

# CADMUS

## Task 4: Pathways Analysis: Overview for Cross Sector Mitigation Subcommittee

September 2nd, 2021





# Framing and Prioritizing Mitigation Opportunities

# Pathways Analysis

## Task 4a

### Initial Pathways Analysis (Sept. 30)

Recommendations and Excel table:

- Sectoral, jurisdictional and existing climate initiatives
- Impact of the VCC recommended strategies on emissions reductions
- Preliminary 2025, 2030 and 2050 pathway recommendations and corresponding LEAP inputs

## Task 4b

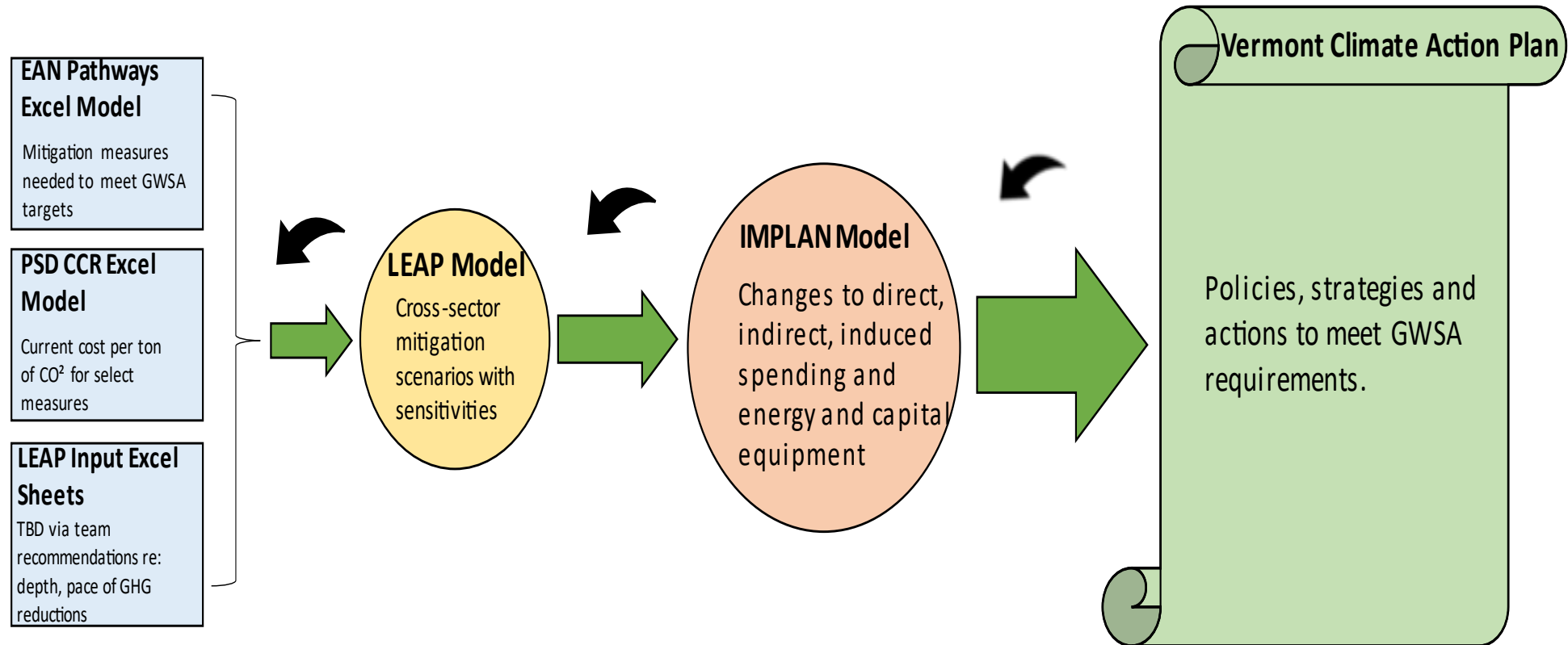
### Draft and Final Pathways Report and Executive Summary (Nov. 30)

- 2025 Pathway: Immediate and short-term policies, programs, and initiatives to meet reduction targets.
- 2030 Pathway: Additional policies, programs, and initiatives to be advanced this decade to meet reduction targets.
- 2050 Pathway: Strategic framework for additional activities necessary to achieve 2050 emissions targets.

## Deliverables

**50-page report, 10-page Executive Summary**

# Collaboration and Iteration to Strengthen the CAP



\*Green arrows indicate primary flow of information. Black arrows indicate iterative data and modeling adjustments as initial outcomes are modified via stakeholder feedback.

