

EE Measure Classification Whitepaper Affirmation



CALIFORNIA

TECHNICAL FORUM

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DECEMBER 17, 2020**

Presentation Overview

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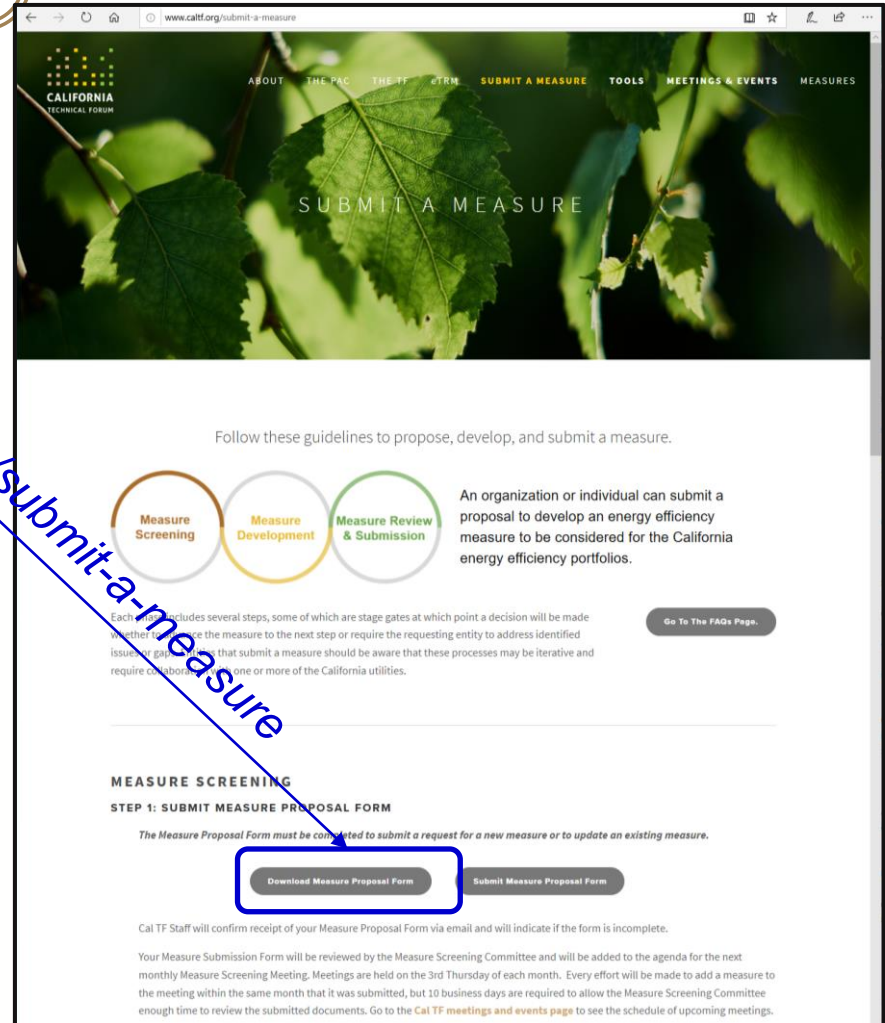
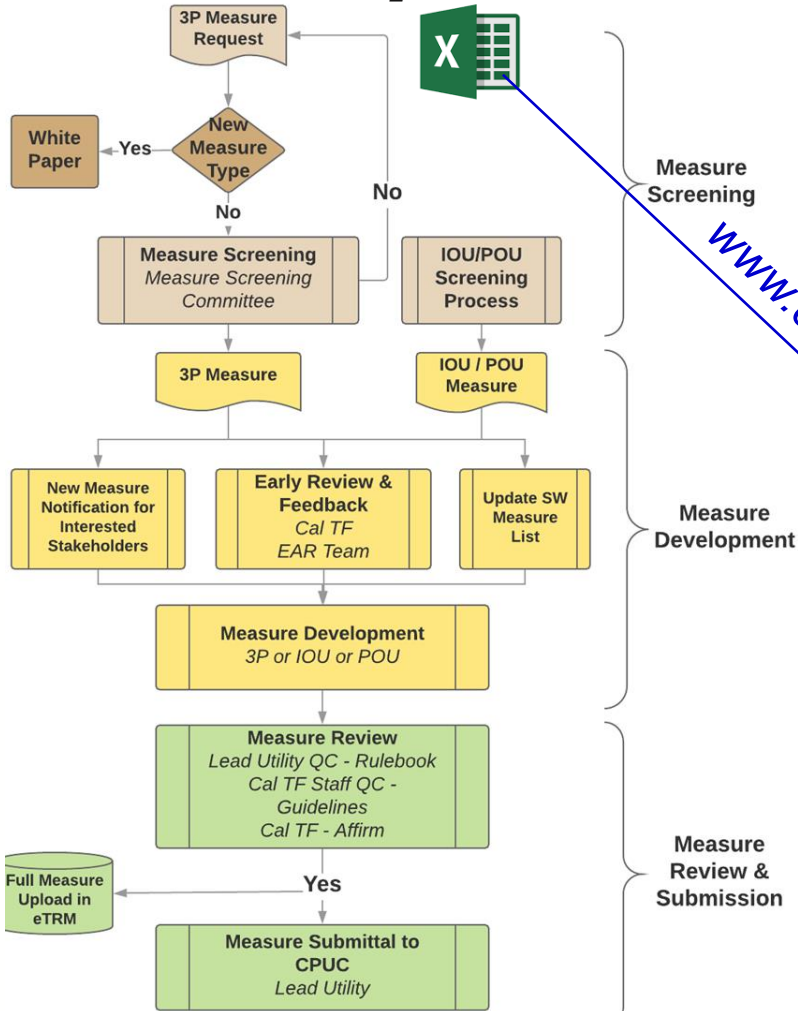
Objective: Seeking TF affirmation of final draft measure classification whitepaper

- Background on Measure Classification whitepaper
- Measure Pathways review
- Measure Pathways comparison
- Operationalization ideas through Decision Tree
- Decision Tree examples
- Affirmation

New Measure Process: Context

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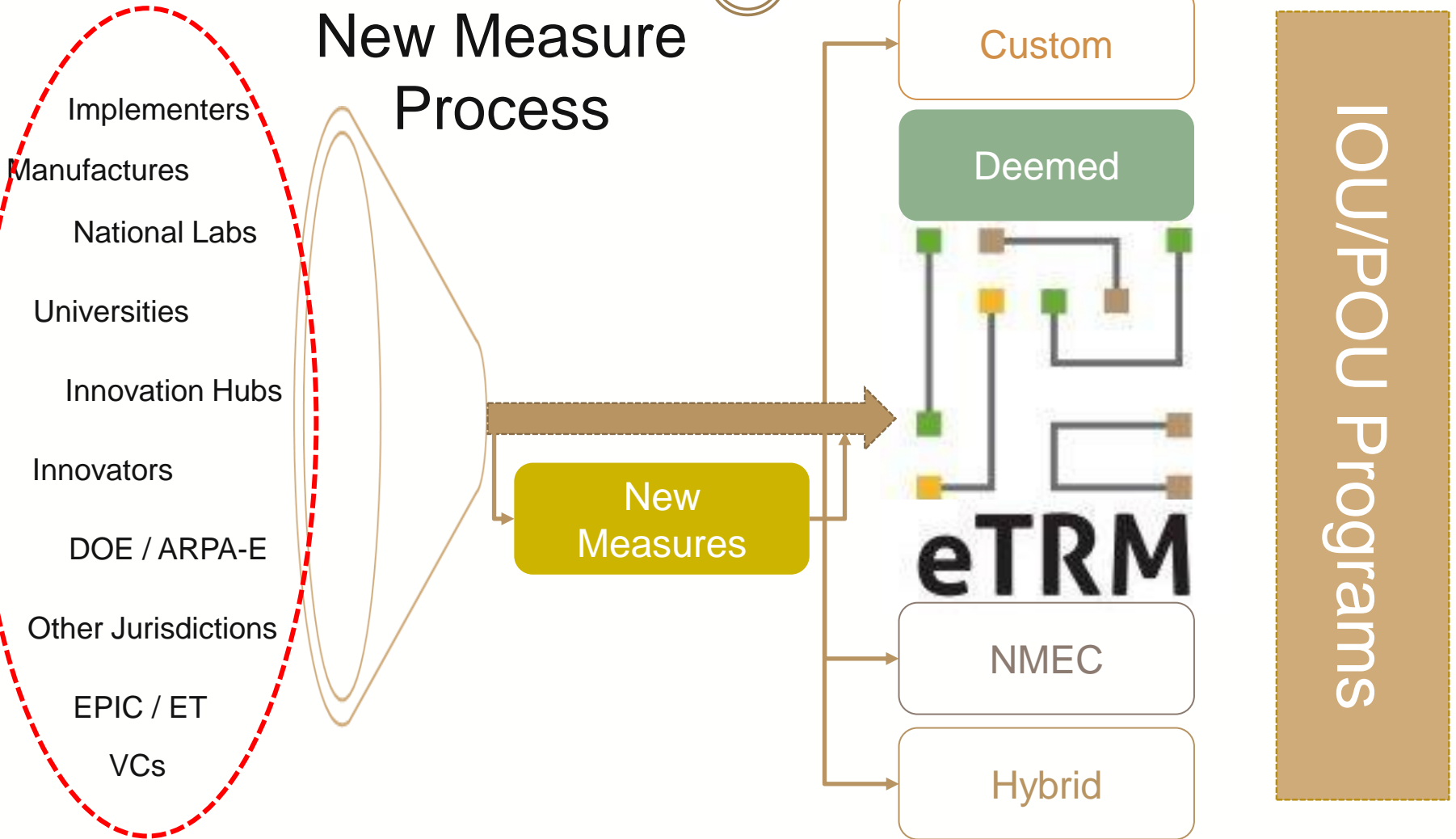
Proposal Form



