



# Renewable Energy Emissions Score V1.0

## Public Consultation Results

### Introduction

The Renewable Energy (RE) Emissions Score is a novel approach to quantifying the impact of renewable energy procurement, developed by the RMI's Climate Intelligence Program as part of the [Horizon Zero Project](#). This approach allows purchasers of different renewable energy products to prove that their purchases are driving real world emissions reductions and increasing renewable energy generation. The RE Emissions Score is a sector-agnostic approach to assessing the impact of renewable energy purchases, meant to serve as a supplemental calculation to traditional Scope 2 reporting. Use of the RE Emissions Score will inform better procurement and enable better valuation of higher emissions reduction impact market instruments.

The draft approach was published online, and a public consultation was held from May 9–June 30 to introduce the approach to key stakeholders and gather feedback. Two public briefings were held on May 13, 2022, and June 1, 2022, along with a presentation to the Clean Energy Buyers Association on June 23.

Parties submitted formal feedback to the approach through an online survey. The following is a summary of the results.

### Results

Input came from a variety of organizations across multiple sectors, including: Web3, not-for-profit organizations, data centers, government, academia, and finance. Overall, a majority considered the approach to be a positive addition to GHG measurement and reporting, particularly as it represented a first step in addressing GHG emissions impact from cryptocurrency mining.

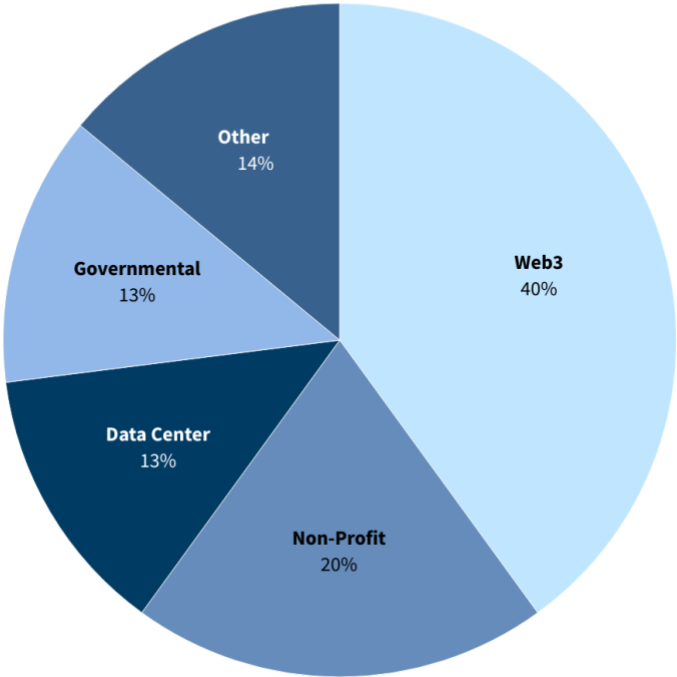
The approach was initially designed for the crypto sector, thus many of the consultation participants are affiliated with Web3. However, RMI believes that the RE Emissions Score is broadly applicable to anyone who engages in renewable energy procurement.

# Respondent Breakdown by Sector

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## ORGANIZATION TYPE

Web3 Non-Profit Data Center Governmental Other



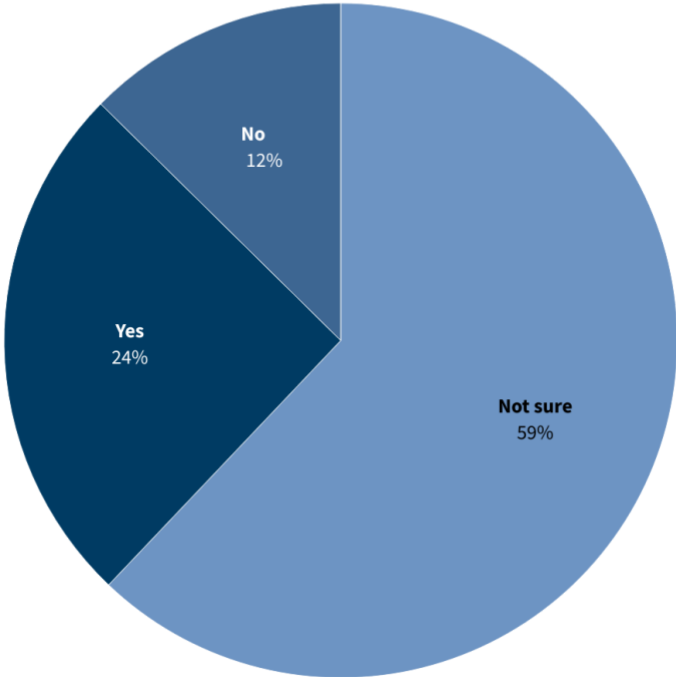
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## What Score Would Represent Zero Net Emissions Load

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### Does 100 RE Emissions Score Represent a Net-Zero Emissions from Load?

