

November 22nd, 2023

RE: SBTI CALL FOR EVIDENCE SUBMISSION

Preview of Research Conducted by Clean Kilowatts, LLC.

From June to October 2023, 21 semi-structured interviews were conducted with stakeholders from the voluntary green power market. Interviewees included 6 developers or organizations that directly interact with development, 4 subject-matter experts, 3 independent power producers/suppliers, 3 investors/banks, 2 buyer organizations, 1 law firm, 1 REC trader, and 1 utility.

The results of the analysis of those interviews have not yet been published. However, key themes from the interviews are directly relevant to SBTi's call for evidence on the use of EACs in corporate climate targets. Given the deadline of the call, we present here a brief summary of preliminary results.

All results are subject to change during the peer review process. Note that the interviews were designed specifically to assess the impacts of all voluntary RECs on renewable energy development, so that is the language used below. We believe that these themes can generally be extrapolated to EACs and clean energy development more broadly.

Feedback from the 21 interviews broadly support six conclusions:

- 1) **The impacts of voluntary REC procurement on clean energy project development are far more complex than prevailing critiques suggest.** While interviewees found certain elements of prevailing critiques to be valid, interviewees broadly questioned the simplicity of prevailing critiques. Two specific responses were common. First, many interviewees suggested that prevailing critiques treat exceptional circumstances as market rules. For instance, a recurring REC critique is that unbundled REC prices are so low that REC revenues only cover transaction costs and do not drive development. Many (but not all) interviewees saw this theory as plausible, but indicated that such low REC prices have only existed temporarily in specific markets. Overall, the interviews suggest that ineffectual REC prices are the exception, not the rule. Second, many interviewees questioned the economic reasoning of prevailing arguments. Specifically, prevailing critiques often suggest that low REC prices relative to power prices indicate the low impact of RECs on development decisions. Interviewees, particularly developers, noted that such reasoning ignores how decisions are made on the margin, where relatively small fluctuations in revenue can determine whether a project is built or not. Most interviewees characterized EAC revenues as similarly critical to development decisions as power revenues despite the price difference between the two revenue streams.
- 2) **REC prices are a misleading proxy of impact on project development.** Most interviewees characterized REC prices as a signal of market conditions, consistent with economic theory. A common model was to frame REC prices as the "missing money" required to finance a project. That is, REC prices reflect the gap between a project's projected non-REC revenues (e.g., power, ancillary services) and the project's target financial return. REC revenues close that gap of "missing money" and drive project development. From this perspective, REC prices do not reflect the impact of RECs on development. The impact is binary rather than continuous: a \$1 REC can be just as important to development in one context as a \$30 REC is in another context. Interviewees suggested that there may be exceptional cases where projects are viable without REC revenues, in which case a low REC price may in fact reflect a muted impact of RECs on development. However, as noted in Theme #1, interviewees characterized such cases as the exception, not the rule.

- 3) **REC revenues play an instrumental role in project development.** Most interviewees indicated that most renewable energy projects need REC revenues to obtain target financial returns and receive backing from financiers. 13 of 21 interviewees agreed that voluntary RECs are impactful on development decisions without qualifying the nature of that impact. The remaining interviewees gave conditional responses. 4 interviewees noted that the impact of voluntary RECs depended on whether those RECs were contracted or merchant (i.e., uncontracted), 3 interviewees conditioned the importance of voluntary RECs on voluntary REC prices, and 2 interviewees answered that the importance of voluntary RECs in development varies across regions.
- 4) **Voluntary demand for energy cannot be separated from voluntary demand for RECs.** Most interviewees agreed that most voluntary buyers only buy power to obtain RECs. Further, 15 of 21 interviewees argued that the ability of RECs to attract voluntary offtakers was a key value of RECs regardless of REC prices. This insight counters prevailing critiques that suggest that non-REC revenues (e.g., power) drive project development but that REC revenues do not. Such critiques presume that voluntary buyers would be willing to provide those revenue streams as offtakers without also offtaking RECs. In reality, there is no meaningful way to separate the impact of voluntary demand for power from the impact of voluntary demand for RECs because the former depends on the latter.
- 5) **Voluntary demand is not easily replaceable.** Several interviewees argued that voluntary buyers support development at a pace and scale that cannot be matched by other sources of demand. This insight counters assumptions in recent analysis that corporate demand for renewables is not necessarily “additional” because projects supported by corporate demand would have been otherwise developed. While interviewees broadly agreed that at least some corporate demand may be redundant (e.g., a project developed for a corporate buyer may have otherwise been developed for a utility buyer), corporate buyers operate at a faster pace and larger scale than other sources of demand. Hence, while individual corporate projects may be, in some sense, replaceable and not “additional,” that conclusion cannot be extended to the market as a whole.
- 6) **All REC transactions are interrelated and essential.** The voluntary REC market—and its impacts on project development—depend on the ancillary functions provided by a variety of REC transactions, including merchant and unbundled RECs and liquid secondhand REC markets. A diversity of REC options underpin the ability of buyers to set and achieve 100% renewable energy targets. For instance, to achieve a 100% renewable energy target strictly through contracted RECs, a corporate buyer would need to procure RECs from a relatively costly firm clean power source (e.g., geothermal) or over-procure RECs from a variable source (e.g., solar) to ensure that output matches demand even in years with relatively low variable generation. The existence of a fluid market for secondhand RECs allows that buyer to procure RECs more cost-effectively by contracting for a relatively lower-cost variable source and using unbundled RECs to flexibly fill in gaps between the variable system’s output and the buyer’s demand. Further, a diversity of REC options maximizes market access. For instance, contractual REC strategies (e.g., PPAs) are only available to relatively large corporations with investment

grade credit ratings. Alternative strategies such as unbundled RECs provided meaningful ways for more corporate buyers to engage in the renewable energy transition.

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