

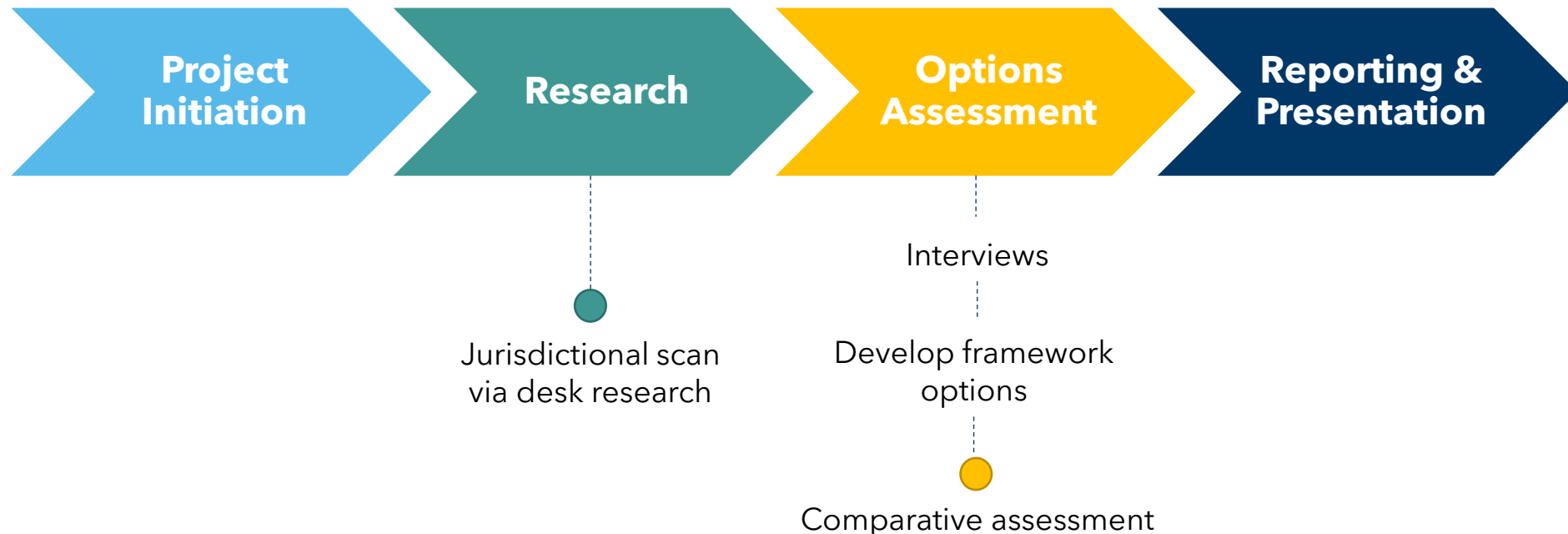
# X2244 – Review Possible Shift of EE to GHG Policy Integration Goals and Metrics

Framework Options & Assessment (Task 3)

August 2023 -- DRAFT



The purpose of this study is to deliver research, analysis, and strategic advice related to a potential transition of Connecticut's C&LM framework from energy savings to a focus on GHG emissions reductions.

