EPRI

2023 TECHNICAL UPDATE

# Bee Better Certified Electric

## Summary of Public Comments on Draft Criteria

# Bee Better Certified Electric

## Summary of Public Comments on Draft Criteria

**3002027502**

Technical Update, May 2023

EPRI Project Manager
**J. Fox**

**EPRI**
3420 Hillview Avenue, Palo Alto, California 94304-1338 USA
800.313.3774 ▪ 650.855.2121 ▪ askepri@epri.com ▪ www.epri.com

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# ACKNOWLEDGMENTS

EPRI prepared this report.

Principal Investigator
J. Fox

The following organization, under contract to EPRI, helped prepare this report:

Xerces Society for Invertebrate Conservation
628 NE Broadway, Ste. 200
Portland, OR 97232

Principal Investigators
E. Lee-Mäder
S. Frischie

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# ABSTRACT

In 2021, EPRI launched a two-year project with The Xerces Society for Invertebrate Conservation to develop a nationally recognized, third-party-verified, voluntary pollinator certification program for electric power companies: *Bee Better Certified Electric*. This effort attempts to establish a science-based certification for solar sites, transmission rights-of-way, substations, and power plant sites to verify that vegetation is managed in a manner that supports pollinator conservation. In October 2022, EPRI opened a public comment period to solicit feedback on the draft criteria. This update report summarizes the results of the public comments and next steps of the project.

## Keywords

Bee Better Certified Electric
Certification
Pollinator
Verification

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# 1 INTRODUCTION

In 2021, EPRI launched a multi-year project with The Xerces Society for Invertebrate Conservation (Xerces) to develop a nationally recognized, third-party-verified, voluntary pollinator certification for electric power companies—Bee Better Certified Electric. This effort aims to establish a science-based certification for solar sites, transmission rights-of-way (ROWs), substations, and power plant sites to verify that vegetation is managed in a manner that supports pollinator conservation. To our knowledge, this would be the first national, third-party-verified program for power companies related to pollinators; see the 2023 EPRI Technical Brief *Pollinator and Wildlife Habitat Certification Programs: An Overview of National Programs in the United States and Canada* (3002025674).

It is important to emphasize that consideration for Bee Better Certified Electric certification is place-based and company-specific. Certification will not be appropriate for all project sites nor companies. Interest in certification would come after a company has determined that a site might be appropriate for pollinator habitat. This determination would include site size and shape, ability to buffer against pesticide exposure, compatibility with integrated vegetation management (IVM) best practices and regulatory requirements, costs, value to customers and/or investors, and other factors.

Bee Better Certified Electric provides a third-party-verifiable standard that meets the needs and interests of an industry that is being asked to consider co-locating pollinator conservation on their land (sometimes as one of the permit's requirements). This program has potential to provide a science-based solution, informed by industry experts, for responding to these requests when pollinator habitat is deemed appropriate for a project site.

There are several key aspects necessary to launch a certification program, including third-party verifier qualification, application forms and resources, structure and pricing for claims and licensing, and developments of the specific performance criteria. The specific criteria that third-party verifiers will use to assess sites are a critical piece of the certification. A collaborative, transparent process for the development of the criteria is at the center of Bee Better Certified Electric. To be viable and impactful, the certification must have a high standard for pollinator conservation, be attainable within the regulatory and practical requirements of the site, and make sense from a power company's business perspective. Therefore, early in the project, we gathered a working group of renowned multidisciplinary experts to define the scope of this effort (see *Bee Better Certified Electric: Project Scoping Report* [EPRI 3002023835]) and develop draft criteria.

The project team has communicated the importance of the process for developing the Bee Better Electric certification:

> *EPRI is keenly aware that a certification developed in a closed room by a limited set of people is unlikely to yield a valuable and well-considered outcome. Indeed, the process by which this certification is developed is critical to ensuring that the certification considers the needs of all parties: the land managers, the pollinators, and the public. EPRI has therefore prioritized the process of this effort over speed of execution, as further described below.* (EPRI 3002023835)

In October 2022, EPRI opened a public comment period to provide feedback on the draft criteria. This report summarizes the results of the public comments and next steps of the project.

# 2 PUBLIC COMMENT PROCESS

Between October 27, 2022, and December 2, 2022, EPRI and Xerces solicited comments from interested companies, organizations, and individuals. We especially encouraged responses from those with experience in energy, electricity, habitat, pollinators, or certifications/standards to comment. EPRI and Xerces distributed the invitation for comment through email (including EPRI-member companies and the EPRI Power-in-Pollinators Initiative), LinkedIn, Instagram, Facebook, and Twitter (see Figure 1 and Table 1). Language in the invitation encouraged further sharing among recipients' networks, with the intent to expand the outreach to additional possible respondents.


Figure 1. Public comment period invitations posted to social media

Table 1. Survey distribution and social media engagement

| Platform | Accounts Reached | Impressions | Likes/Reactions | Comments | Shares |
|---|---|---|---|---|---|
| Xerces Instagram | 7,031 | 7,265 | 502 | 11 | 29 |
| Xerces Facebook | 2,545 | 2,754 | 68 | 1 | 29 |
| Xerces Twitter | 467 | 467 | 9 | 0 | 3 |
| Xerces LinkedIn | 1,259 | 1,259 | 45 | 6 | 6 |
| J. Fox LinkedIn | 1,017 | 1,017 | 22 | 2 | 5 |
| *Total:* | *12,319* | *12,762* | *646* | *20* | *72* |

The public comment process provided an open-access Box folder (no password, login, or registration required) for downloading the draft criteria, a link to download the EPRI report *Bee Better Certified Electric: Project Scoping Report*, and a link to a response form (Survey Monkey). The invitation letter, draft criteria, and Survey Monkey response form are included in Appendix A.

Respondents were required to read both documents and share their comments through the form. There was no requirement to list one's name/affiliation with the comments, and several stakeholders responded anonymously. In addition to or instead of using the form, several respondents provided their comments in letters that were emailed to Jessica Fox, EPRI, Senior Technical Executive.

After the public comment period closed, EPRI sent emails to all respondents who provided contact information and offered to schedule video calls for additional input (that is, listening sessions). The listening sessions were held in January 2023 and grouped by area of expertise (solar, ROWs, and so on).