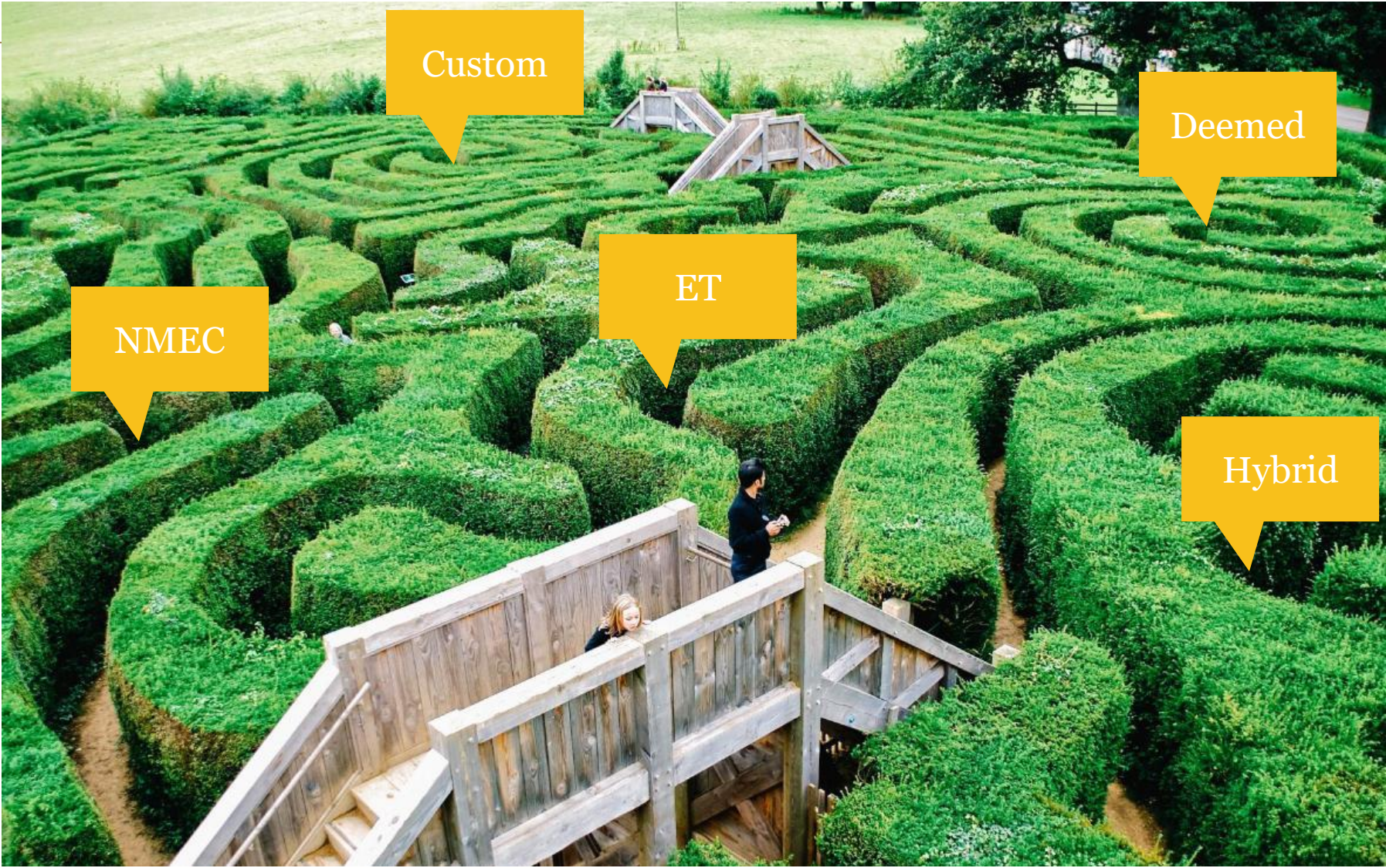
New Measure Process: Broad Funnel

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New Measure Process

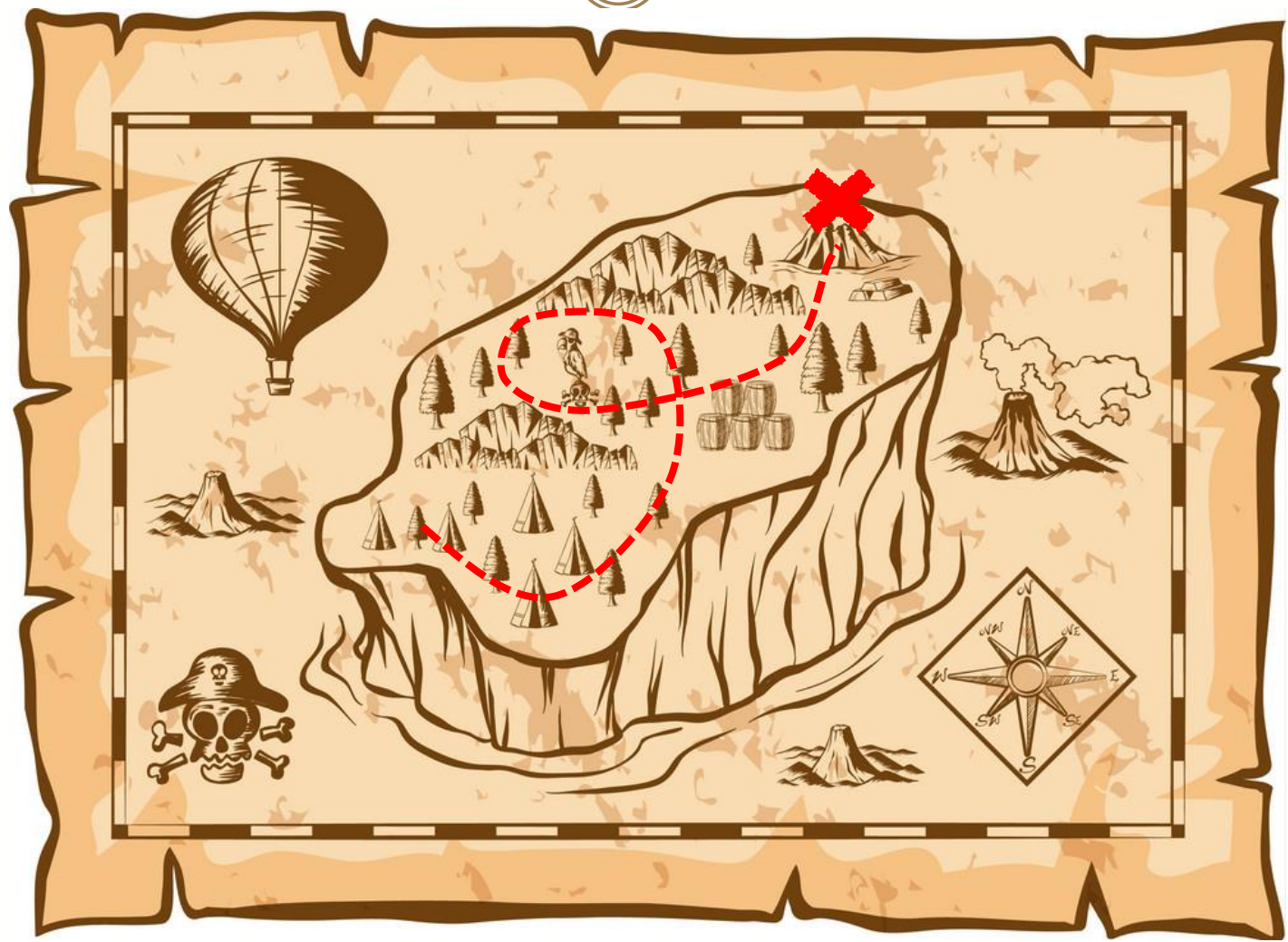


EE Landscape in the eyes of an Innovator



Goal of the Measure Classification WP

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Pathways under consideration

