

Enterprise Services

Economic Site Optimization – Proposal Service

Design, consulting, and advisory services performed by ETB's team of domain experts. We analyze, validate, and optimize all aspects of your solar + storage project(s).

Why Utilize Enterprise Services?



WHO WE SERVE

- ✓ Corporations & Business Owners
- ✓ Facility Managers
- ✓ Solar & Storage Project Developers
- ✓ Financiers & Investors



PROJECT DEVELOPMENT EXPERTISE

Decades of combined full-lifecycle project development experience, from feasibility analysis to EPC and ongoing operations and maintenance.



LOCAL MARKET KNOW-HOW

Deep understanding of regional market policies and regulations, including rate tariffs, NEM frameworks, incentive programs, and optimization strategies.



QUALITY ASSURANCE

Rigorous QA process where our data and enterprise services team members validate all assumptions, ensuring precise and bankable analysis.



LEVERAGE YOUR TIME

Utilize our extensive modeling expertise and insights. Focus your team's infinite time and energy on high-value opportunities that will close.

Economic Site Optimization – Proposal Service



Our team performs a comprehensive techno-economic analysis on your behalf for a specific facility. We rigorously evaluate all aspects of your project, making recommendations on optimal system sizing, rate tariff, and incentive program stacking strategies. [View a completed work sample here.](#)



2.1.1 ENERGY USAGE PROFILE

An energy usage profile (EUP) contains a full year of energy consumption (sum and demand only) data for a specific meter. Energy Toolbase's EUPs are a mix of 30-day or 60-day interval data, which enables us to precisely simulate a project's avoided cost. Your EUP creation method is described below.

EUP creation notes: Customer could not get interval data. This EUP was by basing against a DOE 100 Res Apartment building load profile.

USAGE & COST SUMMARY:

Utility: SCE-NV12
Rate Schedule: GS-5-TDU (Option D)
Annual Usage: 888,438 kWh
Annual Bill (\$): \$260,279
Avg. Monthly cost: \$2,293 /month
Load Factor: 38%

USAGE COST BY MONTH:



MONTHLY LOAD PROFILE:

The chart below shows the customer's load profile for the month of July to illustrate the shape of their load patterns over the course of a summer month billing cycle.



PV-only, 540 kW

2.1.6 PV SYSTEM DESIGN (PRELIMINARY)



SYSTEM DESIGN NOTES

Client selected 17% design (performance) system size. Followed general design best practices.
Note: PV system design is preliminary and is meant for budgetary purposes.

SOLAR PV SYSTEM SPEC

Power Rating: 540,000 WDC
PV Generation (yr): 87,212 kWh
Yield (kWh/kW): 1.632 kWh/kWDC

2.1.4 UTILITY BILL SAVINGS

Utility Bill Savings (aka "Whipped Cost") is calculated by taking "Utility Bill (Before)" - "Utility Bill (After)". Utility bill savings from solar and/or storage takes into account the applicable local market (see Energy Modeling (EM)) and rate tariff (see below). NEM rate tariff notes: Assumes 100% 0-10 Ch unless otherwise noted.

SAVINGS BREAKDOWN:

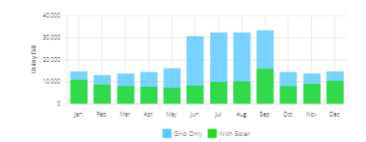
Utility Bill (Before): \$260,279
Utility Bill (After): \$112,718
Utility Bill Savings: \$147,561
Utility Bill Offset (%): 56.7%
Utility Escalation (%): 3.0%
Savings over 10 yrs: \$1,631,498
Savings over 20 yrs: \$3,787,304
Savings over 30 yrs: \$6,434,568

ANNUAL BILL SAVINGS:



MONTHLY BILL SAVINGS:

The chart below shows a monthly breakdown of "Utility Bill Cost (Before)" solar and/or storage, and "Utility Bill Cost (After)" assuming for solar and/or storage.



