

Technical Analysis of a 100% Renewable
or Clean Energy Standard Requirement
for Vermont Distribution Utilities:
Stakeholder Advisory Group Meeting 3

August 31, 2023

Agenda

Statewide/SAG Survey Comparison (9:00-9:10am)

Discuss Scenario Definitions (9:10-10:00am)

Non-Member Comments (10:00-10:10am)

Discuss Benefit-Cost Analysis Methodology & Data Sources (10:10-10:55am)

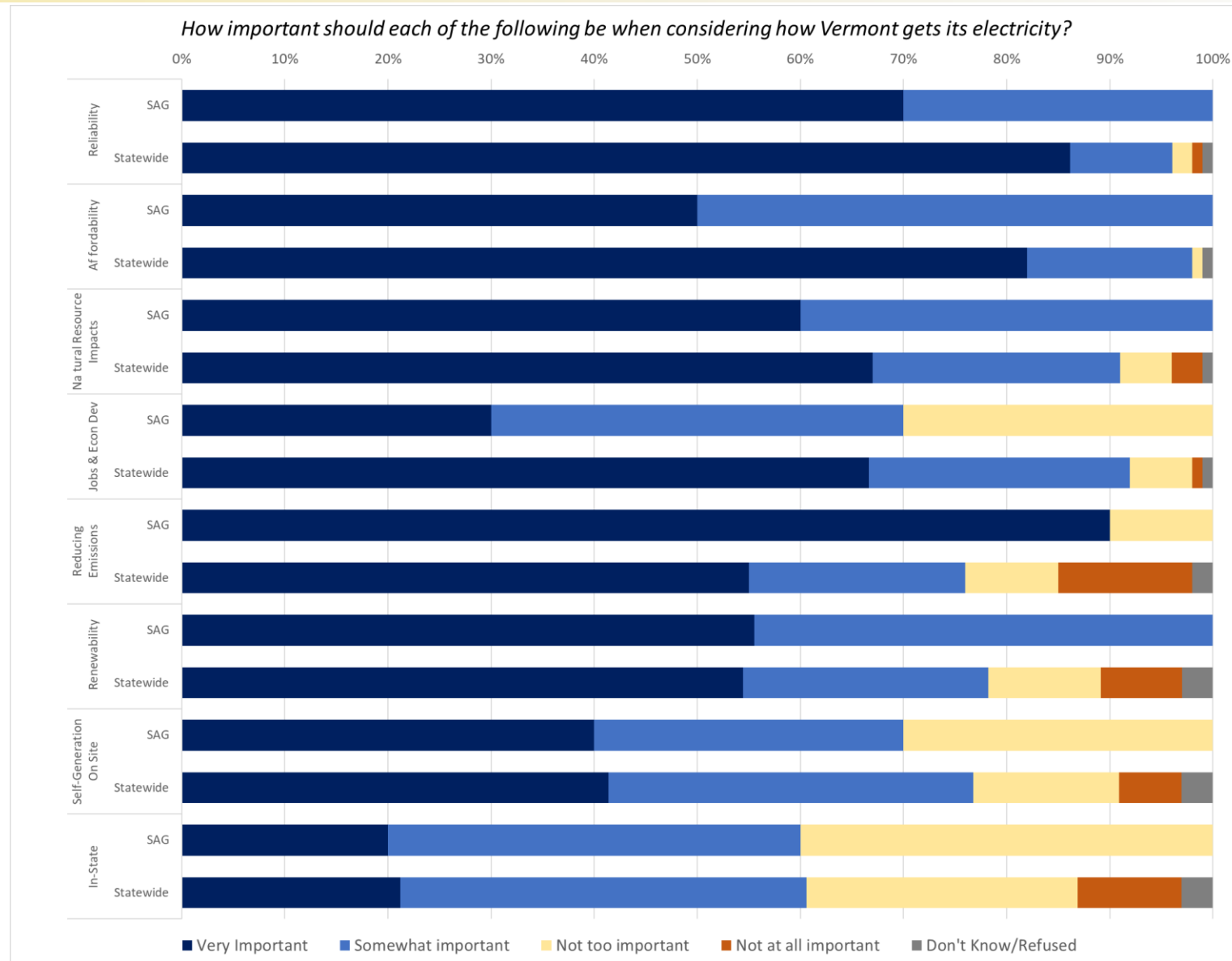
Next Steps (10:55-11:00am)