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- Deemed
 - High-volume, homogeneous interventions
 - Implication: need WP for ex-ante values
- Custom
 - Site-specific analysis for savings above baseline
 - Complex process with ex-ante estimation, ex-post verification
- Hybrid
 - Deemed-like process w/ allowable site-specific data
- NMEC
 - Program delivery w/ metered consumption + reg. analysis for savings
- Emerging Tech
 - Non-resource program, tech / mkt / program validation

Qualitative comparison of Pathways

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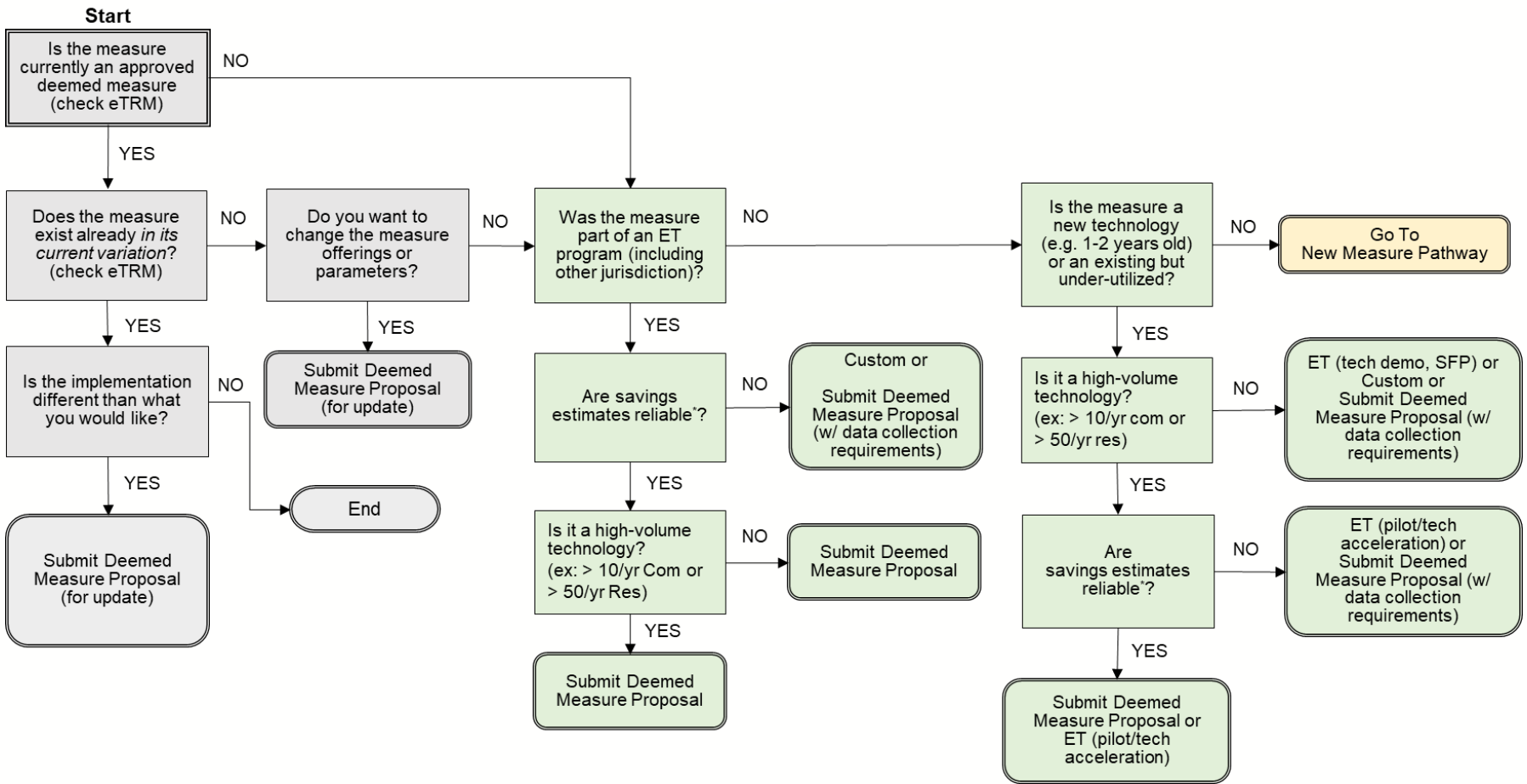
		Emerging Technology	Custom	Deemed	Hybrid	NMEC
Customer	Incentive Risk	Not Applicable, Unknown, Undetermined	High Risk, Long Timeline	Low Risk OR Short Timeline	Med Risk OR Med Timeline	High Risk, Long Timeline
	Project Timeline	Med Risk OR Med Timeline	High Risk, Long Timeline	Low Risk OR Short Timeline	Med Risk OR Med Timeline	High Risk, Long Timeline
	Data Collection Burden	High Risk, Long Timeline	High Risk, Long Timeline	Low Risk OR Short Timeline	Med Risk OR Med Timeline	High Risk, Long Timeline
Implementer	Savings Claims Risk	Not Applicable, Unknown, Undetermined	High Risk, Long Timeline	Low Risk OR Short Timeline	Low Risk OR Short Timeline	High Risk, Long Timeline
	Project Timeline	High Risk, Long Timeline	High Risk, Long Timeline	Low Risk OR Short Timeline	Low Risk OR Short Timeline	High Risk, Long Timeline
	Administrative Burden: Upfront	High Risk, Long Timeline	Low Risk OR Short Timeline	High Risk, Long Timeline	High Risk, Long Timeline	High Risk, Long Timeline
	Administrative Burden: Implementation	High Risk, Long Timeline	High Risk, Long Timeline	Low Risk OR Short Timeline	Low Risk OR Short Timeline	High Risk, Long Timeline
	Customer Satisfaction Level	Med Risk OR Med Timeline	High Risk, Long Timeline	Low Risk OR Short Timeline	Low Risk OR Short Timeline	Not Applicable, Unknown, Undetermined
Utilities	Savings Claims Risk	Not Applicable, Unknown, Undetermined	High Risk, Long Timeline	High Risk, Long Timeline	Low Risk OR Short Timeline	Low Risk OR Short Timeline
Regulatory	Timeline & Process of Measure/Project Development	Not Applicable, Unknown, Undetermined	High Risk, Long Timeline	High Risk, Long Timeline	High Risk, Long Timeline	High Risk, Long Timeline
	Regulatory Review Burden	Not Applicable, Unknown, Undetermined	High Risk, Long Timeline	High Risk, Long Timeline	Not Applicable, Unknown, Undetermined	High Risk, Long Timeline
	Ex Post Evaluation Risk	Not Applicable, Unknown, Undetermined	High Risk, Long Timeline	High Risk, Long Timeline	Low Risk OR Short Timeline	High Risk, Long Timeline
	Claims timing	Not Applicable, Unknown, Undetermined	High Risk, Long Timeline	Low Risk OR Short Timeline	Low Risk OR Short Timeline	High Risk, Long Timeline
	Net-To-Gross (NTG)	Low Risk OR Short Timeline	High Risk, Long Timeline	High Risk, Long Timeline	High Risk, Long Timeline	Low Risk OR Short Timeline

 Low Risk OR Short Timeline
 Med Risk OR Med Timeline
 High Risk, Long Timeline
 Not Applicable, Unknown, Undetermined

