The ZEROgrid Impact Advisory Initiative convenes a group of leading researchers to advance consensus and use of consequential impact assessment methods. This paper was introduced to the Impact Advisory Initiative process for consideration and received unanimous support from the assembled organizations. The following advisors elect to add their names in support of this paper:

Ruaridh Macdonald, MIT Energy Initiative
Fabrizio Finozzi, Open Energy Transition
Wilson Ricks, Princeton University
Lee Taylor, REsurety
Gavin McCormick, WattTime

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ZEROgrid's Impact Advisory Initiative's Performance Metric Principles

Attributional emissions accounting schemes do not currently incentivize companies to: (i) maximize the emissions impact of their renewable procurement, or (ii) pursue a range of actions that could reduce emissions outside of renewable energy procurement (e.g., enhancing transmission lines, installing storage).

Consequential analysis offers an opportunity to address these issues by estimating the total emissions impact of an action by examining a combination of an action's impacts on how an electric grid is operated and grid structural changes (i.e., the addition or removal of generation capacity). Consequential assessment can be conducted using a variety of approaches, including capacity expansion models, yet these approaches are often complex, time-intensive, and subject to producing variable results based upon key inputs and assumptions.

Members of ZEROgrid's Impact Advisory Initiative (IAI) are supportive of an approach to provide an approximation of a consequential analysis which will be referred to here as a "Performance Metric." The goal of such a metric would be as follows.

Performance Metric Objective: A Performance Metric framework should provide a standardized, practicable, and scientifically validated approach to generate a useful retrospective approximation of a company's comprehensive consequential impact.

IAI members believe that a properly designed retrospective Performance Metric could help guide corporate strategy to more quickly and effectively mitigate electricity sector emissions worldwide.

The following represent principles for establishing an effective Performance Metric:

1. **A Standardized Approach using Observable Data Would Limit the Opportunity for Confusion and Manipulation:** The calculation methodology would ideally be standardized and unambiguous so as to mitigate potential confusion, enable replicability, and avoid the potential for individual actors to modify how they implement the metric to improperly inflate the estimated impact of their actions.
2. **The Metric Will Be More Successful if it is Simple to Use:** Voluntary metrics are unlikely to be adopted if they impose significant costs on companies. While significant thought and research will need to go into the development of a standard Performance Metric, it would be ideal for the actual calculation of a company's impact to be relatively simple and inexpensive to enable broad adoption. Similarly, the data requirements for a Performance Metric should be designed to leverage, as

much as possible, information already gathered by companies for market-based reporting.

3. **The Metric Will Be More Trusted and Successful if it is Supported by Research that Validates Output Correlation with Consequential Assessment:** For such a metric to be accepted and widely adopted it would be ideal for its accuracy and correlation to consequential analysis results to be validated scientifically. While it is not possible to fully validate any consequential metric, the chosen approach should still be supported as robustly as possible by a combination of empirical and theoretical analysis. Validation efforts should also seek to assess the degree of uncertainty inherent in the results and the potential impacts of this uncertainty on decision-making and reporting.
4. **The Metric Will Better Incentivize Emissions Reductions if It Can Address All Relevant Corporate Activities:** Companies can and do influence electric grid emissions in many ways such as: consuming electricity in their normal course of business; purchasing new clean generation; intentionally varying their electricity consumption patterns; installing battery storage; supporting transmission enhancements, etc. In order to incentivize corporate actions across these areas, this metric would ideally be designed so that it could be used to quantify the impacts of any and all activities that impact electric grid emissions.
5. **Both New and Continuing Actions Have Impact:** Corporate actions that occurred in the past can continue to have persistent impacts on grid operations and structure. In order to capture the full impact of a companies' activities, the metric would ideally be able to estimate the impacts of these ongoing effects as well as the emissions increased or reduced from new activities.

If a Performance Metric approach can be developed that satisfactorily achieves the above principles, then the IAI would also recommend the following additional principle:

6. **The Metric Will Be More Successful if it Can Support a Net Impact Claim:** Corporate adoption of sustainability targets has been closely linked with clearly defined, quantitative metrics (e.g., annual matching of electricity consumption with renewable energy certificates). A Performance Metric is likely to receive greater corporate support and adoption if companies can similarly offset the positive emissions from their operations with emissions reductions from other actions.

Additional Considerations:

- The IAI would advocate that a Performance Metric be considered in parallel to and in the same timeframe as the current Scope 2 revision process and that potential complementary interactions between these frameworks be actively considered in the revision process.
- If and when there are specific proposals regarding how to implement such a Performance Metric, it will be important to consider if — and under what circumstances — its adoption should be mandatory, recognizing that optional metrics may not achieve significant adoption.
- The Performance Metric envisioned above could provide a mechanism for companies to perform analysis consistent with the ISB's support for stricter spatial and temporal alignment as part of the Scope 2 revision process.