# 3 RESULTS

Between October 27, 2022, and January 30, 2023, the following input was captured:

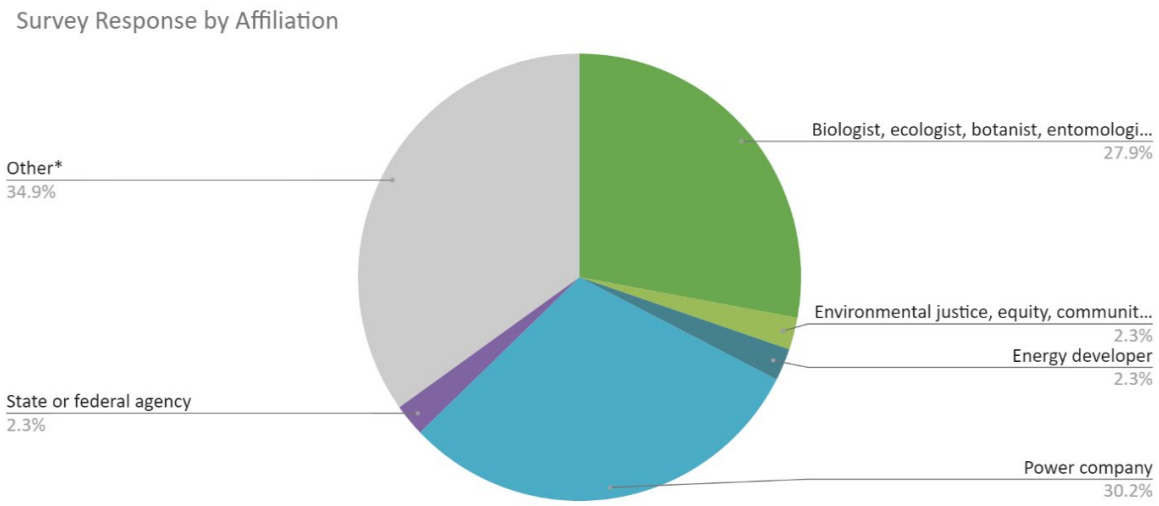
- Completed Survey Monkey forms (n=45)
- Letters (n=4)
- Listening sessions (n=8)

The combined expertise represented in the respondents is **extensive and diverse**. As summarized here, the input varies widely depending on the perspective, experience, and values of the respondent.

## Survey Monkey Results

Not all respondents answered all questions. Some submissions were anonymous. The comments resulted in a length of 198 extracted pages.

Survey Monkey respondents were asked to identify their affiliation (see Figure 2). In general, there was a relatively balanced number of responses from "-ologists" and power companies. The "Other" category was paired with a comment field to provide details, which generally fell into these categories: industry advocacy or trade groups, industry consultants (such as arborist or IVM expert), and chemical manufacturers. There was one self-selected "environmental justice, equity, community expert" who was a private individual. One respondent identified as "energy developer."




| | Affiliation | Count |
|---|---|---|
| | Biologist, ecologist, botanist, entomologist, etc. | 12 |
| | Environmental justice, equity, community expert | 1 |
| | Energy developer | 1 |
| | Power company | 13 |
| | State or federal agency | 1 |
| | Other* | 15 |
| **Total Responses:** | | **43** |

Figure 2. Survey Monkey respondents' affiliations by category

**Note**: One large solar company submitted the same comments (in other words, copy and paste) through Survey Monkey six times from different individuals, including one anonymous stakeholder "John." The affiliations selected for these six repeat submissions were Energy Developer (n=2), Power Company (n=2), Other (n=1), and Biologist (n=1). To ensure that this company's opinions were not overweighted, the duplicate submissions were considered a single response, and the affiliation was considered Power Company. The exception in these duplicate submissions was that there were minor variations to survey responses for Q12 and Q15. The project team recorded and considered these comments individually as contributions to the public comment period.

After a series of open-ended questions regarding the criteria (see Appendix A), respondents were asked to classify their overall opinion about aspects of Bee Better Certified Electric and the draft criteria. The compiled results for these opinion questions are grouped by affiliation (see Figures 3–5). In addition to the single-choice opinion questions, related detailed comments were submitted through the Survey Monkey.

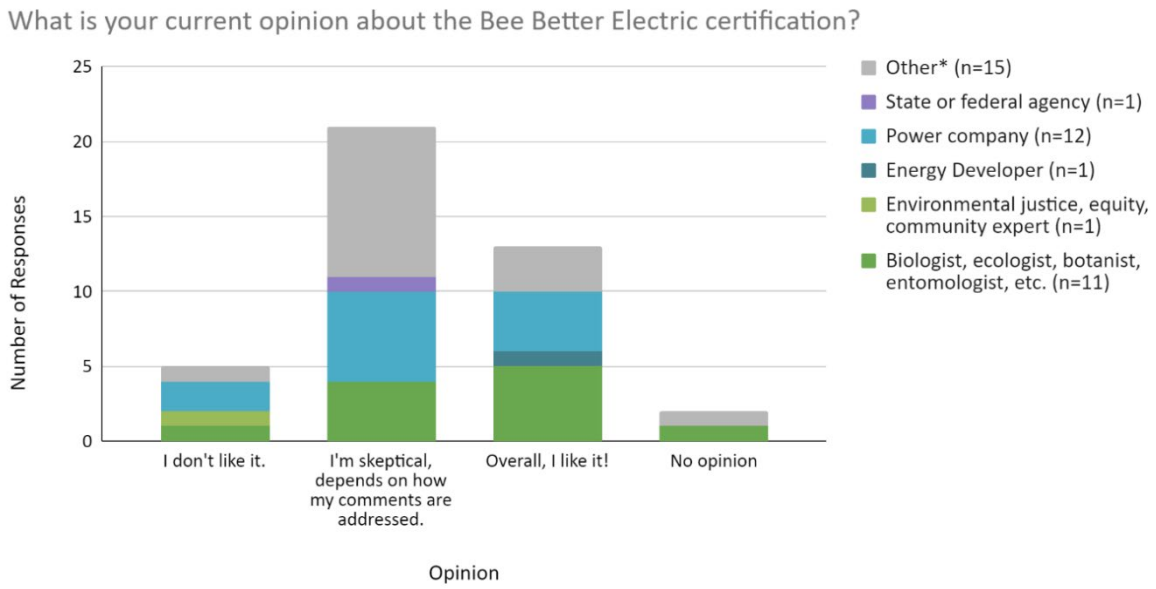



Figure 3. Survey Monkey results to "What is your current opinion about Bee Better Electric certification?" (n=41)