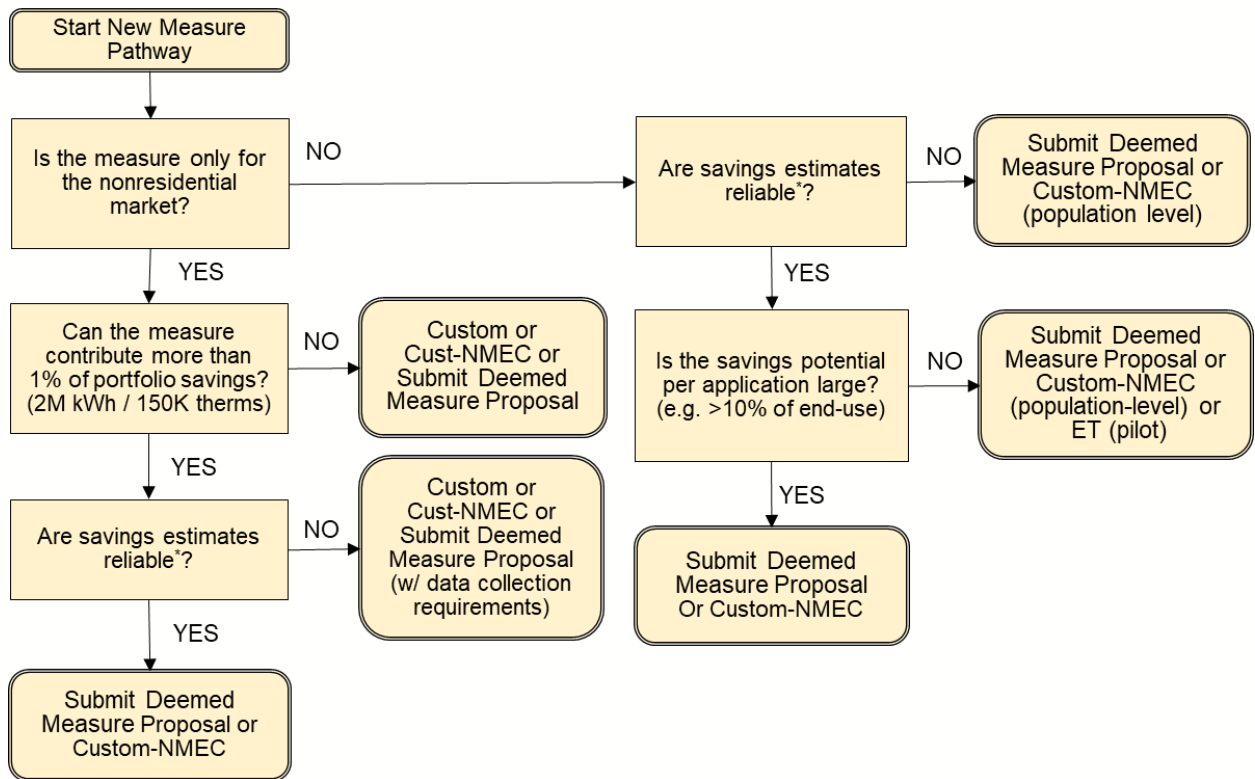
Qualitative comparison of Pathways: details

	Emerging Technology ¹⁰ (part of ETP)	Custom	Deemed	Hybrid (POU-only)	NMEC	
Implementer	Savings Claims Risk	(Not applicable)	Very High Risk & Uncertain Outcome; “investment” risk of time/effort in a project that might or might not get claimable savings	Low Risk; minimum TRC requirements as of 2021; some measures subject to retrospective savings claim risk	Low/Med Risk; depends if simple variation of existing deemed vs calculator-based approach	High Risk; need to see the impact on the utility meter and have the right M&V plan; non-routine events can cause additional disruption; need to ensure program criteria are met
	Project Timeline	Varies on project specific and dependent on data collection requirements, usually long	Long, multiple touchpoints; high uncertainty	Short; program does not impose potential delays that are outside of implementer control	Short; a bit more than deemed	Long, but known to include long term monitoring
	Administrative Burden	High; program usually entails multiple touchpoints, technology validation, customer experience verification, significant data collection and analysis	Low upfront (no workpaper necessary) High implementation burden, project-specific; effort to generate the same amount of savings varies and may require differing approaches; influence documentation; multiple touchpoints during review; reporting + forecasting; risk of changing rules during project life; standard practice; cost documentation	Low from implementation perspective (front-loaded / startup); High upfront for a new measure workpaper development, calculations, data collection, data analysis, etc. / ongoing deemed measure updates; “high impact measure” makes burden even higher	Low, similar to deemed; some light additional verification requirements High upfront for a new measure workpaper development, calculations, data collection, data analysis, etc. / ongoing deemed measure updates; “high impact measure” makes burden even higher	Med burden for implementation High for M&V + data collection infrastructure; also needs specialized statistical knowledge & software at hand to extract signal from the data

