

SUCCESS STORY

Two PPAs allow BART to meet renewable energy goals ahead of schedule



BART is the fifth largest rapid transit system in the US, serving San Francisco and surrounding communities. BART riders make approximately 430,000 trips each weekday on the system. To transport those riders, BART uses approximately 400,000 megawatt hours of electricity every year, making it one of the largest electricity users in Northern California. In 2015, BART was given the authority to buy wholesale renewable energy directly.

Challenges

While BART had the authority to buy its own renewable energy, several challenges remained. First, the organization needed to create a wholesale electricity portfolio policy that included new renewable energy goals. This policy needed to be approved by the publicly-elected board of directors. The board of directors would also need to approve any resulting renewable energy contracts prior to their execution. And like many organizations, BART needed to find long-term renewable energy supply at stable, competitive prices while also minimizing BART's risks during the delivery period.

Unlike many corporate buyers, BART wanted to procure energy under a physical power purchase agreement (versus the commonly used virtual power purchase agreement). In addition, BART had a strong preference to procure renewable energy in the same state as their load and California is a dynamic wholesale power market. The high concentration of solar development has impacted power pricing, changed the value and risk profile for both buyers and sellers, and the market is in a state of regulatory change. The physical nature of BART's procurement meant an additional layer of complexity for the financial analysis.

How we helped

3Degrees worked with BART throughout the entire process – from goal setting to PPA contract execution. Following the approval by the board of directors of the wholesale electricity portfolio policy, 3Degrees customized our RFP template to meet BART's specific procurement needs. From hosting a bidders' webinar to organizing responses, 3Degrees was responsible for organizing the full procurement process.



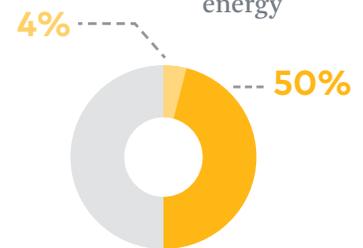
BART COMPANY PROFILE



Annual usage:
400,000 MWh/year

2017
*electricity from
renewables:* 4%

Goal: By
2025, 50% of
electricity is
from renewable
energy



WHAT WE DID:

- + Managed RFP process, including evaluation of over 50 responses
- + Conducted qualitative and quantitative analysis, testing financial outcomes, project viability and risk
- + Led contract negotiations for two PPAs



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BART received proposals from over 50 projects with over 300 variations. 3Degrees led the qualitative and quantitative evaluation of all the proposals in close coordination with the BART team. The joint team created an initial shortlist for deeper analysis. The developers selected for the shortlist were interviewed to gain a more holistic understanding of the projects and the teams. Through this process we were able to uncover proposal characteristics that were not obvious in the written response but had a material impact on project viability and competitiveness. In parallel with the qualitative analysis, 3Degrees performed additional quantitative analysis on the shortlisted projects including carefully constructed “stress tests” to evaluate project performance under a variety of market conditions. By creating a range of scenarios that incorporated the unique needs of BART as well as the challenging characteristics of the California market, 3Degrees was able to identify and reveal clear trade-offs between the proposals. Projects were ranked based on their implied REC value, allowing for an apples-to-apples comparison of proposals with varying characteristics (e.g. contract length, start date, size, etc.).

The comprehensive approach to analyzing the proposals culminated in the creation of a weighted scorecard which provided a transparent tool to assist the BART team in making their final selection. The combined BART and 3Degrees team came to an unexpected decision: BART would move forward with contract negotiations for two projects. With an eye to long-term value, BART took the opportunity to create a diversified supply portfolio that would both save BART money and allow BART to meet their renewable energy goals early.

3Degrees led the commercial negotiations in close coordination with BART and their legal counsel. Negotiating two contracts in parallel required diligence with a focus on standardizing terms and conditions to simplify contract management and an emphasis on minimizing overall risk. Of particular note was the uncertainty caused by proposed solar import tariffs with an unknown final outcome. We worked closely with the solar developer to ensure BART was protected from price risk.

At 3Degrees, our business is our mission. We make it possible for businesses and their customers to take urgent action on climate change. As a certified B Corporation, we provide renewable energy and emission reduction solutions to Fortune 500 companies, utilities, universities, green building firms and other organizations. Headquartered in San Francisco, 3Degrees serves clients around the world.

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“Price was only one of the factors in our decision-making. 3Degrees helped us understand the relative risks and benefits across a number of projects, allowing us to find a cost-effective solution that also minimized our risk.”

HOLLY GORDON

Sustainability group manager at BART



RESULTS:

- + BART signed two 20-year PPAs, one for wind, one for solar for a total of over 106 MW
- + When projects come online in 2021, they will reduce BART’s energy costs
- + These projects will provide 90% of BART’s electricity use from renewable energy, well ahead of the BART goal of 50% by 2025