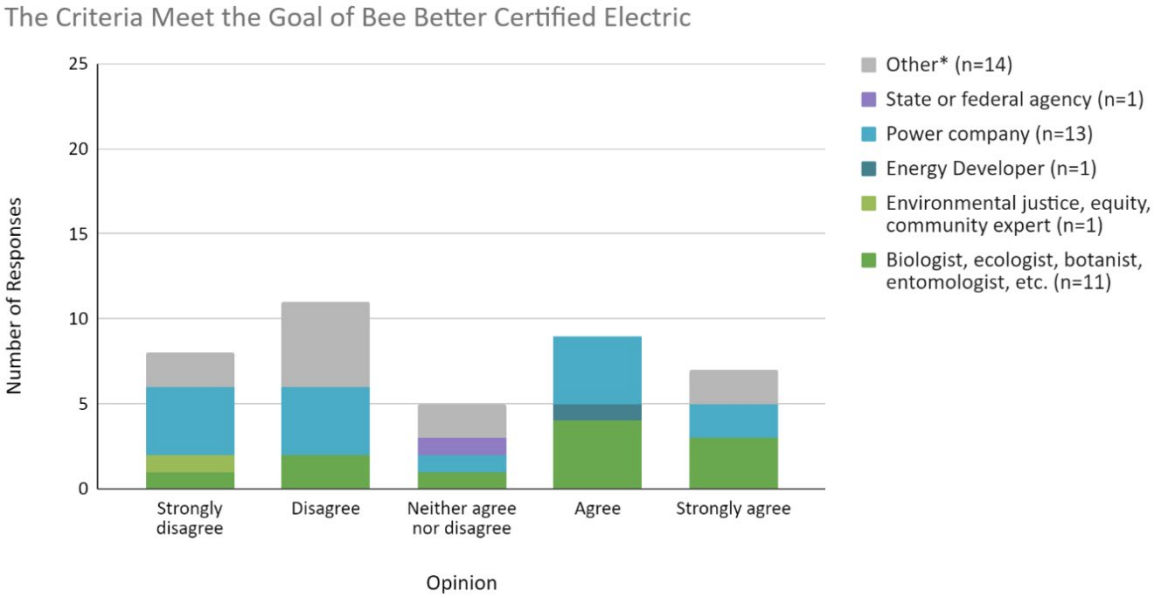



Figure 4. Survey Monkey results to "The criteria meet the goal of Bee Better Certified Electric" (n=41)

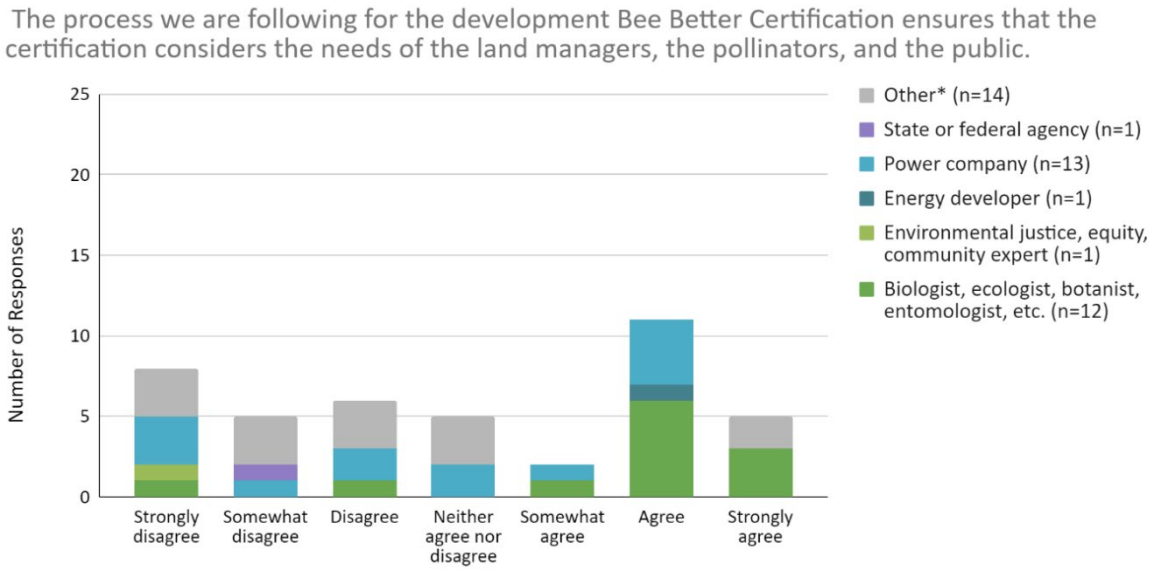



Figure 5. Survey Monkey results to "The process we are following for the development of Bee Better Certified Electric ensures that the certification considers the needs of the land managers, the pollinators, and the public" (n=42)

Regarding the question, "What is your current opinion about the Bee Better Electric certification?", the majority opinion was "I'm skeptical; depends on how my comments are addressed," followed by "Overall, I like it!" (see Figure 3). Affiliations were distributed across opinions.

Among responses within the same opinion, the interpretation requires careful review of the associated comments. For example, the answer "I don't like it" or "I'm skeptical" was associated with two potentially conflicting larger sentiments—that the certification is not protective enough of the pollinators, or that the criteria are too stringent to be implemented.

Respondents were requested to provide their opinion regarding whether the draft criteria meet the goal of Bee Better Certified Electric, which is:

> *To support pollinators on lands managed by power companies through a set of detailed criteria that are science-based, measurable, verifiable by a third party, applicable to various land types and climates, and achievable without unreasonable cost or hardship.*

Results varied across all perspective types (see Figure 4). Further comments revealed the diverse opinions, even when the same survey response was selected (that is, "agree," "disagree," and so on):

- "This is a well-thought-out plan backed by the literature." – Biologist
- "The program, as it sits now, would be impossible to certify on my company's transmission lines." – Power company

- “I don’t have sufficient information to determine whether the requirements in the Draft Criteria are science-based or not.” – Power company
- “There is a lot of good in the Bee Better Electric program...however, more work needs to be done to incorporate past work of professionals working with power companies.” – IVM consultant
- “There MUST be a net benefit to ecosystem services...I have concerns that the percent site coverage [for native plants] is too low.” – Biologist
- “We are at a critical, delicate time period: the massive development of solar sites with lives of 30+ years. We need to help developers get this right. Assuring they don’t greenwash a site is critical while assuring they include a X% of natives...Don’t let perfect get in the way of good.” – Biologist
- “These projects don’t fund themselves and they don’t spontaneously develop with an investment of time from people whose primary function is keeping the lights on for the lowest cost.” – Power company
- “As an investor-owned, regulated electric retail utility, our highest priority is to supply our customers with clean, safe, reliable, affordable energy. We simply cannot adopt any practices that supersede our federal and state requirements to serve our customers.” – Power company
- “These requirements show a lack of understanding of Utility Vegetation Management activities and budget requirements.” – Power company
- “I am wholeheartedly behind the effort, but there is a lot of room to improve.” – Biologist

We asked respondents to provide their opinion about whether “the process we are following for the development of Bee Better Certification ensures that the certification considers the needs of the land managers, the pollinators, and the public.” The responses were distributed, although “agree” responses were the most frequent (n=11) and were primarily from power companies and biologists (see Figure 5).

