Global Warming Solutions Act Implementation Advisory Committee

June 27, 2019

2-4pm

Agenda

- Welcome & Introductions
- Review and approve minutes of the March 7th IAC meeting
  - Call for vote to approve the minutes
- Brief updates from state agencies
- Present and discuss draft 80x50 Study's Draft Technical Workplan
- Discuss draft 80x50 Study's Stakeholder Engagement Plan
  - Role of IAC members and delegates
  - Feedback on additional stakeholders and outreach activities
- Wrap up & next steps
- Adjournment

Welcome & Introductions

March 7th Minutes

- Review

- Call for vote to approve the minutes

State Agency Updates

80x50 Study

Goals and Outputs of 80x50 study

- To identify the strategies, policies, and implementation pathways for MA to achieve at least 80% GHG reductions by 2050 and the priorities to achieve an interim goal by 2030, taking into account impacts on the economy, public health, and socio-economic equity.
  - In the process, engage various stakeholders to help move from plans to reality
- Outputs of the Study:
  - MA Roadmap to 2050 report
  - 2030 Clean Energy and Climate Plan
  - 2030 GHG Emissions Limit

Definitions and terms of reference

<u>Pathway:</u> a suite of outcomes that achieve a set of policy goals (in this case, the overall goal is GHG emissions reductions).

- Example: by 2050, greenhouse gas emissions from the electricity delivered to Massachusetts users will be at least XX% lower than 1990 electricity emissions.
- Example: by 2040, XX% of light duty vehicles sold in MA will be zero-emission vehicles (ZEV).

<u>Scenario:</u> an internally consistent storyline outlining driving forces, critical assumptions and uncertainties, and how these forces will impact the future, in terms of our ability to meet the 2050 targets.

- Example: by 2050, solar PV installation costs will decrease significantly relative to today, making renewable sources more competitive on the open market. Battery storage technologies improves and become commercially viable for many applications in the power and transportation sectors. Massachusetts population embraces broad electrification but growth sprawls beyond dense urban areas.

Some quick definitions and terms of reference (cont.)

<u>Policy</u>: a defined action by the Commonwealth, *or another actor*, intended to bring about a desired outcome.

- Example: the CES requires that 80% of retail load obligation is satisfied by clean energy in 2050.

- Example: 310 CMR 7.74 limits the emissions of power plants in Mass. to less than 2 $MMTCO_2e$ in 2050.

- Example: Aggressive public investments in ZEV charging infrastructure throughout the Commonwealth, especially in underserved communities and locations.

<u>Implementation Step & Timing</u>: what needs to happen in order to achieve a policy's intended objectives; when does it need to happen

- Example: to avoid dispatching carbon-intensive units during demand spikes, implement policy to manage time-of-use for electric vehicle charging by 20YY.

Project approach

Pathway Analysis
- Energy consumption, land-use changes, technology, etc.
- **What does a GWSA-compliant 2050 look like?**

Scenario Analysis
- Qualitative analysis of uncertainties and background trends.
- **What changes by 2050 will affect pathway implementation?**

Pathway Iteration
- How pathways interact with scenarios, emphasizing feedbacks and common elements.
- **Identifies a robust pathway to analyze in-depth.**

Policy Analysis
- How can we achieve the outcomes identified in the Pathway Analysis?
- **How can we maximize policy benefits?**

2050 Roadmap
- **Long-range review of policies and goals.**
- **Implementation benchmarks.**

CECP for 2030
- **Detailed menu of policies, focusing on an implementation steps in the 2020's.**

Project approach

Pathway Analysis
- Define key inputs, outputs for LEAP and other sector-specific models

Scenario Analysis
- Identify key drivers, trends, feedbacks and modeling assumptions

Pathway Iteration
- Adjust and re-run models with new inputs, outputs, assumptions to capture feedbacks and key drivers.