Survey #2 Results Summary

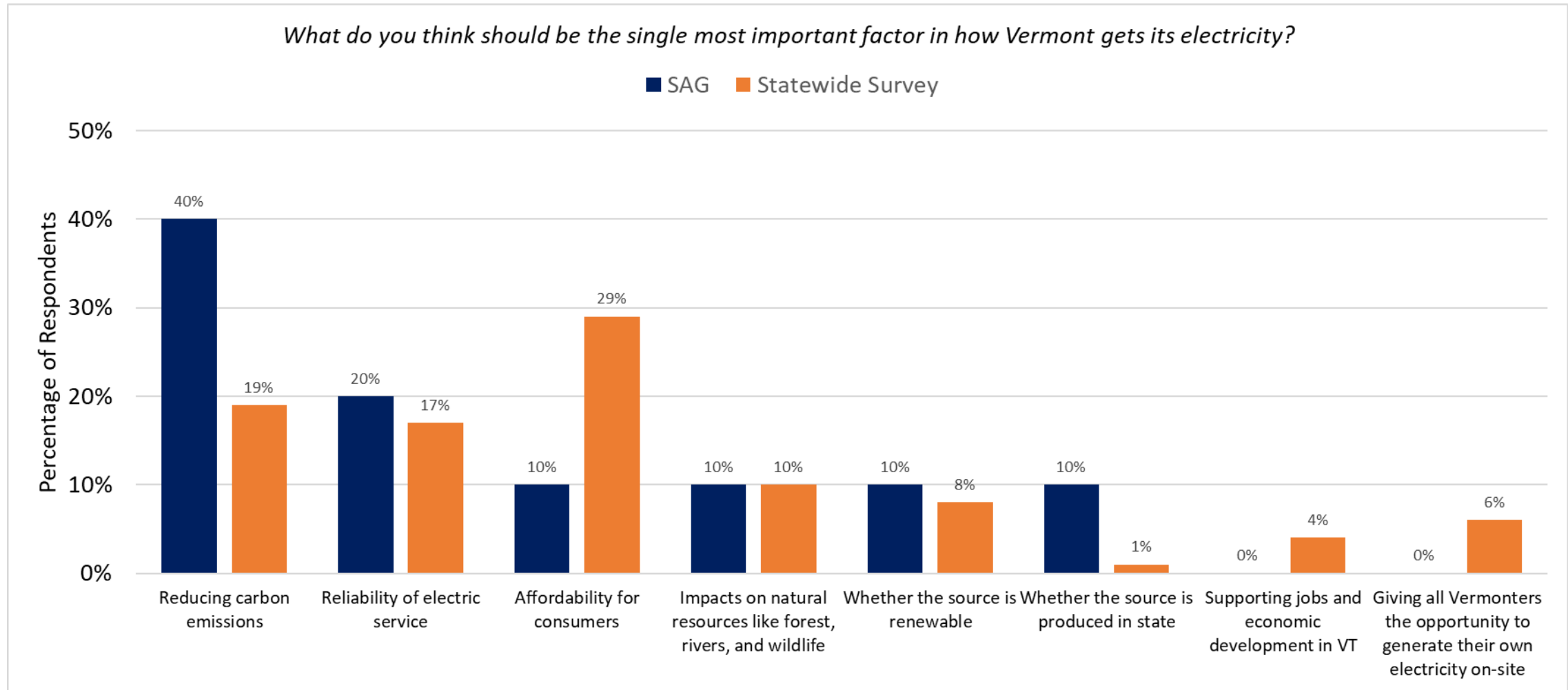
Part 1: Considerations for Vermont's Electricity Supply