Those who “agree” or “strongly agree” generally did not provide additional comments. Some comments from “somewhat disagree” and “strongly disagree” include:

- “This is such a broad statement and you cannot ensure all the needs of land managers, the pollinators, and the public will be properly represented.” – Chemical manufacturer
- “It is unclear what attempts were made to conform to existing scorecards, certifications, and standards (i.e., pollinator solar scorecards)” (*paraphrased*). – Industry advocate
- “The solar industry has had limited opportunity to provide input...the criteria do not consider the realities of solar development.” – Power company
- “We are concerned by the lack of transparency and coordination industry-wide leading up to and during the development of the certification program.” – Industry advocate

- "Your intent is wonderful and I support 100%, but, involve more IVM experts to get this right." – Other
- "Initial participation of the energy sector was limited to EPRI Power-in-Pollinators Initiative, which is not representative of the broader industry." – Power company

## Letters and Listening Sessions

Four letters totaling 35 pages were received from an industry advocacy group, a large investor-owned electric power company, and two vegetation consultants with extensive expertise in ROW IVM.

The following organizations accepted the invitation for a listening session by video call:

- Utility Arborist Association
- Energy and Wildlife Action Coalition
- Solar Energy Industry Association

Eight stakeholder calls with 32 individuals were held in late January 2023, with the focus of each call to ensure full understanding of the public comments submitted. Project staff from Xerces and EPRI attended all stakeholder calls.

Additionally, the project team received comment letters by email from individuals and industry group facilitators. The specific content and attributions from the letters and listening sessions are not detailed in this report. However, the input from these sources has been compiled and combined with Survey Monkey results to identify overall themes and inform revision of the draft criteria.

## Summary of Themes

Compiling input from the Survey Monkey, letters, and listening sessions, the following emerged as themes:

- **Scientific foundations**: The criteria need to be supported by citations to scientific literature and/or expert opinion, particularly for elements that are not agreed as current best practice.
- **Buffer around certified habitat**: General concern about the 30-ft (9.1-m) buffer around the "certified habitat" across all land asset types, and particularly for ROWs. Is the buffer inclusive or exclusive of the "certified site"? How does the buffer relate to "certified habitat" within the "certified site"?
- **Land types**: Interest in adding wind, surplus, and distribution land asset types into the program.

- **Emergency land management**: What happens to the certification if unexpected land management actions are needed to maintain electricity generation and delivery?
- **Herbicides**: Justify and explain the restrictions; reconsider the restrictions around the timing of application, application method, and mode of action specificity.
- **"Native"**: Questions about the definition of *locally native*. Need to avoid confusion with ecotype and reconsider if the U.S. Department of Agriculture's PLANTS database is the best source.
- **One-size-fits-all**: Can there be levels of certification so that it is not a black-and-white program? Consider customization based on land asset type, that is, separate criteria for utility-scale and community-scale solar.
- **Becoming mandate or requirement:** Concern that this voluntary certification program could lead to regulatory requirement or social mandate for ground-mounted solar installations.
- **Cost:** There is an increased cost related to meeting the criteria that is not considered, not including the cost for becoming certified.
- **Certification process and procedures:** General questions about the process anticipated to become a certified site.
- **Process:** The process to date has not allowed for full engagement by industry and related experts.
- **Alignment with existing programs:** How does this program align with other similar efforts, including the state-by-state pollinator-solar scorecards (Pollinator-Friendly Solar Scorecards: Comprehensive Analysis of Scorecard Attributes (epri.com) and Virginia's Pollinator Smart Program? Why don't the criteria follow the monitoring criteria under the Nationwide Candidate Conservation Agreement for Monarch on Energy and Transportation Lands?

Overall, reconciling requests for **increasing** ecological requirements with the need to **lower** hurdles to adoption is a challenge. There is limited value in creating a "gold standard" program that no company adopts. Concerns over "greenwashing" are real, and the criteria need to be scientifically based to ensure that a program is indeed protective of pollinators.

# 4 NEXT STEPS

This overall effort is funded by the EPRI Power-in-Pollinators Initiative. Given the interest in Bee Better Certified Electric and the potential value of a finalized certification program, EPRI is continuing the effort.

To ensure interactive collaboration with a broader set of stakeholders, accept offers for genuine engagement, and address important gaps identified in the draft criteria, the project will support a collaborative editing process with several industry groups in 2023, including:

- Utility Arborist Association
- Energy and Wildlife Action Coalition
- Solar Energy Industry Association
- EPRI's Power-in-Pollinators Initiative

We might need to recruit additional groups/experts who can balance the feedback of these groups to meet the goals of the overall program to support companies, pollinators, and the public.

After the certification criteria are complete, the next steps will be to build the process and procedures for full program rollout, including:

1. Release the final Bee Better Electric Standard (Criteria), Version 1.
2. Publish the Background to the Standard document, which provides the rationale and scientific citations that underpin the criteria.
3. Develop the Process and Procedures for full Bee Better Electric rollout.
    a. Qualify, onboard, and enroll third-party verifiers.
    b. Create application and monitoring documents.
    c. Clarify costs for certification.

# A INVITATION LETTER, DRAFT CRITERIA, SURVEY MONKEY

October 27, 2022
Cc: Eric Mader, eric.mader@xerces.org; Stephanie Frischie stephanie.frischie@xerces.org

Colleagues,

EPRI and Xerces Society are very pleased to open a comment period for the Bee Better Electric Certification project. Please help us share notice of this comment period!

Background:

Beginning in 2021, EPRI launched a two-year project with The Xerces Society for Invertebrate Conservation (Xerces) to develop a nationally recognized, third-party verified, voluntary pollinator certification program for electric power companies: *Bee Better Certified Electric*. This effort establishes a science-based certification for solar sites, transmission rights-of-way (ROWs), substations, and power plant sites to verify that vegetation is managed in a manner that supports pollinator conservation. The most important aspect of the certification is the underlying criteria that third-party verifiers will use to assess specific projects. We have worked with a renowned group of multidisciplinary experts for the last year to develop DRAFT criteria. We are now inviting public comment before finalization of the criteria and associated certification.

Who should comment:

We invite all interested companies, organizations, individuals, and public stakeholders. We especially invite those with experience in energy, electricity, habitat, pollinators, or certifications/standard to comment. There is no requirement to list one's name/affiliation as a reviewer. Summaries of the number of experts, their general profile type (academic researcher, practitioner, and power company), and number of comments will be included in the final document(s).