Policy Analysis
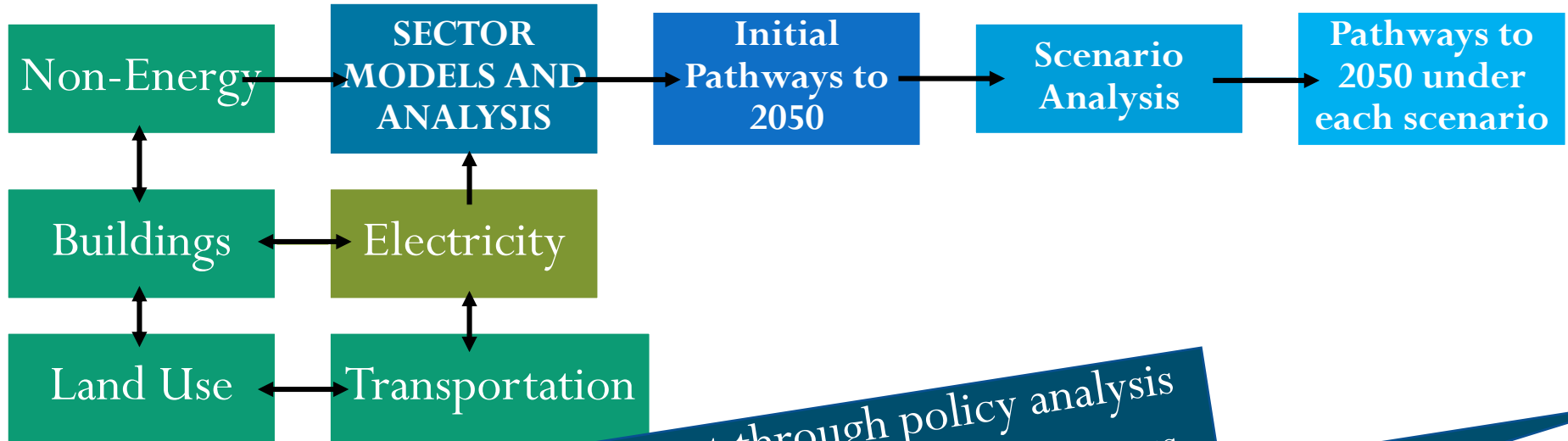- Define key inputs, outputs and for LEAP and other sector-specific models.

2050 Roadmap
- Long-range review of policies and goals.
- Implementation benchmarks.

CECP for 2030
- Detailed menu of policies, focusing on an implementation steps in the 2020's.

7/2/2019

(Rough) Research Stream Process

| Non-Energy | → | SECTOR MODELS AND ANALYSIS | → | Initial Pathways to 2050 | → | Scenario Analysis | → | Pathways to 2050 under each scenario |

Non-Energy ↕ Buildings ↕ Land Use

Buildings ↔ Electricity

Land Use ↔ Transportation

Electricity ↑ from SECTOR MODELS AND ANALYSIS

Transportation ↕ Electricity

Information put through policy analysis and screens including cost-effectiveness, equity, etc. *Iterative Process.*

Associated workbooks, models, tools, slide decks, etc.
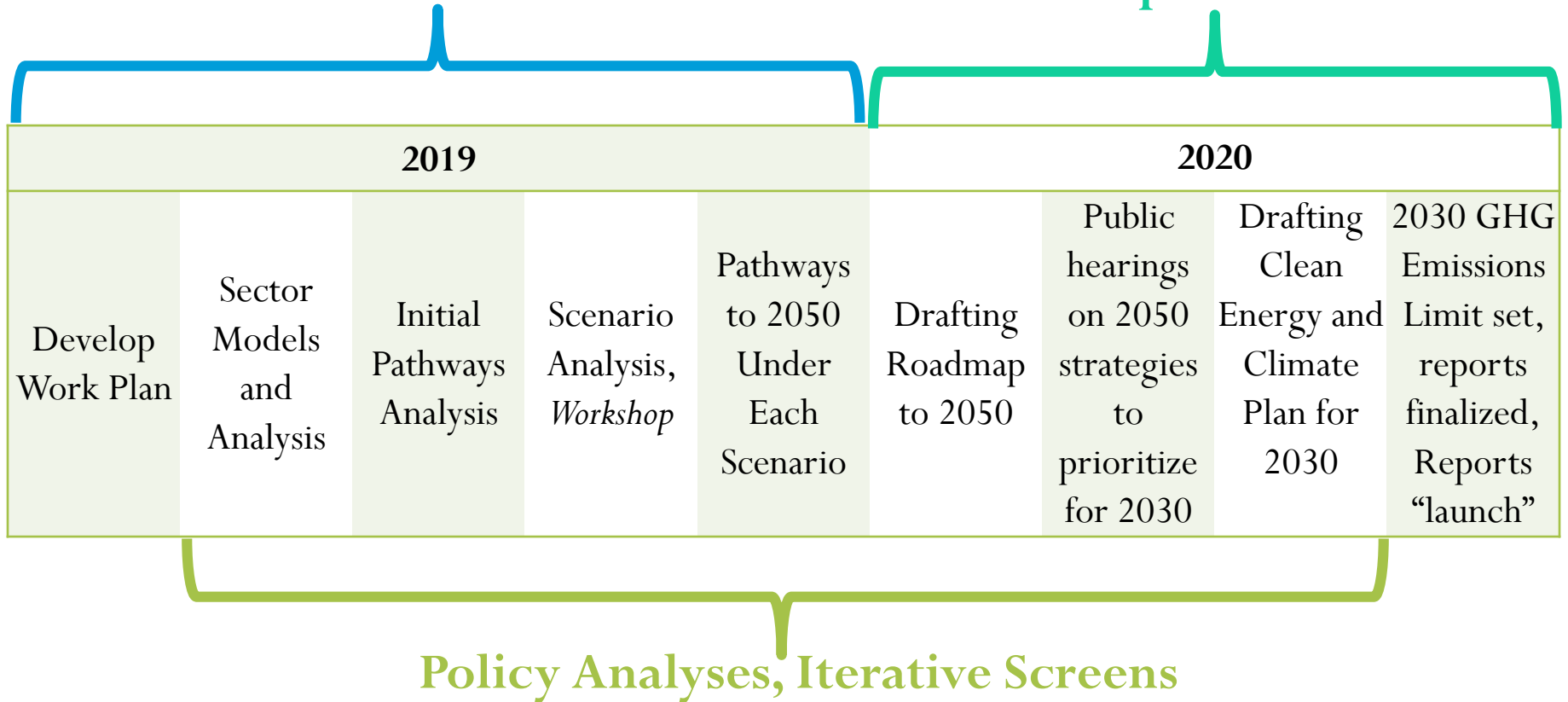
MA Roadmap to 2050