3.1 Cash Purchase

Assumptions and Key Financial Metrics

Project Period: 3.0 Years
Utility Escalation Rate: 3.0%
Discount Rate: 5.0%
Net Present Value: \$2,011,188
Payback Period: 2.0 Years
Payback Period: 2.0 Years

Year	Project Cost	EMM / Equipment Replacement	Electric Bill Savings	State Tax Effect	Federal Tax Effect	Total Cash Flow	Customer Cash Flow
1	-41,880,000	-41,880,000	\$147,561	\$14,756	\$736,408	\$957,977	\$957,977
2	-	-	\$151,238	\$15,124	\$741,163	\$928,344	\$928,344
3	-	-	\$155,962	\$15,596	\$745,917	\$898,710	\$898,710
4	-	-	\$160,686	\$16,069	\$750,671	\$869,076	\$869,076
5	-	-	\$165,410	\$16,541	\$755,425	\$839,442	\$839,442
6	-	-	\$170,134	\$17,013	\$760,179	\$809,808	\$809,808
7	-	-	\$174,858	\$17,486	\$764,933	\$780,174	\$780,174
8	-	-	\$179,582	\$17,958	\$769,687	\$750,540	\$750,540
9	-	-	\$184,306	\$18,431	\$774,441	\$720,906	\$720,906
10	-	-	\$189,030	\$18,903	\$779,195	\$691,272	\$691,272
11	-	-	\$193,754	\$19,375	\$783,949	\$661,638	\$661,638
12	-	-	\$198,478	\$19,848	\$788,703	\$632,004	\$632,004
13	-	-	\$203,202	\$20,320	\$793,457	\$602,370	\$602,370
14	-	-	\$207,926	\$20,793	\$798,211	\$572,736	\$572,736
15	-	-	\$212,650	\$21,265	\$802,965	\$543,102	\$543,102
16	-	-	\$217,374	\$21,737	\$807,719	\$513,468	\$513,468
17	-	-	\$222,098	\$22,210	\$812,473	\$483,834	\$483,834
18	-	-	\$226,822	\$22,682	\$817,227	\$454,200	\$454,200
19	-	-	\$231,546	\$23,154	\$821,981	\$424,566	\$424,566
20	-	-	\$236,270	\$23,627	\$826,735	\$394,932	\$394,932
21	-	-	\$240,994	\$24,099	\$831,489	\$365,298	\$365,298
22	-	-	\$245,718	\$24,571	\$836,243	\$335,664	\$335,664
23	-	-	\$250,442	\$25,044	\$840,997	\$306,030	\$306,030
24	-	-	\$255,166	\$25,516	\$845,751	\$276,396	\$276,396
25	-	-	\$259,890	\$25,989	\$850,505	\$246,762	\$246,762
26	-	-	\$264,614	\$26,461	\$855,259	\$217,128	\$217,128
27	-	-	\$269,338	\$26,933	\$859,999	\$187,494	\$187,494
28	-	-	\$274,062	\$27,406	\$864,753	\$157,860	\$157,860
29	-	-	\$278,786	\$27,878	\$869,507	\$128,226	\$128,226
30	-	-	\$283,510	\$28,351	\$874,261	\$98,592	\$98,592
Totals	\$-41,880,000	\$-41,880,000	\$6,434,568	\$643,457	\$3,211,188	\$14,300,000	\$14,300,000



TARIFF OPTIMIZATION

We will recommend the optimal utility rate tariff and NEM framework.



FINANCIAL PROFORMA

Detailed financial model incorporating CAPEX, OPEX, savings, incentives, and tax effects.



SOLAR PV DESIGN

Preliminary solar PV system design and layout, run in an industry-vetted survey and design tool.



DEMAND RESPONSE REVENUE

We quantify the range of potential revenues coming from DR and wholesale market programs.



SYSTEM SIZING OPTIMIZATION

Solar and storage system sizing optimized for NPV and/or maximum bill savings.



COMPARISON ANALYSIS

We objectively compare solar-only vs. solar + storage and quantify the marginal economics of adding energy storage.

Economic Site Optimization – Scope of Work

SOW / Aspects we evaluate:

- **Utility Bill Reconstruction.** We reconstruct and validate 365-days of energy consumption and the cost of that energy, which is our [Pre-Proposal Service \(brochure\)](#)
- **Rate Tariff Optimization.** We evaluate all applicable tariffs and optimize eligible rate-switching options
- **NEM Rules.** We document and apply the applicable NEM rules based on project location and PV size
- **Incentives.** We apply and quantify all eligible incentives based on the site and project specifics
- **PV & ESS System Size.** We typically optimize for ‘maximum bill savings’ OR ‘maximum NPV/IRR’
- **ESS Optimization.** We simulate ESS dispatch to maximize value capture of all eligible value streams
- **Solar PV Design.** We generate a preliminary design layout based on site parameters and client guidance
- **Financing Transactions.** We model cash/CAPEX and additional transactions (e.g., PPA, Lease) on request
- **Project Economics.** We provide full lifetime financial model and summarize key metrics (IRR, ROI, NPV)