Deadline:
**DECEMBER 2, 2022, midnight Pacific Time**

Instructions:

1. REQUIRED: Read EPRI Report, Bee Better Certified Electric: Project Scoping Report (epri.com) *Report #3002023835*

   This report is intended to guide the development of the *Bee Better Certified Electric* certification, including the underlying specific measurable criteria, and to serve as a reference for participating stakeholders regarding purpose, approach, and boundaries. It provides the background for stakeholders to participate in the comment period for the draft criteria that third-party verifiers will use to determine site-level qualification. The project expert Working Group actively developed this report over nearly a year. *If you do not read the scoping report, your comments will not be considered.*

2. Review the draft Criteria

The actual criteria is what the independent third-party verifier will use to assess if a project meets the requirements for this program. It is the "meat" of the certification. The project team and expert working group drafted criteria to protect pollinators and to be viable for power company land managers to achieve.

Link to criteria: https://epri.box.com/s/pv6qay7hpas2rb4nvn6d00cyu5irxb4d

3. Submit comments via Survey Monkey by **Dec 2, midnight Pacific Time**

Key Resources:

1. Link to Bee Better Electric Project Scoping Report: Bee Better Certified Electric: Project Scoping Report (epri.com)
2. Link to draft Criteria: https://epri.box.com/s/pv6qay7hpas2rb4nvn6d00cyu5irxb4d
3. Link to Survey Monkey: https://www.surveymonkey.com/r/785T579

Additional Resources:
Home ⋆ Bee Better Certified™
Project Summary here.
Energy Central Article: Pollinator Conservation Certification Taking Flight in 2022

**Jessica Fox**
Conservation Biologist, Sr. Technical Executive

**Electric Power Research Institute**
3420 Hillview Avenue | Palo Alto, CA 94304
Tel: 650.855.2138
Email: jfox@epri.com

https://www.linkedin.com/in/jessica-fox-680b6515/

www.epri.com/pollinators

**http://wqt.epri.com**

*Together...Shaping the Future of Electricity*

# Bee Better Electric - Draft Criteria

**DRAFT FOR PUBLIC COMMENT**

**Deadline: DECEMBER 2, 2022, midnight Pacific Time**

Who should comment:

Most reviewers will be working at the intersection of land management and the electric power industry. We especially invite those with experience in energy, electricity, habitat, pollinators, or certifications/standards to comment. There is no requirement to list one's name/affiliation as a reviewer. We will summarize the comments received in wholistic form, not including people/organizational attributions.

Instructions:

1. Read the Scoping Report (REQUIRED STEP)

   Bee Better Certified Electric: Project Scoping Report (epri.com). This report is intended to guide the development of the *Bee Better Certified Electric* certification, including the underlying specific measurable criteria, and to serve as a reference for participating stakeholders regarding purpose, approach, and boundaries. It provides the background for stakeholders to participate in the comment period for the draft criteria that third-party verifiers will use to determine site-level qualification. The project expert working group actively developed this report over nearly a year. *If you do not read the scoping report, your comments will not be considered.*

2. Review the draft Criteria

   The actual criteria are what the independent third-party verifier will use to assess if a project meets the requirements for this program. It is the "meat" of the certification. The project team and expert working group drafted criteria to both protect pollinators and to be reasonable from the perspective of power company land managers.

3. Submit comments via Survey Monkey by December 2, midnight Pacific Time
   https://www.surveymonkey.com/r/785T579

Resources:

Project Summary here.

Energy Central Article: Pollinator Conservation Certification Taking Flight in 2022

Background:

Beginning in 2021, EPRI launched a two-year project with The Xerces Society for Invertebrate Conservation (Xerces) to develop a nationally recognized, third-party verified, voluntary pollinator certification program for electric power companies: *Bee Better Certified Electric*. This effort establishes a science-based certification for solar sites, transmission rights-of-way (ROWs), substations, and power plant sites to verify that vegetation is managed in a manner that supports pollinator conservation. The most important aspect of the certification is the underlying criteria that third-party verifiers will use to assess specific projects. We have worked with a renowned group of multidisciplinary experts for the last year to develop DRAFT criteria and are now inviting public comment before finalization.

**We are grateful to the project Working Group for extensive support over a full year to develop the Scoping Report and draft criteria.**

NO ASSUMPTION CAN BE MADE REGARDING ENDORSEMENT OR CONCURRENCE WITH SPECIFIC OUTCOMES OR DECISIONS FROM SPECIFIC WORKING GROUP MEMBERS.



| Name | Organization | Expertise/Role |
|---|---|---|
| **Moderators** | | |
| Eric Lee-Mäder | Xerces | Program Manager |
| Jessica Fox | EPRI | Program Manager |
| Liz Robertson | Xerces | Project Coordinator |
| **Working Group** | | |
| William Maidment | ENGIE | Civil Engineer, Solar Owner, Operator |
| Lewis Payne | New York Power Authority | Rights-of-Way and Environmental Manager |
| Kathleen Ave | SMUD | Sr. Climate Program Manager |
| Chuck Sheppard | Bonneville Power Administration | Manager of Vegetation and Forestry |
| Kevin Atkins | Ameren Services Company | Sr. Environmental Manager |
| Matthew Shackelford | DTE Energy | Environmental Manager |
| Josh Burnette | Tennessee Valley Authority | Land Manager |
| Beth Markhart | WEST, Inc. | Senior Restoration Ecologist |
| Rebecca R. Hernandez | UC Davis, Wild Energy Initiative | Professor, Department of Land, Air, and Water Resources |
| Tom Karas | Minnesota Native Landscapes | Restoration Contractor |
| Claudio Gratton | University of Wisconsin – Madison | Pollinator Ecologist |
| Ben Bowell | Oregon Tilth | Certification Expert |

| | | |
|---|---|---|
| Zara Dowling | University of Massachusetts, Clean Energy Extension | Research Fellow |
| Cameron Newell | Xerces | Ecological Certification Expert |
| Stephanie Frischie | Xerces | Restoration Expert, Plant Materials |
| Teresa Kim | JP Morgan | Financial Investment Manager |

About Draft Criteria:

These criteria will be used by trained third-party verifiers to assess projects. This is a stand-alone document and does not contain background information. It is important to first read the Bee Better Electric Scoping Report #3002023835 as context for understanding the scope, scientific-basis, and purpose of this criteria. **Bee Better Certified Electric: Project Scoping Report (epri.com)**

## Terms & Definitions

**Certified Site** is the land unit, all within one property boundary that includes certified habitat, spatial buffers, and electric infrastructure. It may or may not include vegetated areas outside of the certified habitat (e.g., at a solar site, vegetation within the array may be outside the managed certified habitat, while the certified habitat is along one edge of the site.

**Certified habitat** is the area within the Certified Site that supports healthy populations of pollinators by meeting the criteria.

**Abundance Categories:**

Abundant: Numerous individuals of the flowering species are present (51– 100% cover).

Common: Several individuals of the flowering species are present (11– 50% cover).

Sparse: Only a few individuals of the flowering species are present (1– 10% cover).

