

SUCCESS STORY

Wind and solar PPAs allow BART to meet renewable energy goals ahead of schedule



Bay Area Rapid Transit (BART) is the 5th largest rapid transit system in the US, serving San Francisco and its surrounding communities. BART riders take approximately 430,000 trips each weekday on the system.

To transport those riders, BART uses approximately 400,000 MWh every year, making BART one of the largest electricity users in Northern California. With nearly 90% of riders agreeing that BART is an environmentally responsible form of transportation, BART leveraged this support to sponsor a bill in 2015 that would allow it to buy wholesale renewable energy directly. This bill's passage allows BART to directly support California's climate change goals by buying cost-effective, zero-emissions renewable power and further support their eco-conscious riders.

Challenges

While BART now had the legal authority to buy its own renewable energy, several challenges remained. First, the organization needed to create a new wholesale electricity portfolio policy that included new renewable energy goals. This policy needed to be approved by the publicly-elected Board of Directors. Second, the Board also needed to approve any renewable energy contracts prior to their execution. And third, BART needed to find long-term renewable energy supply at stable, competitive prices, with minimal risks, and do so in the complex wholesale California energy market. California's recent solar boom resulted in a high concentration of solar development which has impacted power pricing and changed the value and risk profile for both buyers and sellers. Lastly, regulatory changes both in California and at the federal level, and the looming solar panel tariffs, complicated the risk and financial analyses.

How we helped

BART partnered with 3Degrees to help navigate through these challenges, from developing their renewable energy goals to final PPA contract execution. Following the approval by the Board of the wholesale electricity portfolio policy, 3Degrees developed a customized RFP to meet BART's special procurement needs and was responsible for organizing the full procurement process from hosting a bidders' webinar to final project recommendations.



BART COMPANY PROFILE

Annual usage:
400,000 MWh/year

2017 electricity from renewables: 4%

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

Goal: By 2045, 100% of electricity is from renewable energy

3DEGREES' ROLE:

- + 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 – a wind project and a solar project



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

This was no small task: BART received proposals from over 50 projects with over 300 price and contract 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. We interviewed the shortlisted developers to gain a more holistic understanding of the projects and the teams, and through this process uncovered key project nuances that 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. We ranked the projects based on their implied REC value, thus allowing for an apples-to-apples comparison of proposals of sometimes-widely varying characteristics.

Our 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. In order to ensure this approach didn't over complicate the process or add unnecessary time, 3Degrees led the commercial negotiations in close coordination with BART and their legal counsel, negotiating the two contracts in parallel. 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.

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 the 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