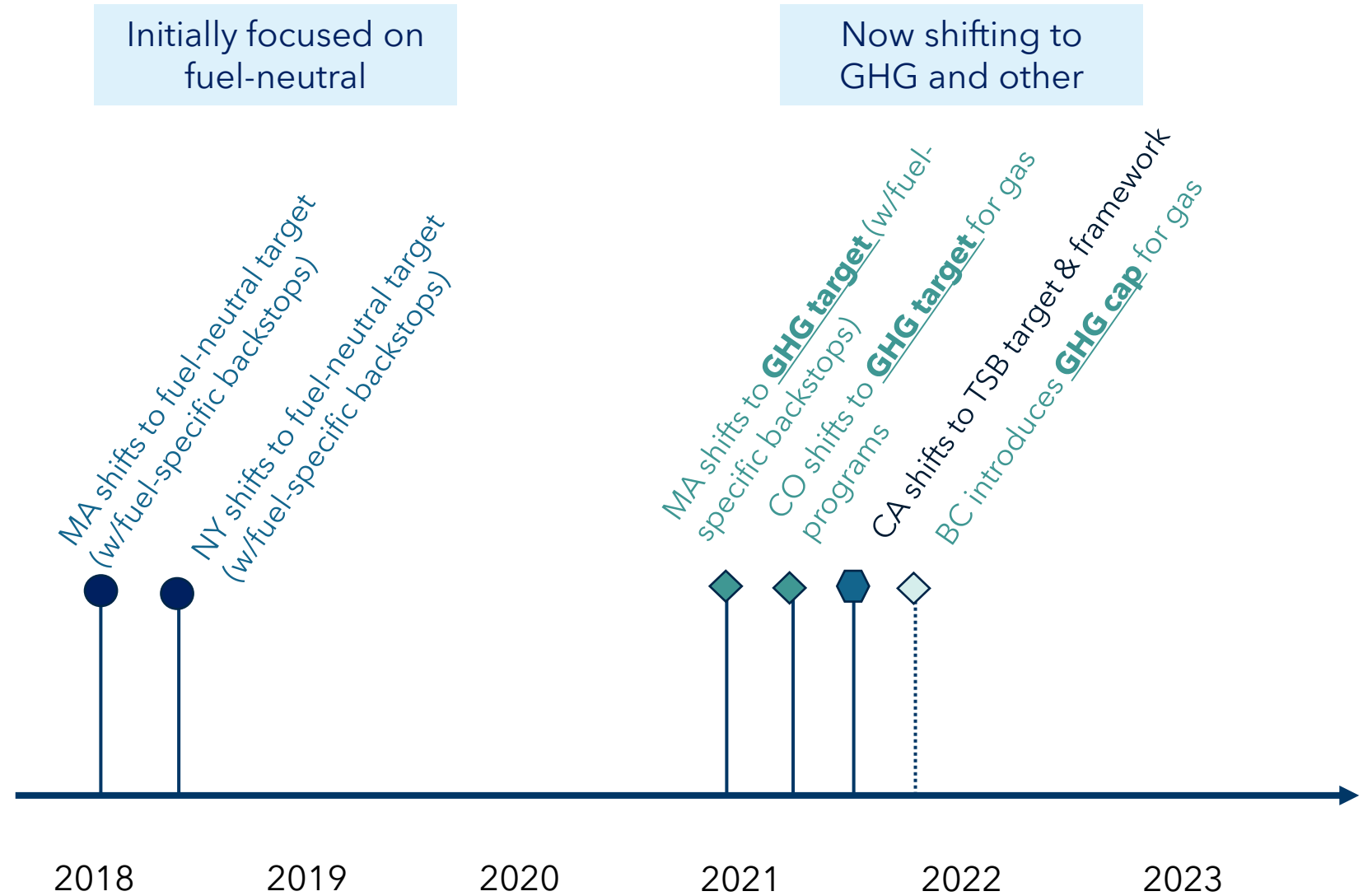


# Jurisdictional Scan Findings - Brief Recap

# We are starting to see a shift in DSM targets.

## Key Findings:

- **Energy savings targets** remain the leading primary target metric.
- However, EE targets have started to shift in the last 5 years to support climate goals and beneficial electrification.
- First saw a move to **fuel-neutral**; now some jurisdictions are exploring **GHGs**, other.
- States and provinces' GHG requirements fall along a spectrum (from voluntary consideration to primary target).



# Jurisdictions are redefining the range of offerings.

## Key Findings:

- Program measure eligibility is being expanded to include efficiency fuel switching by removing existing bans on fuel switching or explicitly including/requiring electrification.
- Almost all jurisdictions in this review also include demand response to help minimize impacts on system peak.
- Other eligible measures include (1) storage, (2) voltage regulation, (3) mobility, (4) non-energy (e.g., refrigerants), (5) renewables integration, and (6) green hydrogen.

	Efficient FS	DR <i>(passive &amp; active)</i>	Other
<b>BC</b>	✓	✓	
<b>CA</b>	✓	✓	✓ <sup>4</sup>
<b>CO</b>	✓	✓	✓ <sup>4,6</sup>
<b>IL</b>	✓	✓	✓ <sup>2</sup>
<b>MA</b>	✓	✓	✓ <sup>1,3,5</sup>
<b>MI</b>	✓	✓	✓ <sup>5</sup>
<b>NY</b>	✓	✓	✓ <sup>3</sup>
<b>QC</b>	✓	✓	
<b>WI</b>	✓*		

# Performance incentives are increasingly factoring in climate.

## Key Takeaways:

- Since utilities have a fiduciary duty to their shareholders, the earnings metrics in the performance incentive mechanism will have at least as great of an impact on the type of measures/savings a utility will pursue.
- Almost all leading states implicitly factor GHGs into their Performance Incentive Mechanism (PIM), for example, including net benefits that incorporates GHGs.
- Only New York and Minnesota currently explicitly include GHGs.