Absent: No flowering species are present (0% cover).

**Flowering / pollinator-attractive species** can include trees, shrubs, or forbs known to provide pollen and/or nectar to pollinators.

**Active plant growth period:** the non-dormant seasons, when aboveground plant parts are green or flowering.

**Invasive Plant Species** are defined by all of the following characteristics: a. non-native to the area of interest; b. able to establish, persist, and spread (i.e., naturalize); and c. recognized to cause or potentially cause economic, human health, and/or ecological damage. Categorization of invasive species is subjective, generally not legally binding, and determined at various geographic scales. See Appendix A for more details and references.

**Native plants** are species that are indigenous to a region, i.e., those that occurred historically in an area without human intervention. In the United States, see USDA PLANTS database for native status. https://plants.sc.egov.usda.gov/java/

**Noxious Weed** is a plant species whose movement, trade, or presence is legally regulated due to potential economic or ecological harm. See Appendix A for more details and references.

**Region is an area with** definable ecological and geographic characteristics; i.e., Sonoran Desert or Upper Midwest.

**Pesticides** are any substance or mixture of substances intended for preventing, destroying, repelling or mitigating a pest or disease; or intended for use as plant or insect growth regulators, defoliants, desiccants, or nitrogen stabilizers. The term pesticide includes bactericides, fungicides, herbicides, insecticides, miticides, molluscicides, nematicides, avicides, repellents and piscicides. Pesticides may be conventional, biopesticides, or antimicrobials.

**Pesticide applications** include any activity that introduces a pesticide into the environment for the purposes of controlling pests, including but not limited to spraying, dusting, and chemigation.

**Locally native:** Nativity, or which plants are considered native to where, is not absolute – it is subject to interpretation, arbitrary boundaries or distances, and the dynamic nature of plant distribution over time. The definition of "locally native" for Bee Better Certified is illustrated in an example in Figure 1.

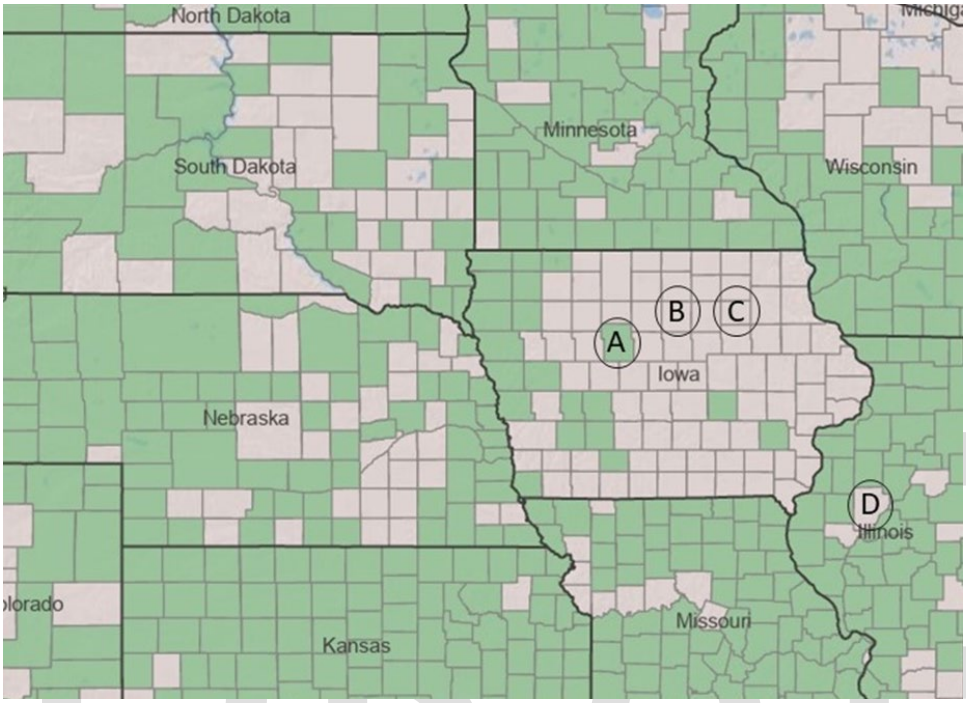



Figure 1. A snapshot of the native range of a plant species selected for a project. Counties that are shaded in green are where the plant is native as reported in the USDA PLANTS database https://plants.usda.gov.

For Bee Better Certified, "locally native" is defined as native (as reported in the USDA PLANTS database https://plants.usda.gov) within 2 counties of the certified site. To illustrate this definition, there are four counties labeled A, B, C, and D in Figure 1. This example plant species is considered locally native for sites located in County A, County B and/or County D, since these counties are all within a 2-county distance of a green-shaded county. For a site in County C, this example plant species is not locally native.

**Mature created permanent habitat:** habitat that was created (planted/seeded/restored/enhanced) more than three years prior to applying for Bee Better Certification

**Pesticides** - Any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating a pest organism or disease. Pesticides can include plant regulators, defoliants, desiccants or nitrogen stabilizers, in addition to bactericides, fungicides, herbicides, insecticides, miticides, molluscicides, nematicides, and piscicides.

**Pesticide applications** - Any activity that introduces a pesticide into the environment for the purposes of controlling pests, including but not limited to spraying, dusting and chemigation. We also categorize the planting of pesticide-coated seed as a pesticide application.

**A Spatial buffer** is an area where no insecticides or fungicides are applied, such as roads or untreated vegetation, that is established to reduce risks to pollinators and their habitat via spatial separation. For Bee Better Certified Electric, herbicide use in spatial buffers must meet the criteria under Section 6.

**A Spot treatment** is an herbicide application method that reduces the exposure of non-target plant species to herbicide application (e.g., using a backpack sprayer, weed wiper, or applying herbicide directly onto cut stumps or bark).

## Criteria

### 1. Asset Types and Certified Habitat Minimums

1.1. The land where the Certified Site is located must be under authority or control by the certifying power company and available for habitat management and inspection. "Authority and control" can be demonstrated through property fee title, memorandum of understanding with landowner, or lease/easement agreement.

1.2. If recent new project **siting and construction** activities on the site a applying for certification required state and/or federal mitigation for species or habitat in the past 3 years, it is not eligible for certification (e.g., mitigation required under the Endangered Species Act and their state-level equivalents).

1.3. Each Certified Site must have a minimum of one acre of certified habitat.

1.4. A 30-foot-wide spatial buffer is required between certified habitat and adjacent land. The area of the spatial buffer does not count as part of the Certified Habitat.