Determining the pathway: Decision Tree

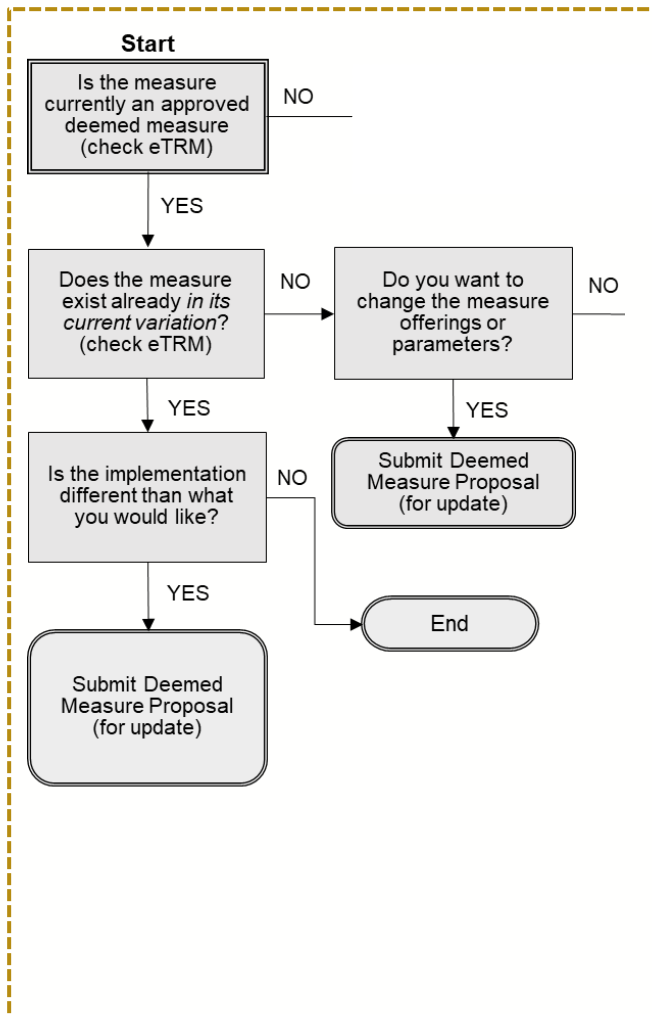


Determining the pathway: Decision Tree



Determining the pathway: Decision Tree

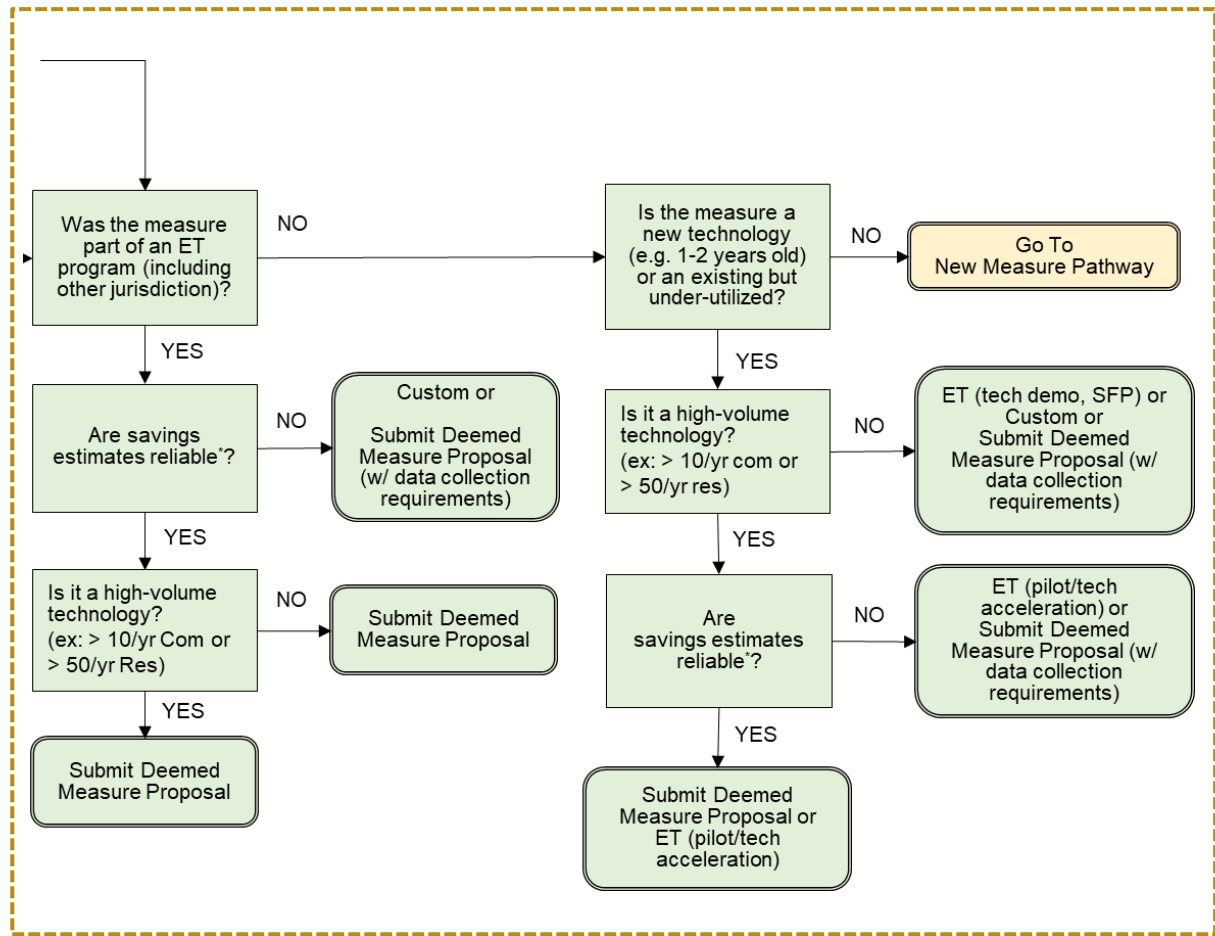
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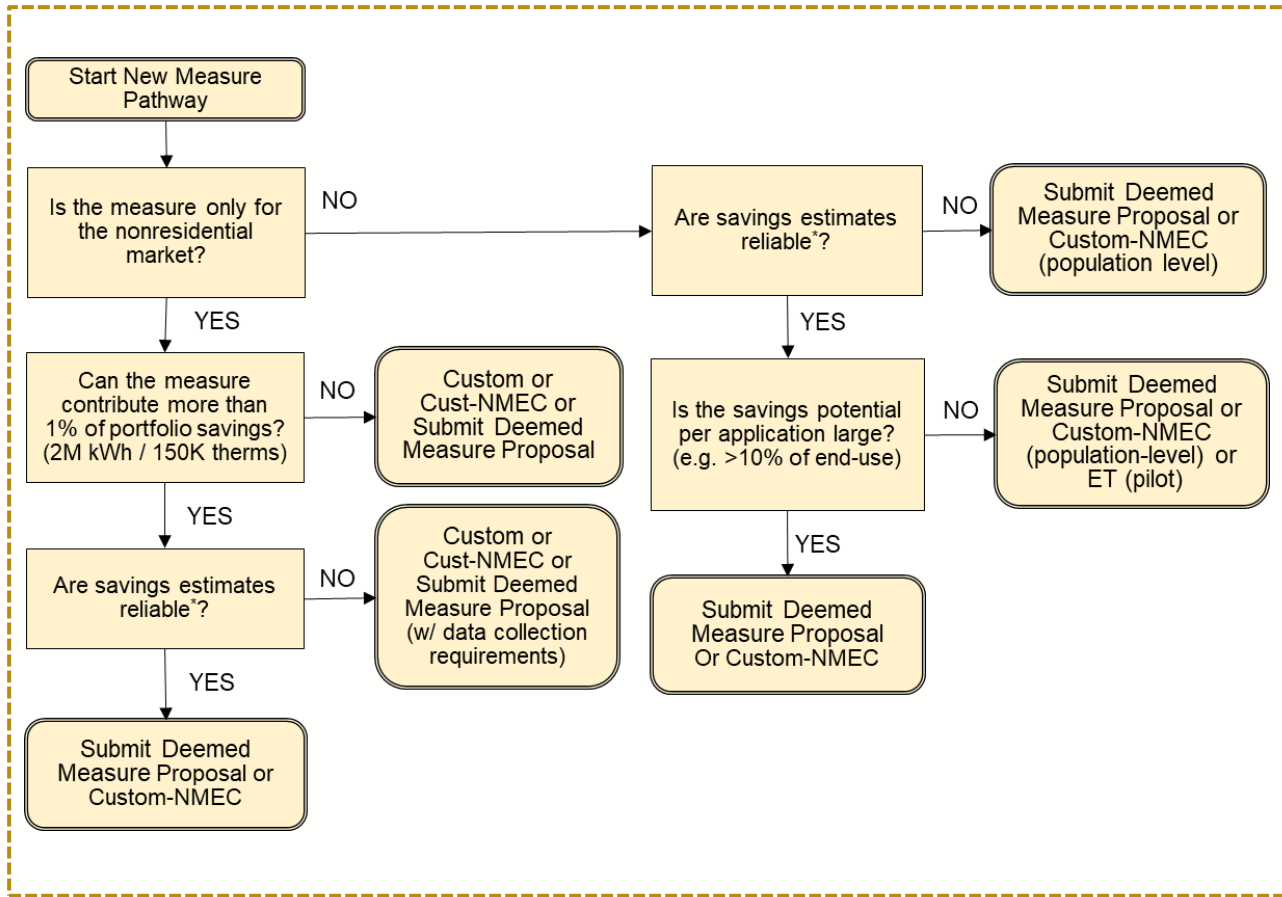
- 1) Existing Measure Variations
- 2) Sophisticated user
- 3) Simple questions

Determining the pathway: Decision Tree

- 1) New Technologies
- 2) ET grads from other jurisdictions



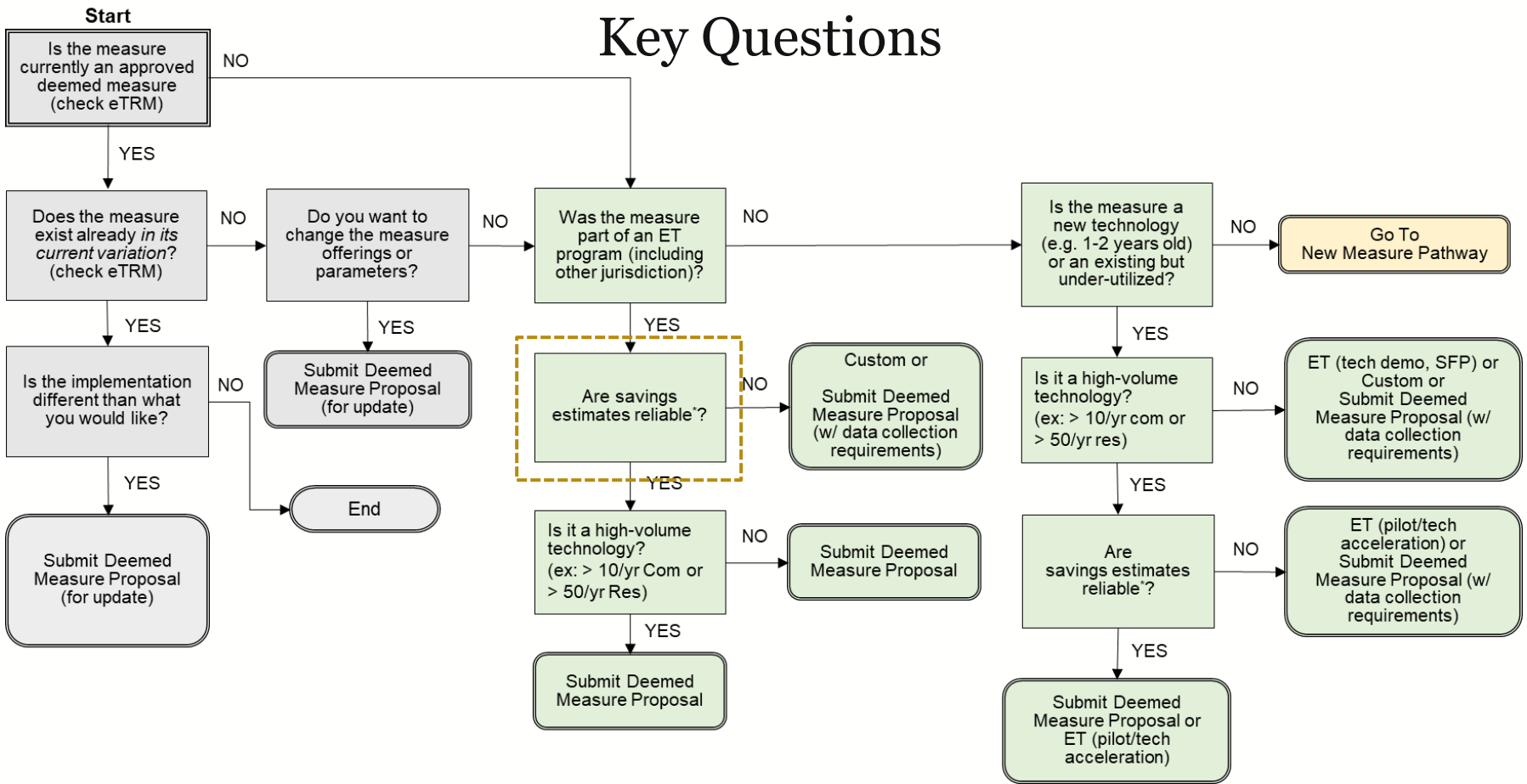
Determining the pathway: Decision Tree



New Measures
(not new tech)