Considerations for VT Electricity Supply



Most Important Factor for VT Electricity Supply



Survey #2 Results Summary

Part 2: Proposed Scenarios and Sensitivities



Survey Responses re: Scenario Definitions

- General Findings:
 - No consensus, and very little overlap among SAG member analytical preferences
 - 7 out of 11 respondents created custom scenarios and ranked them in top 3
- Content-Specific Findings:
 - Tier I
 - SAG evenly divided on including nuclear and applying *any* limits to large hydro and/or nuclear
 - Tier II
 - Range of requested inputs: 10% - 30% by 2035
 - However, some supporting 30% also suggest combining Tier II with Regional Tier
 - Regional Tier
 - Range of requested inputs: 30% – 45% by 2035

Proposed Scenarios & Sensitivities: PSD Scenarios, influenced by SAG and Polling Preferences

Scenarios → Design Element ↓		BAU	S1: 100% RES	S2: 100% RES, incl. Regional Tier	S3: 100% CES	S4: 100% CES, incl. Regional Tier
Tier I, Net	Target	65%	70%	40%	70%	40%
	Target Date	2032	2035	2035	2035	2035
	Eligibility Changes	N/A	None	None	Add nuclear	Add nuclear
Tier II	Target	10%	30%	30%	30%	30%
	Target Date	2032	2035	2035	2035	2035
	Eligibility Changes	N/A	None	None	None	None
Regional Tier	Target	N/A	N/A	30%	N/A	30%
	Target Date	N/A	N/A	2035	N/A	2035
	Eligibility*	N/A	N/A	2010+	N/A	2010+

Sensitivities:

- Tier II Targets*: 10%, 20%, 30% by 2035
- Regional Tier Targets*: 20%, 30%, 40% by 2035

* Tier I: set as remainder after Tier II and Regional Tier are defined

Proposed Scenarios & Sensitivities: SAG Scenarios – select 2 out of 4

Scenarios → Design Element ↓		Option 1	Option 2	Option 3	Option 4
Tier I, Net	Target	50%	40%	80%	40%
	Target Date	2035	2035	2035	2035
	Eligibility Changes*	Remove biomass	Remove biomass	Add nuclear; remove biomass	Add nuclear; remove biomass
Tier II	Target	20%	Combined with Regional Tier	20%	Combined with Regional Tier
	Target Date	2035		2035	
	Eligibility Changes	None		None	
Regional Tier	Target	30%	60%	N/A	60%
	Target Date	2035	2035	N/A	2035
	Eligibility*	2010+	2010+	N/A	2010+

* **Treatment of large hydro:** Achieve SAG’s hydro-related objectives by...

- (1) Including lower impact hydro in regional Tier (use CT Class I definition as a proxy), and
- (2) Limiting the overall % of sales met by Tier I (rather than limiting hydro by project size or location)

Other Topics

- Battery Storage: Assess potential deployment as a modeling output, on a scenario-specific basis.
- Prime Ag Soils: Default assumes non-prime sites available to fulfill RES targets.

Assumptions Applied to All Scenarios/Sensitivities

- All targets reached by 2035 (no requests for 2030)
- RES-obligated load to include losses (required for a 100% target)
- For ‘100% renewable utilities,’ Tier I, Tier II, and Regional Tier RES requirements will be applied to load above a defined baseline
 - Baseline Options: 2019 (pre-COVID); 2022 (most recent full year)
- RES compliance multipliers not included (DG siting objectives should be incentivized through direct payments and/or permitting priority)
- Regional Tier Eligibility
 - All post-2010 solar and wind
 - Hydro meeting CT Class I criteria (post-2003, operating as run-of-river)
 - Biomass not eligible

SAG Comments For Discussion

- Should Tier II and Regional Tier be combined?
 - Continue to promote DG objectives through current/future iterations of net metering, standard offer, and/or other supply-side programs (as is done in other New England states)
- All DUs to meet full RES requirements (i.e., model “what if there was no exemption”)



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