*1.5. Specific Land Asset Minimums*

*1.5.1. Substations*:

a. Certification unit: Individual site
b. The Certified Site is defined by and contained within the substation property.
c. At least 80% (by area) of **vegetated zones** within the Certified Site must be managed as Certified Habitat

*1.5.2. Solar Plant*:

a. Certification unit: Individual site
b. The Certified Site is defined by and contained within the property associated with the solar array.
c. At least 35% (by area) of the Certified Site must be managed as Certified Habitat

*1.5.3. Power Plants and Hydroelectric Generating Sites*:

a. Certification unit: Individual site
b. The Certified Site is defined by and contained within the power plant or hydroelectric property boundary.
c. At least 35% (by area) of **vegetated zones** within the certified site must be managed as Certified Habitat

*1.5.4. Transmission Rights-of-Way*:

a. Certification unit: Segment (defined as the ROW from one substation to the next substation on the line)
b. At least 35% (by area) of the **certified segment** must be managed as pollinator habitat.

## 2. Pollinator Habitat Plant Diversity, Abundance, and Nativity

**These criteria apply to Certified Habitat (not the entire Certified Site).**

2.1 At least every two years, a vegetation inventory will be conducted to identify and estimate abundance (percent cover (%)) of native species, noxious weeds, and invasive plant species. (See 3.1)

a. A native species must be locally native.

b. State level definitions of noxious weeds must be used.

c. State level definitions of invasive plant species must be used.

2.2 Pollinator habitat must contain a significant proportion of native, pollinator-attractive plants.

a. For new habitat areas, at least 70% of the species used to create the habitat must be locally native (based on plant materials lists).

b. In natural or mature created permanent habitats, at least 50% of the species listed in the inventory for the certified habitat must be locally native (based on biennial plant inventories).

2.3 At least three native species with flowers that provide nectar and pollen to pollinators must be in bloom during each season of the active plant growth period under natural conditions in the region. Seasons are defined as spring, summer, fall, and winter.

2.4 For sites that receive more than 10 inches (25 cm) of annual precipitation, the combined vegetative cover of the native plant species in bloom must be “abundant” or “common” for each season in the active growth period. See below for Abundance Categories (based on reports or other evidence from Integrated Vegetation Management Plan (IVMP)).

2.5 For sites that receive less than 10 inches (25 cm) of annual precipitation, the combined vegetative cover of the native plant species in bloom must be at least “common” or “sparse” for each season in the active growth period. See below for Abundance Categories (based on reports or other evidence from IVMP).

## 3. Noxious Weeds and Invasive Plant Species Management

**These criteria apply to the entire Certified Site.**

3.1 At least every two years, a vegetation inventory will be conducted to identify and estimate abundance of native species, noxious weeds, and invasive plant species. (See 2.1)

a. A native species must be locally native.

b. State level definitions of noxious weeds must be used.

c. State level definitions of invasive plant species must be used.

3.2 Vegetation management staff must be trained on identification and status determination of noxious weeds or invasive plants (i.e. Bee Better staff training materials, or similar equivalent).

3.3 An IVMP is required for Certified Sites.

a. IVMP must include guidance on identification and status determination of noxious weeds or invasive plant species.

b. IVMP must include best management practices (BMPs) on limiting the movement and spread of noxious weeds and/or invasive plants (e.g., seasonal timing of control prior to production of viable seeds or fruits; cleaning equipment before leaving each job site to remove plant cuttings and soil that could contain seeds or other propagules).

c. IVMP must include methods for targeting and reducing noxious weeds and/or invasive plants.

d. IVMP must include expectations and plans for how non-noxious and non-invasive plant species will respond to the control or management of noxious weeds and/or invasive species (e.g., the timing, degree, or extent of invasive treatment will minimally impact desirable vegetation; appropriate seed mixes will be sown to establish desirable vegetation following noxious or invasive plant species management activities).

e. IVMP must include a description of mowing or grazing that will be used for targeted noxious weed or invasive plant management, including the expected timeline and diversity of desired vegetation following the management activities.

3.4 A maximum allowable abundance of noxious weeds at any time is 25% cover based on random plot vegetation monitoring.

## 4. Mowing and Grazing

**These criteria apply to Certified Habitat (not the entire Certified Site).**

4.1 Mowing and/or grazing are allowed but the vegetation in habitat areas must meet the criteria under criterion 2. Pollinator Habitat Plant Diversity, Abundance, and Nativity.

4.2 Mowing and/or grazing are not allowed during ground nesting bird nesting season, as per the North American Migratory Bird Treaty Act.

## 5. Insecticides and Fungicides

**These criteria apply to Certified Habitat (not the entire Certified Site).**

5.1 Insecticide and fungicide applications are prohibited except for:

a. the outdoor control of structural pests with applications limited to buildings, equipment, or infrastructure, and
b. incidental application for stinging insects related to worker protection, and
c. emergency applications to control invasive insect pests (excluding applications targeting native grasshoppers and native, non-disease vectoring mosquitoes).

5.2 Applicants must file for an exemption or exclusion of certified habitat from vector control applications in jurisdictions that allow exemption requests.

5.3 To reduce risk of pesticide drift, all certified sites must maintain a 30-foot-wide spatial buffer between certified habitat and ***any*** adjacent lands. The area of the spatial buffer does not count as part of the Certified Habitat.

5.4 Pesticide application equipment must be calibrated at least once annually and according to manufacturer specifications.

5.5 Records of all insecticide applications on certified land shall be maintained and available for review by certifier on an annual basis, starting from date of certification. Records must include application date, location, application method, active ingredient(s), application rate, and target insect(s).

5.6 Pesticide-coated seeds are considered an insecticide/fungicide use and prohibited.

## 6. Herbicides

***These criteria apply to Certified Habitat and to spatial buffer areas.***

6.1 IVMP must include each of the following with regard to herbicide mitigation:

a. Monitoring protocol for the assessment of weed conditions,

b. Pre-established action thresholds that consider native pollinator plants for vegetation management actions,

c. A written specification of both mechanical and chemical treatment actions for actionable vegetation management and weed conditions,

d. Guidance on selective herbicide options for major weeds to limit non-target impacts on desirable vegetation for pollinators,

e. Protocol to calibrate herbicide application equipment according to manufacturer specifications at least on an annual basis,

f. Guidance to use spot treatment methods on target plants to avoid weakening non-target species,

g. Guidance to avoid off-site movement of herbicides and reduce the risk of drift such as avoiding applications when wind speeds are over 15 mph or during temperature inversions, keeping equipment calibrated, and using the lowest effective pressure and largest droplet size possible.

6.2 Records of all herbicide applications must be maintained and available for review by certifier annually, starting from date of certification. Records must include application date, location, application method, active ingredient, application rate, and target vegetation.