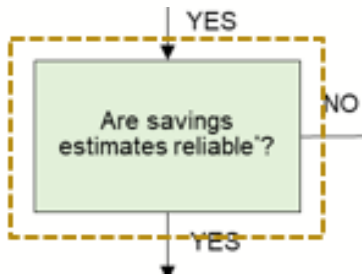
Determining the pathway: Decision Tree

Key Questions



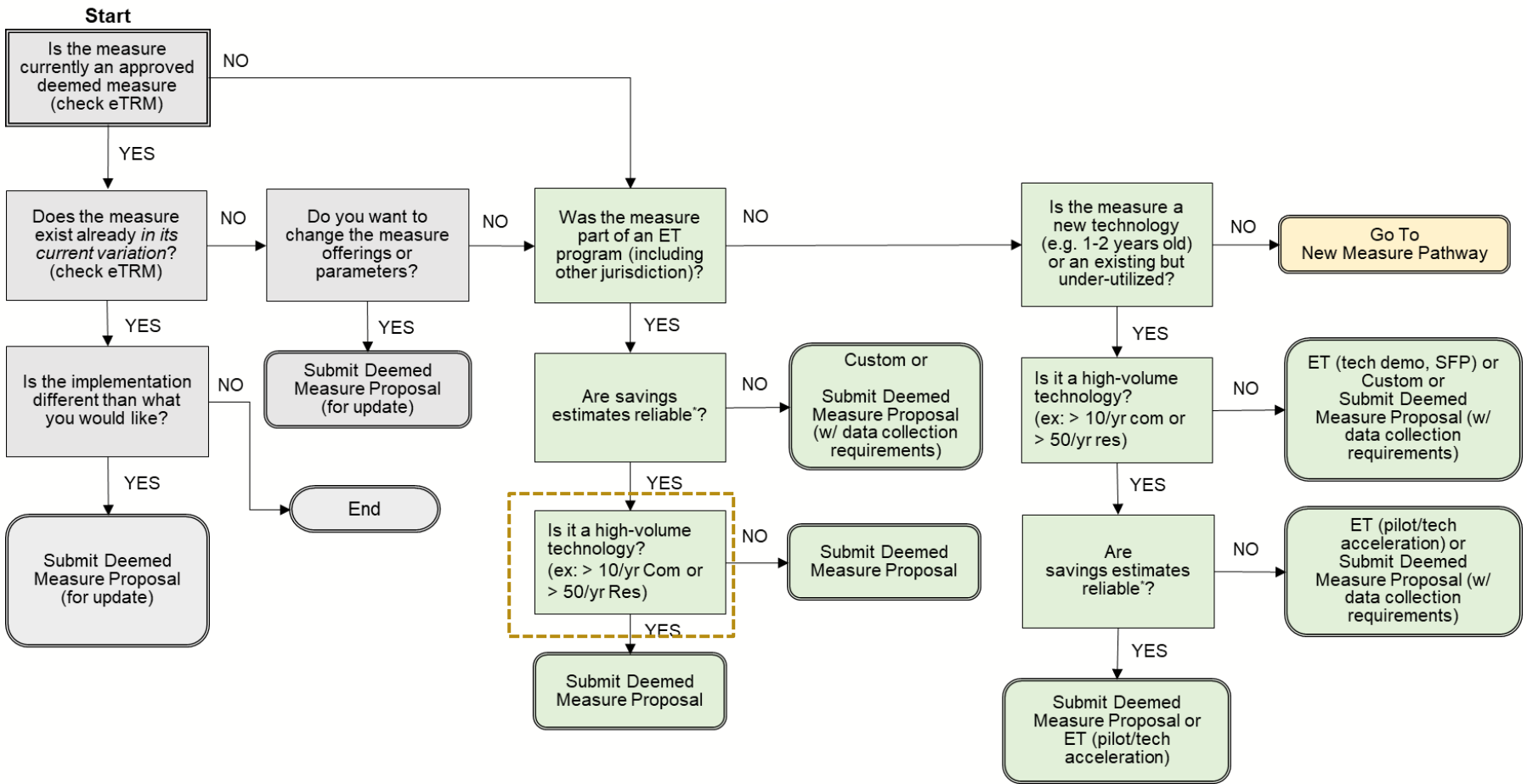
Are Savings Estimates Reliable?

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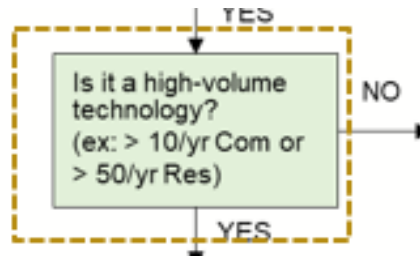
- Measure has achieved sufficient market penetration to determine with statistical significance (80/30 minimum):
 - ❑ Baseline Energy Consumption
 - ❑ Efficient Measure Energy Consumption
 - ❑ Cost data
- For High Impact measures (>1% of portfolio savings) statistical significance goes up to 90/10

Determining the pathway: Decision Tree



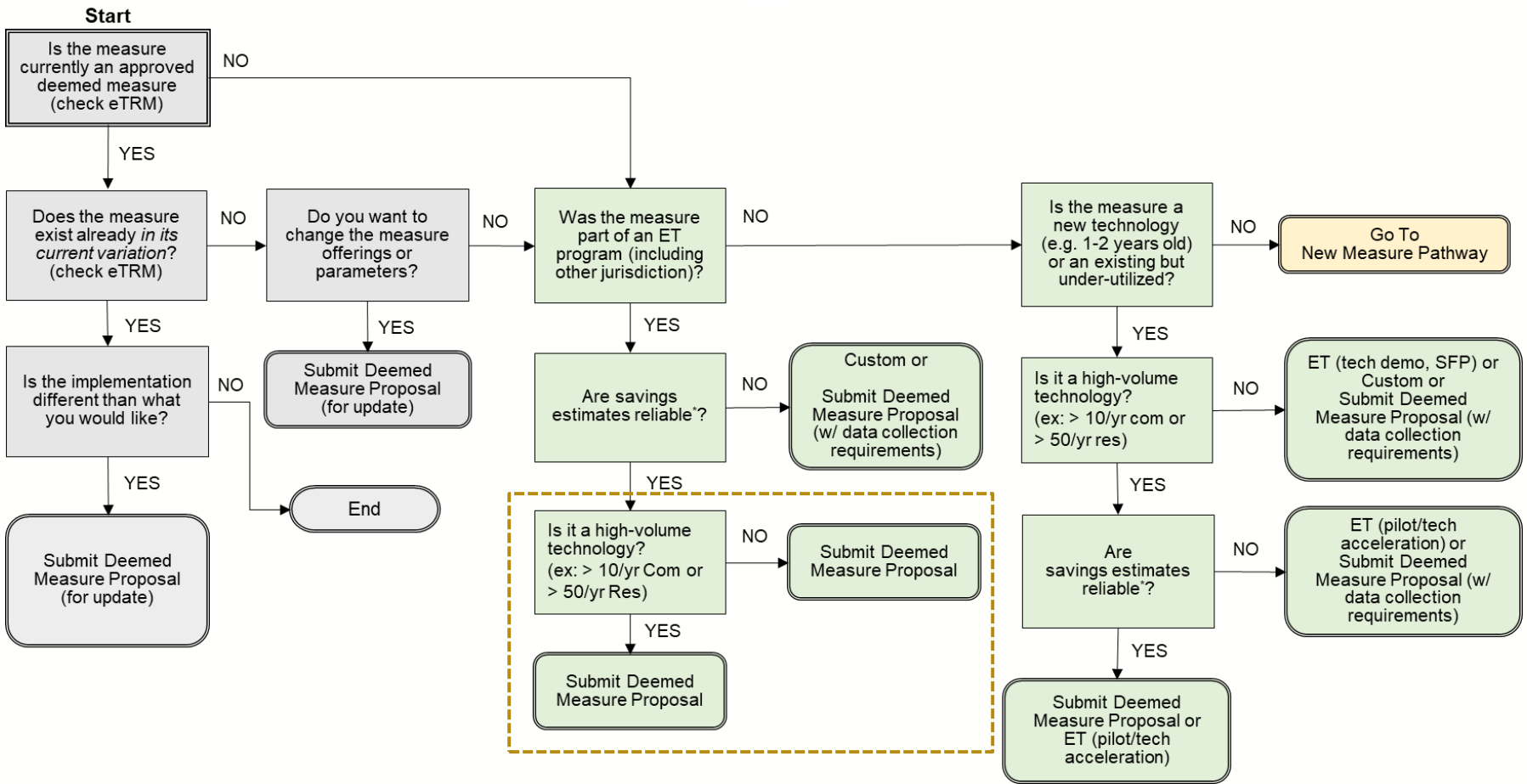
Is it a high-volume technology?