# Approach to Pathways Analyses

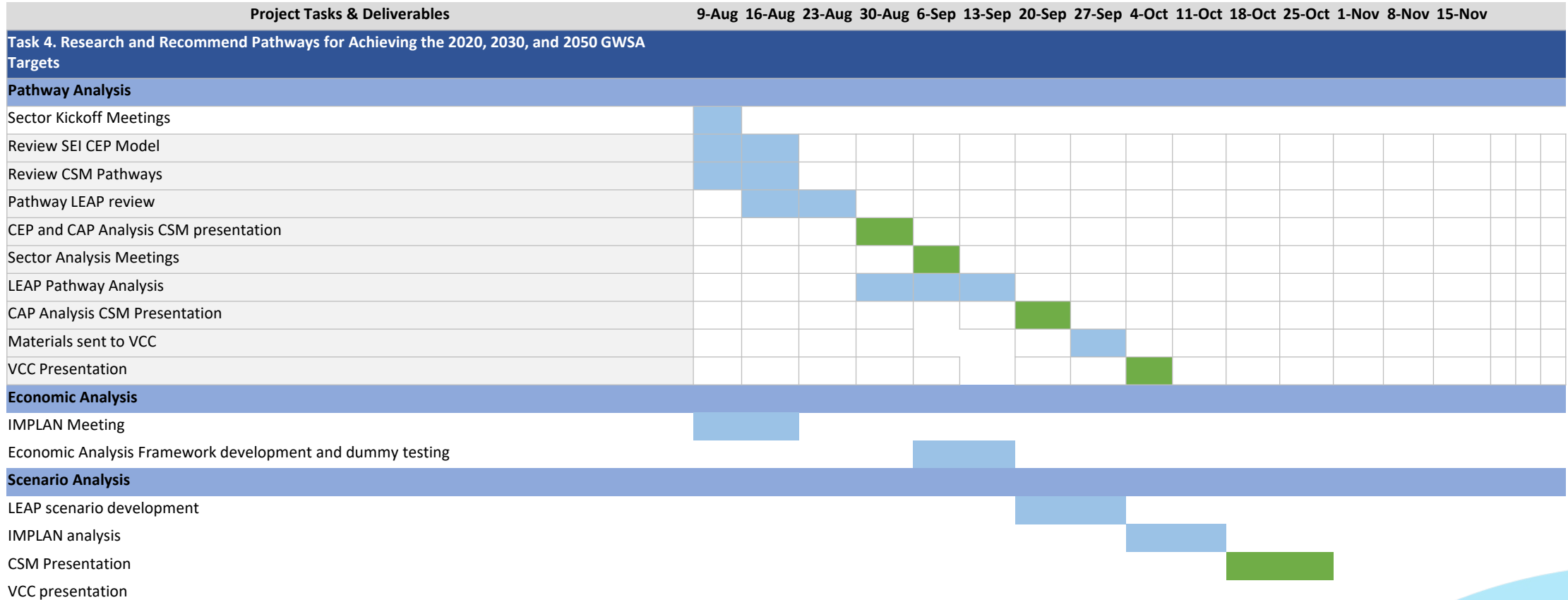
Build upon existing model

Synthesize Climate Council Pathways and Mitigation Pathways

Identify:

- Gaps in existing analyses
- Additional strategies, measures or categories
- Review assumptions and inputs
  - Depth and pace of emissions reductions
  - Costs and performance
- Supporting policies and initiatives

# Timeline





# Sectoral Overviews

# Transport Sector

1. Review existing initiatives & relation to mitigation pathway scenarios in LEAP
  - A. Transportation Climate Initiative – Sales and stock in model – EAN pathways estimates
2. Reductions in VMT – Current LEAP model has technology/stock turnover focus.
3. Charging infrastructure – required levels and costs.
4. Baseline adoption rates for medium and heavy duty, costs for BEVs.
5. Managed charging and biofuels – depth and pace of adoptions under pathways.
6. Identify key metrics for tracking tool.
7. Other....



# Buildings Sector

1. Review existing initiatives & relation to mitigation pathway scenarios in LEAP
  - A. Clean Heat Standard -
2. Weatherization at scale, review model to coordinate with latest from EAN working group
3. New construction, code collaborative and Net zero energy by 2030.
4. Rental efficiency initiative.
5. Space heating systems – shares and additional (centrally ducted HPs).
6. District heating for commercial space and water heating.
7. Pace of fossil phase outs for cooking and water heating.
8. Advanced wood heating systems review inputs and assumptions
9. Identify key metrics for tracking tool.
10. Other....

# Electricity Sector

1. Review existing initiatives & relation to mitigation pathway scenarios in LEAP
2. 100% Resource Portfolio Standard
3. Local renewable generation focus
4. Transmission and distribution system upgrades, triggers and costs
5. Managed load shapes
6. Identify key metrics for tracking tool.
7. Other....

# Non-Energy Sector

1. Review existing initiatives & relation to mitigation pathway scenarios in LEAP
2. Ozone depleting substitutes – review pace and scale of ODS substitute reductions
3. Semi conductor manufacturing – consider driver other than population growth
4. Agricultural soils – consider changes or range to rate of improved sequestration
5. Enteric fermentation – review depth and pace of estimate of 30% reduction by 2025
6. Manure management – review depth and pace of estimate of 40% reduction by 2025
7. Land use, land use change, forestry – review rate of decreasing sequestration, options for rate or range of rates
8. Identify key metrics for tracking tool.
9. Other....

# Cross Cutting & Economic Analysis

1. Population – sensitivity with higher demographic, in-migration
2. Housing demographics
3. Analytic boundary and scope and scale settings
4. Fuels and effects – biogenic CO<sub>2</sub>, upstream emissions, GWP time horizons
5. Discount rate – reflect social cost of greenhouse gases discount rate(s) (task 3).
6. Social cost of avoided emissions based on Task 3 recommendations
7. Economic analysis through 2030 and then through 2050
8. Translation of LEAP outputs to IMPLAN analysis
9. Other....



# Discussion and Questions



Thank You!