6.3 The use of persistent herbicides is prohibited.

6.4 Dicamba (3,6-dichloro-2-methoxybenzoic acid), Paraquat (N,N'-dimethyl-4,4'-bipyridinium dichloride), Diquat (1,1'-Ethylene-2,2'-bipyridyldiylium dibromide), Picloram (4-amino-3,5,6-trichloro-2-pyridinecarboxylic acid), Atrazine, and 2,4-D (2,4-Dichlorophenoxyacetic acid) are prohibited.

6.5 Aerial application of herbicides is prohibited. Aerial application of herbicides is allowable outside of designated certified areas, so long as all of the following conditions are met:

a. other application methods are not feasible,

b. the herbicide is not dicamba, paraquat, diquat, picloram, atrazine, or 2,4-D, and

c. no applications are conducted within 60 feet of certified habitat.

# Appendix A – Noxious Weeds and Invasive Species

Plant species that are categorized as noxious weeds or as invasive species do not support quality pollinator habitat. The purpose of these criteria is to limit their presence and abundance on Certified Sites.

Noxious weeds as defined as those that pose an economic threat to agriculture or livestock, they may be native or non-native to a region; and they may or may not pose an ecological threat. At the federal level, it is defined by the Agriculture Risk Protection Act, Public Law No. 106-224[1] as "any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products), livestock, poultry, or other interests of agriculture, irrigation, navigation, the natural resources of the United States, the public health, or the environment". Additionally, each state and some counties have their own laws and lists of noxious weeds. There are legal requirements for landowners to manage and control noxious weeds, overseen by federal[2], state*, and county agencies or boards.

"Invasive species" are defined as plants that have all of the following characteristics: a. non-native to the area of interest; b. able to establish, persist, and spread (I.e., naturalize) without human intervention; and c. are recognized to cause or potentially cause economic, human health, and/or ecological damage[3, 4, 5]. Categorization of invasive species is subjective, generally+ not legally binding, and determined at various geographic scales.

*To find state noxious weeds, perform a web search with the term "STATENAME + noxious weed". Results from the website invasive.org will list the species and hyperlink to the applicable state legislation. Some states or jurisdictions regulate the trade, sale, and presence of plants categorized as invasive species.



References

[1] Agriculture Risk Protection Act. Public Law No. 106-224 (2000). https://www.govinfo.gov/content/pkg/PLAW-106publ224/html/PLAW-106publ224.htm

[2] https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/sa_weeds/sa_noxious_weeds_program

[3] Iannone, B. V., Carnevale, S., Main, M. B., Hill, J. E., McConnell, J. B., Johnson, S. A., Enloe, S. F., Andreu, M., Bell, E. C., Cuda, J. P., & Baker, S. M. (2021). Invasive Species Terminology: Standardizing for Stakeholder Education. Journal of Extension, 58(3). Retrieved from https://tigerprints.clemson.edu/joe/vol58/iss3/27

[4] Exec. Order. No. 13112, 3 C.F.R. 6183 (1999). https://www.govinfo.gov/content/pkg/FR-1999-02- 08/pdf/99-3184.pdf

[5] Beck, G. K. Zimmerman, J.D. Schardt, J. Stone, R.R. Lukens, S. Reichard, J. Randall, A.A. Cangelosi, D. Cooper, and J.P. Thompson. 2006. Invasive Species Defined in a Policy Context: Recommendations from the Federal Invasive Species Advisory Committee. Invasive Plant Science and Management 1(4):414-421.

Bee Better Electric - Draft Criteria Public Comment Period.
ENDS DECEMBER 2, 2022

**This survey is to collect comments on the draft criteria for the Bee Better Electric certification. The criteria will ultimately be used by the third-party verifier to determine if a project receives certification.**

1. Please Enter Contact Information

**Name**

**Organization**

**State/Province** -- select state --

**Email Address**

**Phone Number**

* 2. Please tell us your perspective/expertise.

- Power company
- Energy Developer
- Biologist, ecologist, botanist, entomologist, etc.
- State or Federal Agency
- Environmental Justice, Equity, Community expert
- Public stakeholder
- Other (please specify)

* 3. I have read the Bee Better Electric Project Scoping Report (EPRI Report #3002023835):

- Yes. Please proceed to taking survey.
- No. Please read the report before taking survey.

4. For the criteria domain "Asset Types and Certified Habitat Minimums", please share your comments in the space provided.

5. For the criteria domain, "Pollinator Habitat Plant Diversity, Abundance, and Nativity," please share your comments in the space provided.

6. For the criteria domain, "Noxious Weed and Invasive Plant Species Management," please share your comments in the space provided.

7. For the criteria domain, "Mowing and Grazing", please share your comments in the space provided.

8. For the criteria domain, "Insecticides and Fungicides", please share your comments in the space provided.

9. For the criteria domain, "Herbicides", please share your comments in the space provided.

10. Should eligibility for certification take prior land use into consideration? For example, a solar site that previously was a farm, forest, or prairie.

- ◯ Yes
- ◯ No
- ◯ No Opinion/Not Sure

Please Explain.

11. The criteria meets the goal of Bee Better Certified Electric: “To support pollinators on lands managed by power companies through a set of detailed criteria that are: science-based, measurable, verifiable by a third party, applicable to various land types and climates, achievable without unreasonable cost or hardship”:

- ◯ Strongly agree
- ◯ Agree
- ◯ Neither agree nor disagree
- ◯ Disagree
- ◯ Strongly disagree

Please Explain

12. The process we are following for the development Bee Better Certification ensures that the certification considers the needs of the land managers, the pollinators, and the public.

- ◯ Strongly agree
- ◯ Agree
- ◯ Somewhat agree
- ◯ Neither agree nor disagree
- ◯ Somewhat disagree
- ◯ Disagree
- ◯ Strongly disagree

Please Explain.

13. If you are a utility or electric power asset land manager, do you have sites that you would like to consider for Bee Better Electric certification?

- ◯ Yes
- ◯ No
- ◯ Maybe
- ◯ Does Not Apply To Me
- ◯ Please Explain and share the specific land asset types (substation, solar, power plant, ROWs).

14. What is your current opinion about the Bee Better Electric certification?

- ◯ Overall, I like it!
- ◯ I'm skeptical, depends on how my comments are addressed.
- ◯ I don't like it.
- ◯ No opinion

15. What else would you like to share?

**About EPRI**

Founded in 1972, EPRI is the world's preeminent independent, non-profit energy research and development organization, with offices around the world. EPRI's trusted experts collaborate with more than 450 companies in 45 countries, driving innovation to ensure the public has clean, safe, reliable, affordable, and equitable access to electricity across the globe. Together, we are shaping the future of energy.

**Program:**

Endangered and Protected Species

3002027502



**EPRI**
3420 Hillview Avenue, Palo Alto, California 94304-1338 USA
800.313.3774 ▪ 650.855.2121 ▪ askepri@epri.com ▪ www.epri.com