2030 GHG emissions limit

MA Clean Energy and Climate Plan for 2030

2019

Rough Calendar of Report Activities

Research Phase

Report Phase

2019					2020			
Develop Work Plan	Sector Models and Analysis	Initial Pathways Analysis	Scenario Analysis, *Workshop*	Pathways to 2050 Under Each Scenario	Drafting Roadmap to 2050	Public hearings on 2050 strategies to prioritize for 2030	Drafting Clean Energy and Climate Plan for 2030	2030 GHG Emissions Limit set, reports finalized, Reports "launch"

Policy Analyses, Iterative Screens
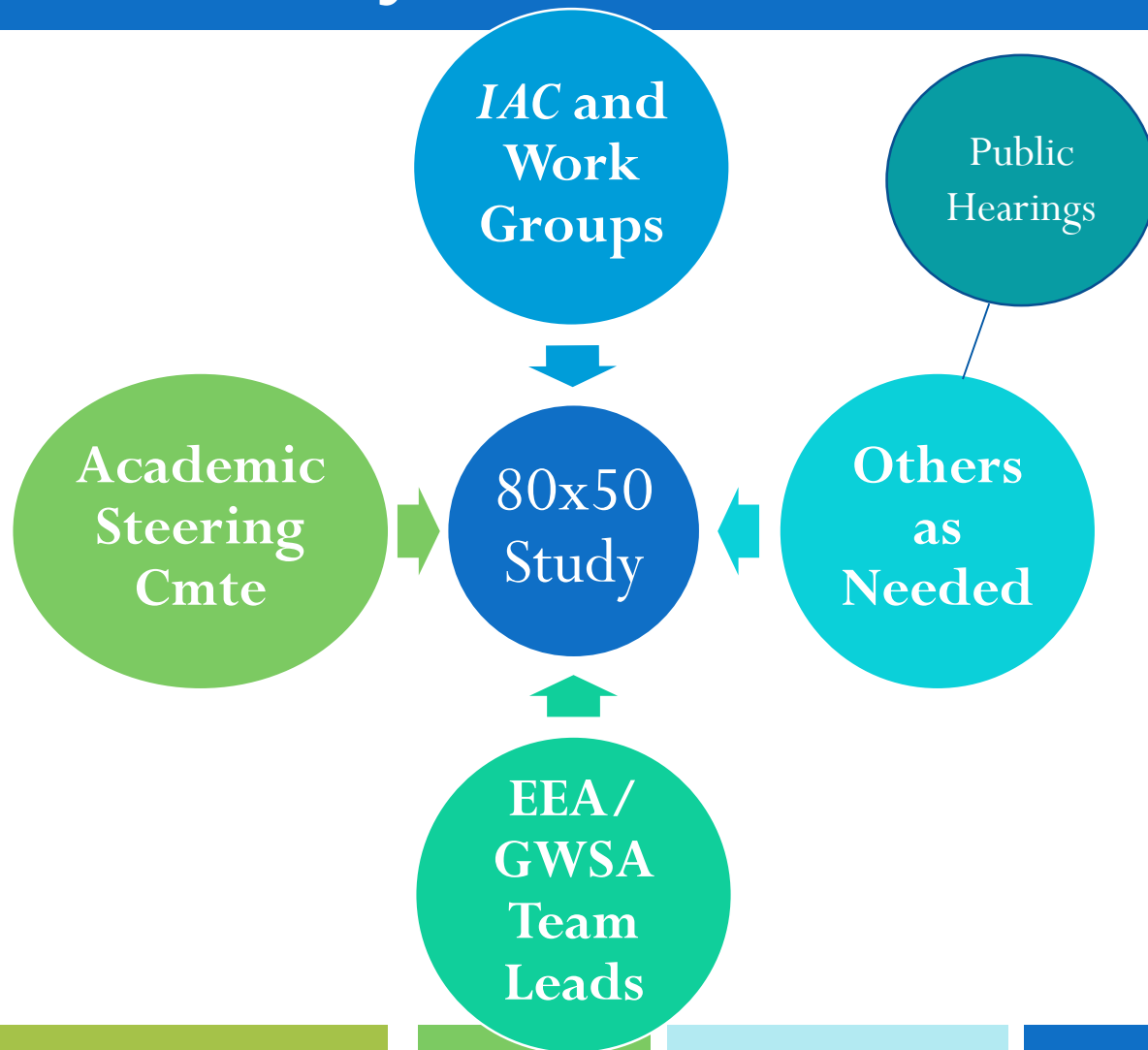
80x50 Study Stakeholder Engagement