Not sure Yes No



Respondents were asked whether a score of 100 would represent “a zero net emissions impact for their load.” Most respondents were either unsure or in disagreement due to the embedded emissions associated with renewable energy, the uncertainty of reporting for RECs, or the procurement factor as a potential way to obscure emissions impact. Some feedback focused on the embedded emissions of crypto mining equipment. Proof of work cryptocurrencies, such as Bitcoin and Ethereum, require large amounts of computational power to “mine” new coins and verify transactions. Specialized equipment is necessary to achieve this computational ability, and there are emissions and e-waste associated with the production and discarding of these specialized computers. As a result, completely decarbonizing electricity usage in cryptocurrencies would not achieve complete decarbonization in the network.

Respondents were largely unsure how long it would take a company to reach a score of 100 from a starting point of 0, with suggestions of as short as one year to a maximum timeframe of 10 years.

## Calculation Effectiveness and Relevant Industries

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### Calculation's Effectiveness

5 = Effective with no foreseeable issues	19%
4 = Effective with few issues	25%
3 = There are several issues that may or not be addressable	38%
2 = Somewhat ineffective	0%
1 = Totally ineffective	0%
N/A = unsure	19%

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The most common response was a score of three on a scale of one (totally ineffective) to five (effective) with no foreseeable issues). When asked what industries this approach may not apply to, most respondents did not single out any particular sector. However, two sectors that were singled out were electric utilities and crypto miners — with the respondent questioning crypto’s social license to operate and its share of existing renewable energy resources.

### The Procurement Factor

The most rigorous feedback surrounded the procurement factor. Suggestions on additional data points to consider include:

- Transmissions, storage costs (not upgrades)
- Consideration of contract length
- The cost of on-site generation may not reflect the levelized cost of electricity (LCOE) values available
- Price of electricity
- Ancillary services
- Demand response capability
- Considerations such as congestion, negative price, and renewable curtailment

The price of bundled electricity was offered by our consultation as the first addition to the procurement factor, although there seemed to be some confusion as to whether it was already part of the calculation. Generally, the price of an Energy Attribute Certificate (EAC) alone was deemed an insufficient measure of the additional impact of the procurement.

### Challenges and Benefits of the Score

Respondents raised several challenges with the approach. A common challenge raised was using the LCOE as part of the procurement factor. This was due to the described “theoretical” nature of an LCOE, as well as the fact that in some markets, the LCOE would not be the only appropriate factor. Additionally, respondents raised the time-dependent data available for EACs, as well as the lack of consideration for grid services and upgrades, noting that emissions do not respect corporate boundaries, and a solution focused on a single corporation’s impact does not fully assess grid needs.

Finally, it was pointed out that there could be some compatibility issues with science-based targets and net-zero targets due to the use of marginal emissions factors. This is because the sum of consequential emissions, as measured by marginal emissions, do not correspond to the sum of global emissions. Marginal emissions factors are used to assess the impact of additional load, and do not always align with grid conditions

Respondents' evaluations of the RE Emissions Score benefits were largely focused on the approach's attempt to have companies think more closely about their emissions impact. The desired behavioral changes incentivized by the approach, such as use of electricity in low-emissions areas and high quality procurement in high-emissions areas, were also highlighted. The quantitative nature of the approach was noted as a novel method to measure impact from procurement.

### Next Steps

RMI is looking for industry and corporate partners to continue our research and iterate on the RE Emissions Score to improve its utility to off-takers of renewable energy. This work will include, but is not limited to, improvements to the Procurement Factor highlighted above, as well as the inclusion of ancillary grid services that will give a holistic view of renewable energy procurement while remaining relatively simple and, most importantly, usable.

Please reach out to Samuel Huestis: [shuestis@rmi.org](mailto:shuestis@rmi.org) if you have any further questions or comments or would like to be involved in this ongoing effort. More information can be found on RMI's [Horizon Zero](#) webpage, under the Renewable Energy sector.