	Type of PIM	Explicitly includes GHGs	Implicitly includes GHGs
<b>BC</b>	ROE		✓
<b>CA</b>	Multifactor (recently suspended)		--
<b>CO</b>	Share of net benefits		✓
<b>IL</b>	ROE		✓
<b>MA</b>	Multifactor		✓
<b>MN</b>	Share of net benefits	✓	✓
<b>NY</b>	Multifactor + ROE	✓	✓
<b>QC</b>	ROE		--
<b>WI</b>	None		--

# CL&M Framework Options

A shift of Connecticut's C&LM framework to focus on decarbonization could be **incremental or wholesale**. The assessment looks at three levels of intervention across the spectrum of potential decarbonization policy changes:



This approach provides policymakers with information on how **each C&LM framework element** could be adjusted given a range of scenarios.

- **Targets**
- **Measure Eligibility**
- **Cost-Effectiveness** Tests
- **Performance Incentive** Mechanism
- **Plan** Development & **Delivery** Model
- **Evaluation**



# Targets

What is the desired outcome and how is it articulated?

Status Quo

- **Energy savings target:** utilities track and report lifetime energy and demand savings (GWh, MW, and MMcf).
- **Voluntary utility GHG reporting:** utilities are permitted to calculate and report GHG savings from C&LM programs in their regulatory filings.

Incremental

- **Mandatory utility GHG reporting:** utilities are required to calculate and report on GHG savings from C&LM programs in their regulatory filings. BC
- **State reporting:** state government calculates/reports on GHG impacts of C&LM programs on its own.

Moderate

- **Add GHG reductions as secondary target:** utilities are given a specific GHG reduction goal, but energy is still the primary driver of performance. NY
- **Shift to all-fuels target:** pursue a MMBtu target and potentially maintain energy and demand targets/sub-targets. NY

Wholesale Shift

- **Sole target:** GHG reductions - i.e., no more energy savings target AB\* CO\*\*
- **Balanced scorecard:** where GHG reductions is one of many performance objectives. VT
- **Dual target: GHG savings + energy savings:** utilities need to achieve both to be deemed 'successful.' MA

\*Former target in Alberta

\*\*For gas only

# Measure Eligibility

What “counts” (and what doesn’t)? Beyond traditional EE, what about HPs, EVs, DG and others?

## Status Quo

- **Traditional + limited HP**  
Includes “cost-effective energy conservations programs, demand management and market transformation initiatives.” These activities are available to “all customers of electric distribution companies and gas companies.” [Sec. 16-245m(d)(1); see also Sec. 16-245m(d)(5)]

## Incremental

- **Explicit support of HPs:**  
Explicitly include, in legislation, that heat pumps can be included in C&LM Plans and funded through the CAM or other funding sources.  
[Numerous](#)
- **Limit gas measures:**  
Remove gas measures from all new construction, but not from retrofits.  
[CA](#)

## Moderate

- **All Building Energy:**  
Explicitly include all building energy measures to be included in programs (i.e., HPs, BTM RE, storage).  
[MA, MI](#)
- **No gas measures:** Remove gas measures from all retrofit and new construction.  
[MA\\*, NY, CA\\*\\*](#)

## Wholesale Shift

- **All GHG measures:**  
expand to include transportation, BTM RE generation, storage and/or non-energy such as refrigerants.  
[MA, CO, MI, CA](#)
- **+ Enabling investments:**  
allow investments that make buildings “electrification ready” – i.e., incentives for electric panel, wiring, etc. to enable HPs, solar, EVs.  
[BC, SMUD, CA IOUs](#)

\*Cape Light Compact’s residential market rate programs.

\*\*Proposed

# Cost-Effectiveness Test

What cost-benefit tests are used and what is included?

Status Quo

Incremental

Moderate

Wholesale Shift

- **New Connecticut Efficiency Test (CTET):** Modified UTC, which includes utility system impacts (incl. benefits from reduced arrearages, collection costs, debt write-off, admin costs), oil and propane savings, and GHGs (based on either the avoided cost of compliance with the GWSA or non-embedded GHG cost from AESC study).

- **Strengthen cost of carbon in current test:** Keep CTET, update as needed, and include/ensure a forward-looking SCC that increases over time.

CA, CO,

- **Move away from cost-effectiveness:** Shift focus to "least cost" GHG savings (\$/ton CO<sub>2</sub>e reduced).

# Performance Incentive Mechanism

How are utilities rewarded for achieving the target(s)?

Status Quo

- **Energy savings and net economic benefits + secondary metrics:** Primary metrics include sector- and program specific energy saving performance indicators as well as sector-specific net economic benefits metrics. Secondary, program-specific metrics (e.g., participation, comprehensiveness) also included. PIM earnings based on a percent of program spending vs. performance (75-130% of targets).