- Discuss draft 80x50 Study's Stakeholder Engagement Plan
  - Role of IAC members and delegates
  - Feedback on additional stakeholders and outreach activities

80x50 Study Stakeholders

IAC and Work Groups

Public Hearings

Academic Steering Cmte

80x50 Study

Others as Needed

EEA/ GWSA Team Leads

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7/2/2019

Role of IAC members and delegates in 80x50 Study

- Inform the trajectory of the 80x50 research as part of the regular IAC meetings
  - IAC meetings will align with decision points in the research
  - i.e. Fall/winter IAC meeting as part of a scenario workshop (with other stakeholders—details TBD)
- IAC help inform **public hearings** and process
- IAC to provide **policy** recommendations to be considered in 80x50 study
- Other as needed

Public Engagement

- Goal: Engage the general public across the commonwealth to both gather input into and generate enthusiasm towards implementing the plans.
  - Structure: A series of public hearings during a 2-4 week period (targeting spring/summer 2020) throughout the state
  - Content: Review high level 2050 strategies and available analysis, public comments/testimony focused on what should be prioritized for the 2030 plan
    - Especially seeking ideas on existing or planned efforts/initiatives to help inform feasibility of 2030 activities.

IAC Policy Recommendations for 80x50

- IAC Work Groups have already developed policy recommendations

- Looking to full IAC to recommend policies for consideration in 80x50 report

- Possible approach:
  - Work groups meet in the coming weeks to review current policy recommendations, review based on **criteria**, and refine into new format: Policy summary (~2 sentence description of concept) and Policy details.
    - EEA can help staff these meetings and work to compile discussion into appropriate format
  - Full IAC meet in late August to review and discuss these policies, make recommendations for consideration in 80x50 Study

Policy Screening Criteria (from GWSA)

- Technologically feasible within desired timeframe
- GHG reduction estimates
- Cost
- Equitable distribution of impacts, benefits specifically for EJ communities or low income residents
- Diversify energy sources
- Consider minimizing leakage of GHG emissions outside of MA
- Improve adaptive capacity of built and natural environments
- State influence on implementation
- Policy feasibility

Other ideas

- Implementation is a huge part of the goal (and of the IAC)

- Ideas to engage and energize implementers through this process?

- Feedback on public hearings?

- How can the 80x50 Study synergize with your existing efforts over the next 2 years?

- Have an idea? Let me know! Claire.Miziolek@mass.gov, 617-626-1193

Wrap up and Next Steps

- Slides will be posted

- Meeting minutes will be assembled

- Who can make the next meeting (8/29)? Look to reschedule or keep?

- Looking to plan Work Group meetings soon

Thank you!