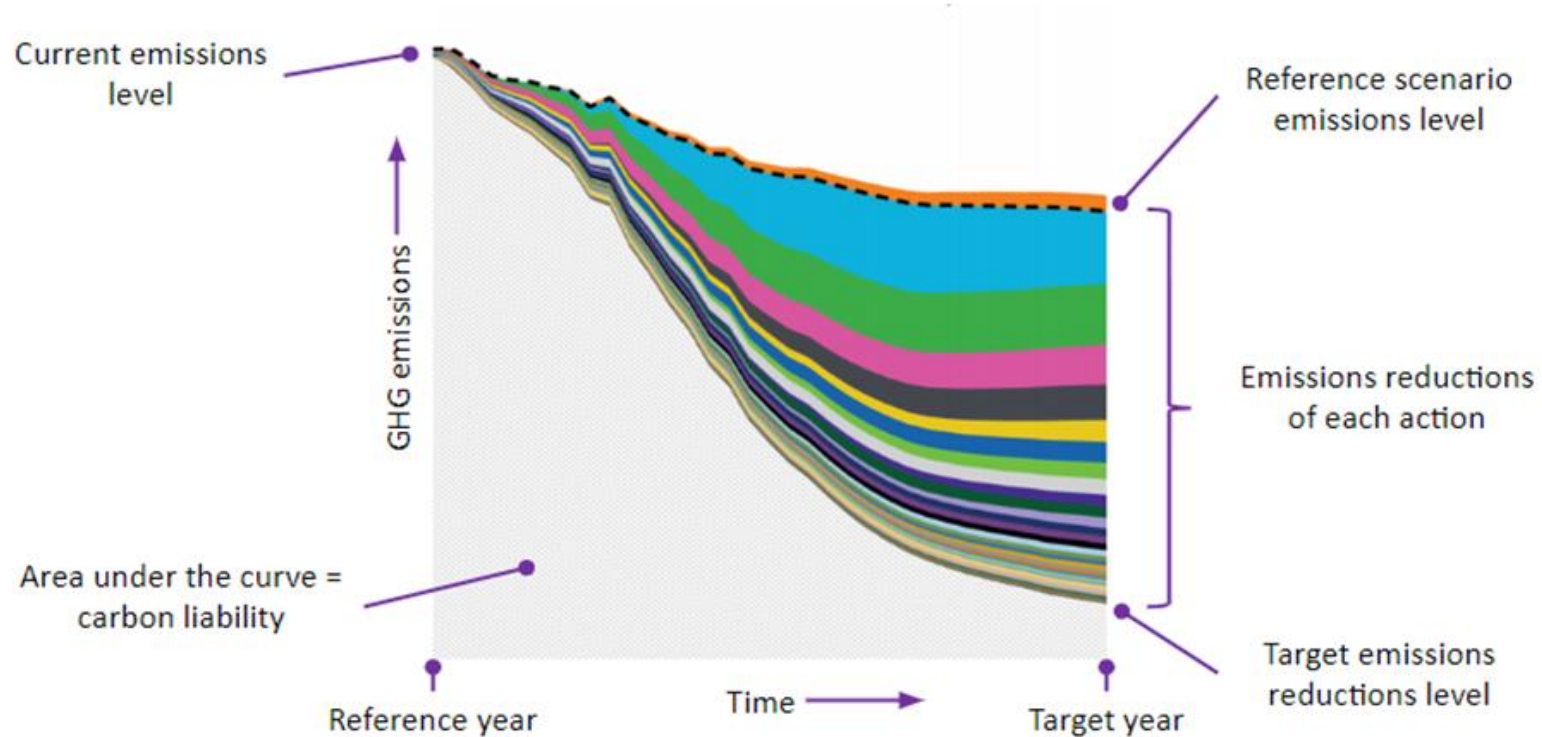
MAC CURVE – Examples



MARGINAL ABATEMENT CURVE FOR THE CITY OF TORONTO LOW CARBON SCENARIO
(\$/tCO2e COST PER TONNE SAVED | TOTAL kt CO2e SAVED)



BUNDLING ACTIONS



The dotted line represents the reference scenario. Each action (ERSA) is represented by a colored line. The integrated scenario is a combination of ERSA results in the area under the curve.

4. Co-Benefits Analysis

- Seek **guidance from the OGWC** and confer stakeholders
- Co-benefits go beyond GHG emission reductions
- Co-Benefits could include:
 - Environmental impacts (on air, land, and water)
 - Health impacts (from reductions in criteria pollutants)
 - Equity impacts on historically and currently underserved populations and communities
 - Increases in resiliency
 - Potential for job creation
 - Quality of life impacts

4. Co-Benefits Analysis (cont.)

- Confer with DEQ and use data from recent Climate Protection Program analysis
- Qualitative and quantitative analysis of the co-benefits (aide the scoring of ERSAs)
- Draft memo and seek **guidance from OGWC** and confer with agencies, and stakeholders

COMPLETION OF THE TIGHGER PLAN

5. OGWC Scores and Ranks the ERSAs

- Develop and agreed on evaluation criteria
- Using the MAC Curves and the Co-Benefits for Scoring (not just a cost ranking of actions)

6. OGWC creates a new “Roadmap to 2035” to meet our goals

OVERALL TIGHGER SCHEDULE

Project Steps	Consultant Work																		
	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-22	
MAC Curve & Co-Benefits Analysis	█	█	█	█	█	█													
Evaluation Criteria, Scoring & Ranking ERSAs							█	█	█	█									
Scenario Analysis/Packages of ERSAs											█	█							
Sector-Specific Climate Action Plans													█	█	█				
"Roadmap to 2035" Report																█	█	█	

CONSULTANT SCHEDULE

Consultant Work						Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23

OGWC Opportunities for Leadership and Input

Overall Project Steps	
Consultant	MAC Curve and Co-Benefits Analysis - -
Task 1:	Provide ideas for potential ERSAs Virtual Stakeholder Meetings (optional) Review and Comments on Outreach Input Memo
Task 2:	Review Process and Data Source Plan Review Draft ERSA List Virtual Stakeholder Meetings (optional) Review and Comments on ERSA List Memo
Task 3:	Input on MAC Curve Key Assumptions & Methodologies Review and Comments on MAC Curve Results Memo
Task 4:	Provide Input on Co-Benefits and Their Metrics Review and Comments on Co-Benefits Draft List Memo Review and Comments on Co-Benefits Results Memo
	Evaluation Criteria, Scoring & Ranking ERSAs Input on Eval Criteria Development Review and Comments on Scoring and Ranking Results Memo
	Scenario Analysis/Packages of ERSAs Input on Scenario Packages Development Review and Comments on Scenario Results Memo Confirm Preferred Scenario
	Sector-Specific CAPs Review and Comments on Sector CAPs Memo
	Roadmap to 2035 Report Review and Comments on Draft Report



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