Incremental

- **Strengthen cost of carbon:** see previous slide.
- **Enhanced incentive for select programs:** Update metric weighting to reward programs with largest GHG savings.

Moderate

- **Set unlocking thresholds:** Minimum thresholds for GHG before eligible for any other incentives and can claim above 100% of target. MA\*

\*With respect to equity and electrification components.

Wholesale Shift

- **Reward solely focused on GHGs:** Rewarded for achievement of GHG target (could be based on % of target, cost efficiency, other). May also include unlocking thresholds for energy, etc. (e.g., NY - for one EAM).
- **Reward based on scorecard achievement:** include all targets but could be weighted toward GHG (and other key priorities).

# Plan Development & Delivery Model

Rules and guidelines regarding program development, approvals and delivery.



Status Quo

Incremental

Moderate

Wholesale Shift

- **DEEP + Energize CT + EEB:** DEEP conducts IRP, which establishes targets, reviews/approves budgets and plans (three-year and annual adjustments) developed by utilities. Joint administration of C&LM programs by electric and gas utilities through Energize CT. Integrated delivery primarily through third parties. Stakeholder engagement through the EEB, which supports development of plans and administers EM&V process.

- **Target setting:** energy target set through IRP and GHG follows, or GHG target to align with state goals and that is input into IRP?
- **Expand EEB:** add seats to account for new areas/priorities (legislative change).

- **New EEB:** shift of mandate and reconstitution of EEB (including name change).
- **Update delivery model:** non-utility or competitive model options

# Evaluation

*How are outcomes measures?*

Status Quo

Incremental

Moderate

Wholesale Shift

- **Independent, third-party:** Formal rules and procedures in place (via legislation). Independent EM&V on an ongoing basis, overseen by the EEB and submitted to PURA.
- **Incorporate GHGs:** Incorporate GHG savings into EM&V studies and include best in class GHG standard protocols.
- **Incorporate new measure profiles:** e.g., EVs.
- **Improve granularity:** incorporate measure load profiles alongside associated GHG time varying emission profiles.
- **Focus on absolute savings:** Shift away from counterfactuals to actual emissions performance.

# Overview of Framework Options

	Status Quo	Incremental	Moderate	Wholesale shift
<b>Targets</b>	<ul style="list-style-type: none"> <li>• Energy shavings target</li> <li>• Voluntary GHG reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Mandatory utility GHG reporting</li> <li>• State reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Add GHG reduction as secondary target</li> <li>• Shift to all-fuels target</li> </ul>	<ul style="list-style-type: none"> <li>• Sole GHG target</li> <li>• Balanced scorecard</li> <li>• Dual target (GHG+energy)</li> </ul>
<b>Measures</b>	<ul style="list-style-type: none"> <li>• Traditional + limited HP</li> </ul>	<ul style="list-style-type: none"> <li>• Explicit support of HPs</li> <li>• Limit gas measures</li> </ul>	<ul style="list-style-type: none"> <li>• All building energy</li> <li>• No gas measures</li> </ul>	<ul style="list-style-type: none"> <li>• All GHG measures</li> <li>• + Enabling investments</li> </ul>
<b>Cost-Effectiveness</b>	<ul style="list-style-type: none"> <li>• New Connecticut Efficiency Test</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen cost of carbon in current model</li> </ul>		<ul style="list-style-type: none"> <li>• Move away from cost-effectiveness</li> </ul>
<b>Performance Incentive</b>	<ul style="list-style-type: none"> <li>• Share of net benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen cost of carbon</li> <li>• Enhance incentive for select programs</li> </ul>	<ul style="list-style-type: none"> <li>• Set unlocking thresholds</li> </ul>	<ul style="list-style-type: none"> <li>• GHG-based reward</li> <li>• Scorecard-based reward</li> </ul>
<b>Plan Development &amp; Delivery Model</b>	<ul style="list-style-type: none"> <li>• DEEP +Energyize CT + EEB</li> </ul>		<ul style="list-style-type: none"> <li>• Target setting</li> <li>• Expand EEB</li> </ul>	<ul style="list-style-type: none"> <li>• New EEB</li> <li>• Update Delivery model</li> </ul>
<b>Evaluation</b>	<ul style="list-style-type: none"> <li>• Independent, third-party</li> </ul>	<ul style="list-style-type: none"> <li>• Firm up status quo</li> <li>• Build new measure profiles</li> </ul>	<ul style="list-style-type: none"> <li>• Improve granularity</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on absolute savings</li> </ul>

**Questions?**