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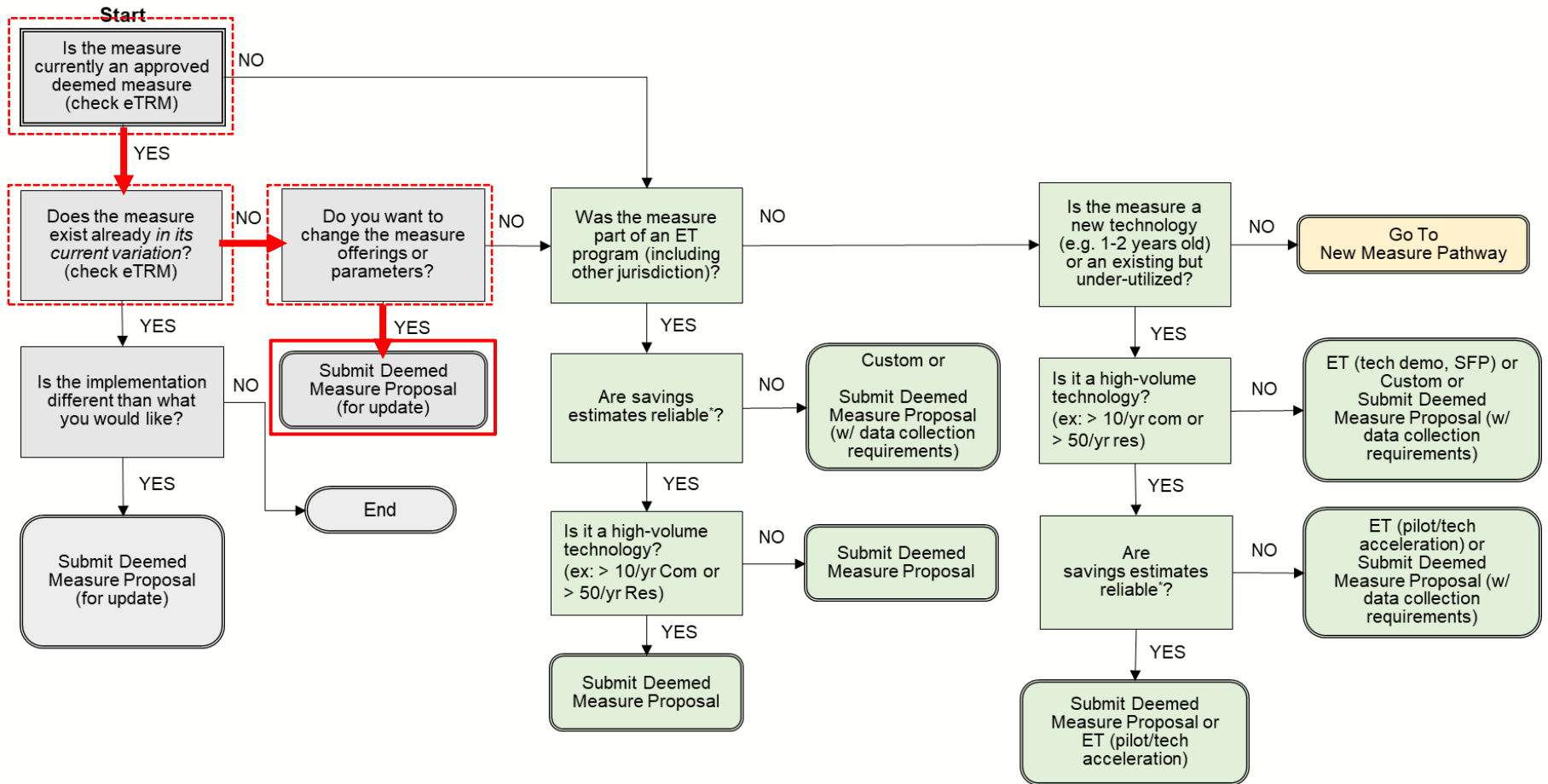
- High Volume – intuition is more volume = more data, more likely to be Deemed
 - 50 Res / 10 Com is arbitrary but has logic behind it
- Generally, high volume / homogeneous interventions are for Deemed; low volume / unique are for custom

Determining the pathway: Decision Tree



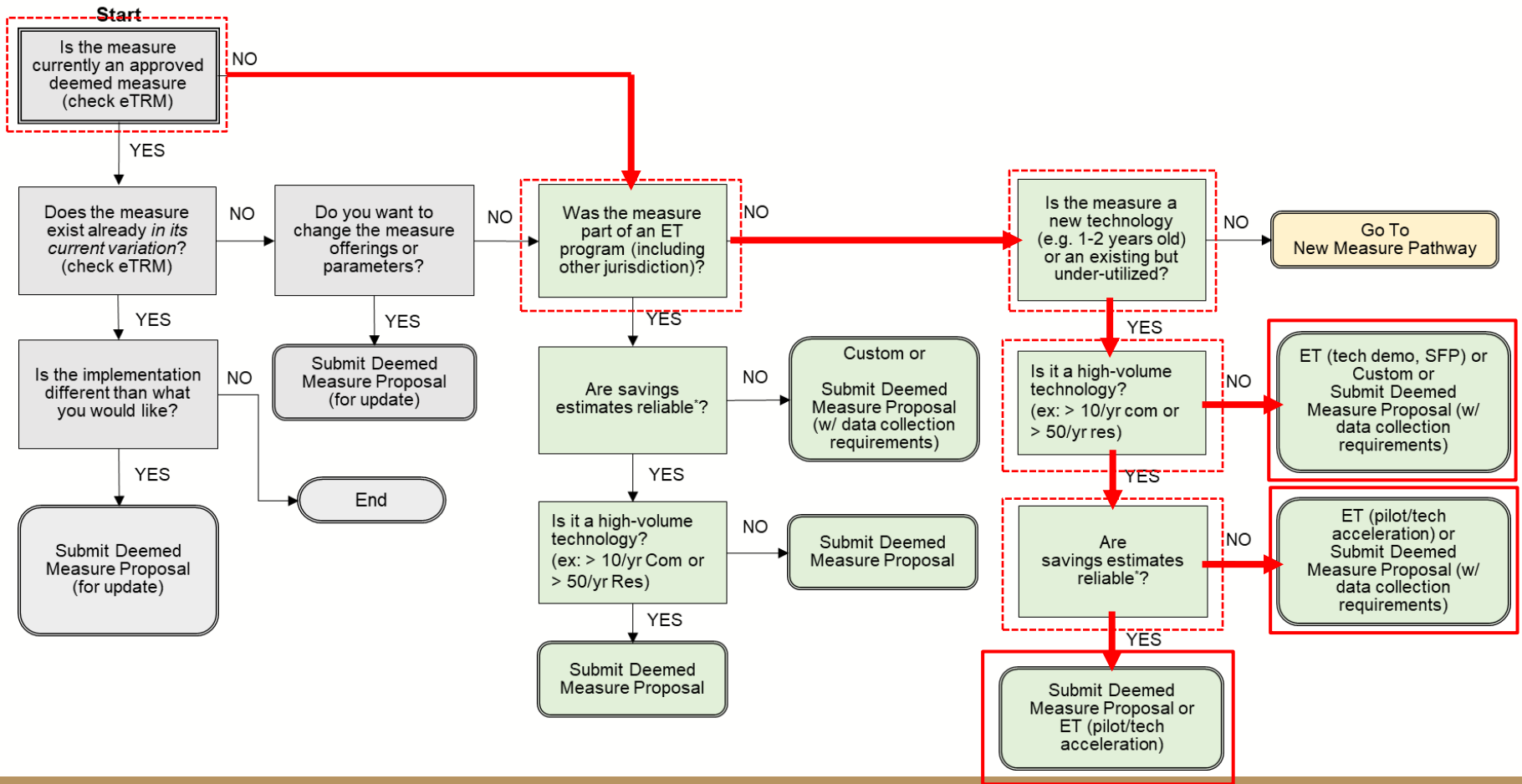
Determining the pathway: Example 1

Proposing to include large boilers (currently custom) into deemed programs



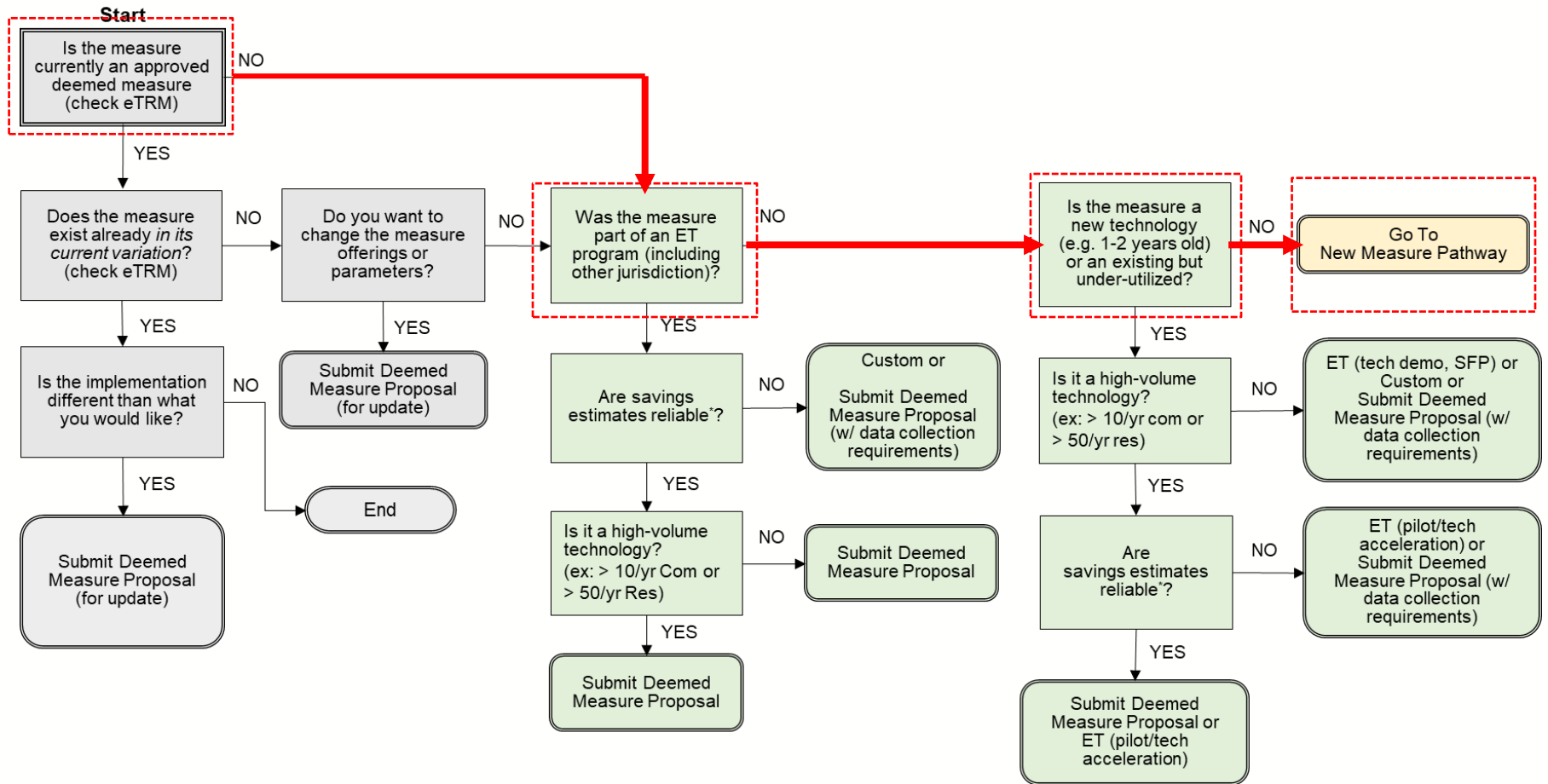
Determining the pathway: Example 2

New Measure proposal: EMS (software) for Industrial applications

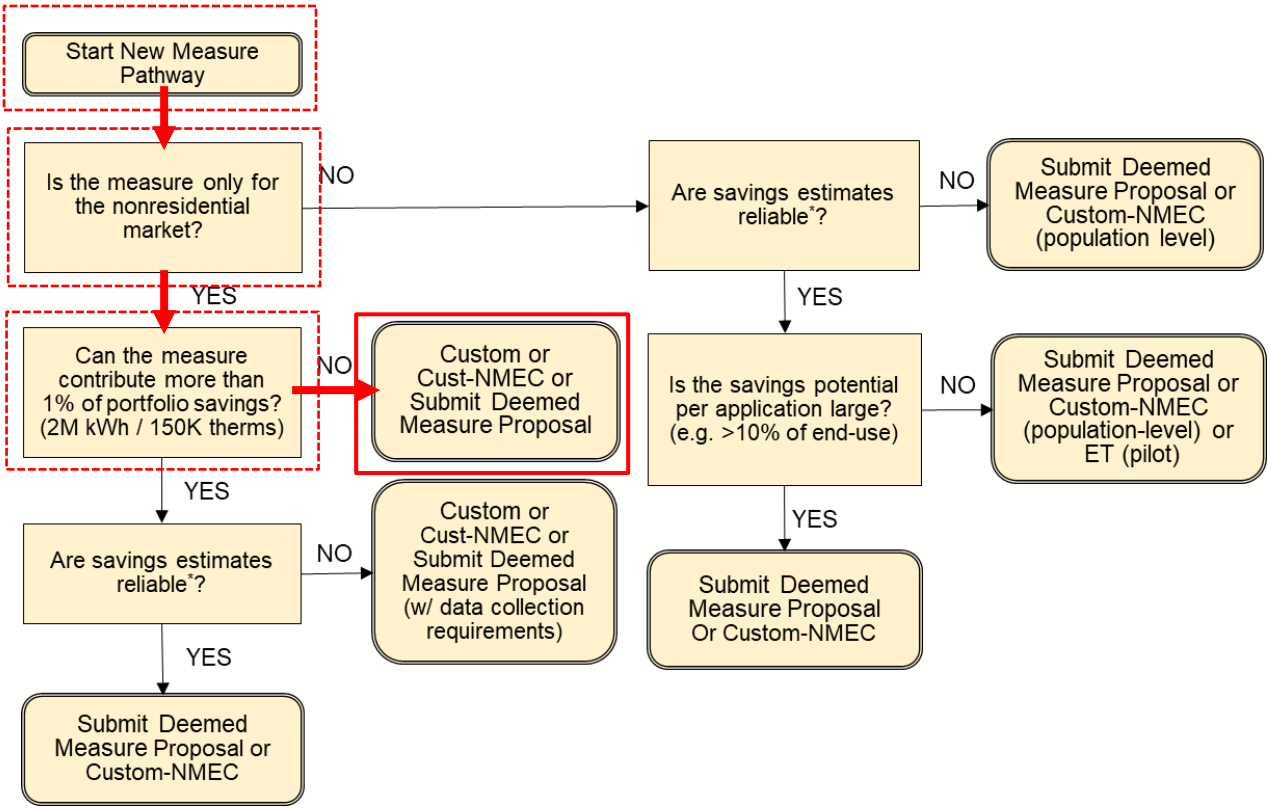


Determining the pathway: Example 3

New Measure proposal: ductless fume hoods (lab applications)



Determining the pathway: Example 3



Affirmation

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- Seeking Affirmation from Cal TF Members