Final Delivered Work Product:

- [\(Work sample\) Enterprise Services – PV + ESS Site Optimization Proposal](#)
- We run up to **(3)** proposal configurations for comparison: PV-only, PV+ESS, ESS-only (if viable)
- Design review meeting. Full transparency of all inputs and assumptions. Client has final discretion to edit.

PRICING

Est. Time: 5 Business Days

\$500

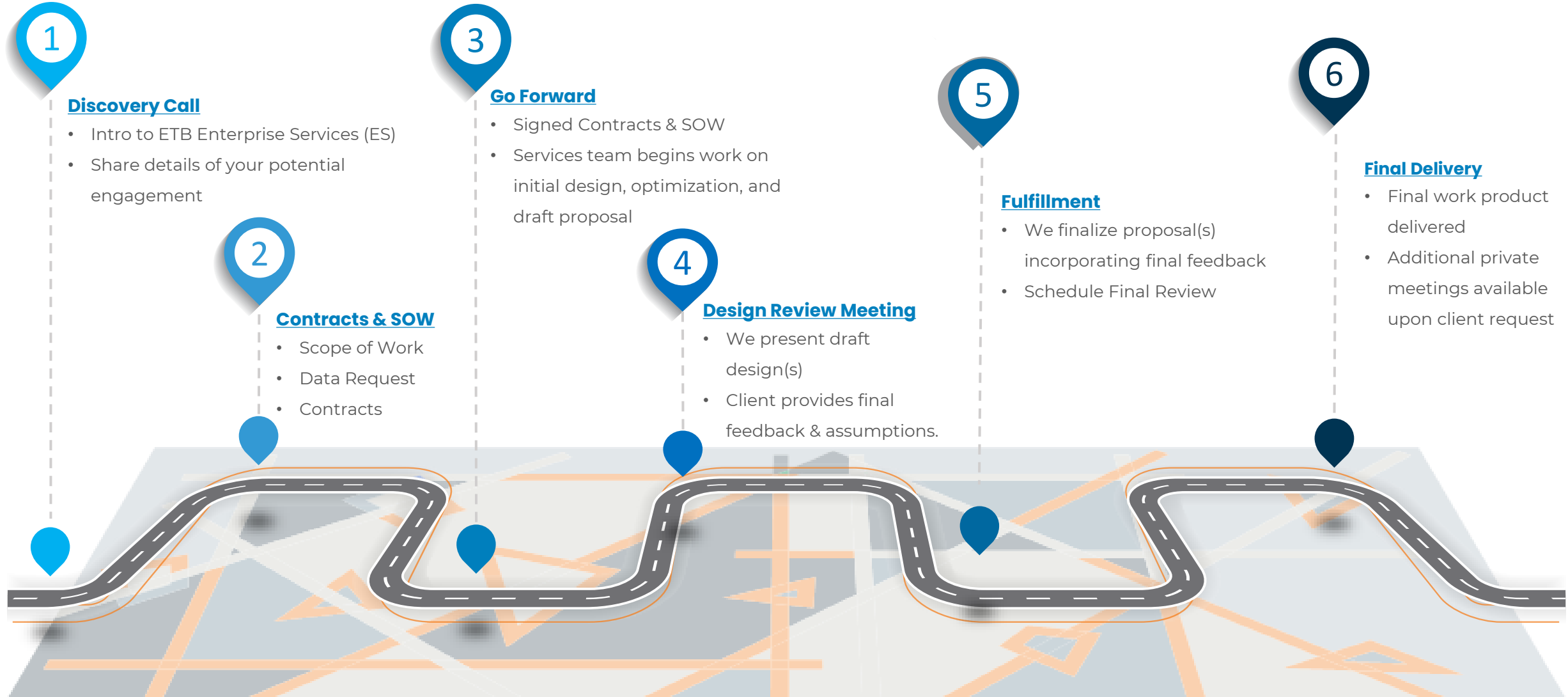
per meter

Optional Premium Add-Ons:

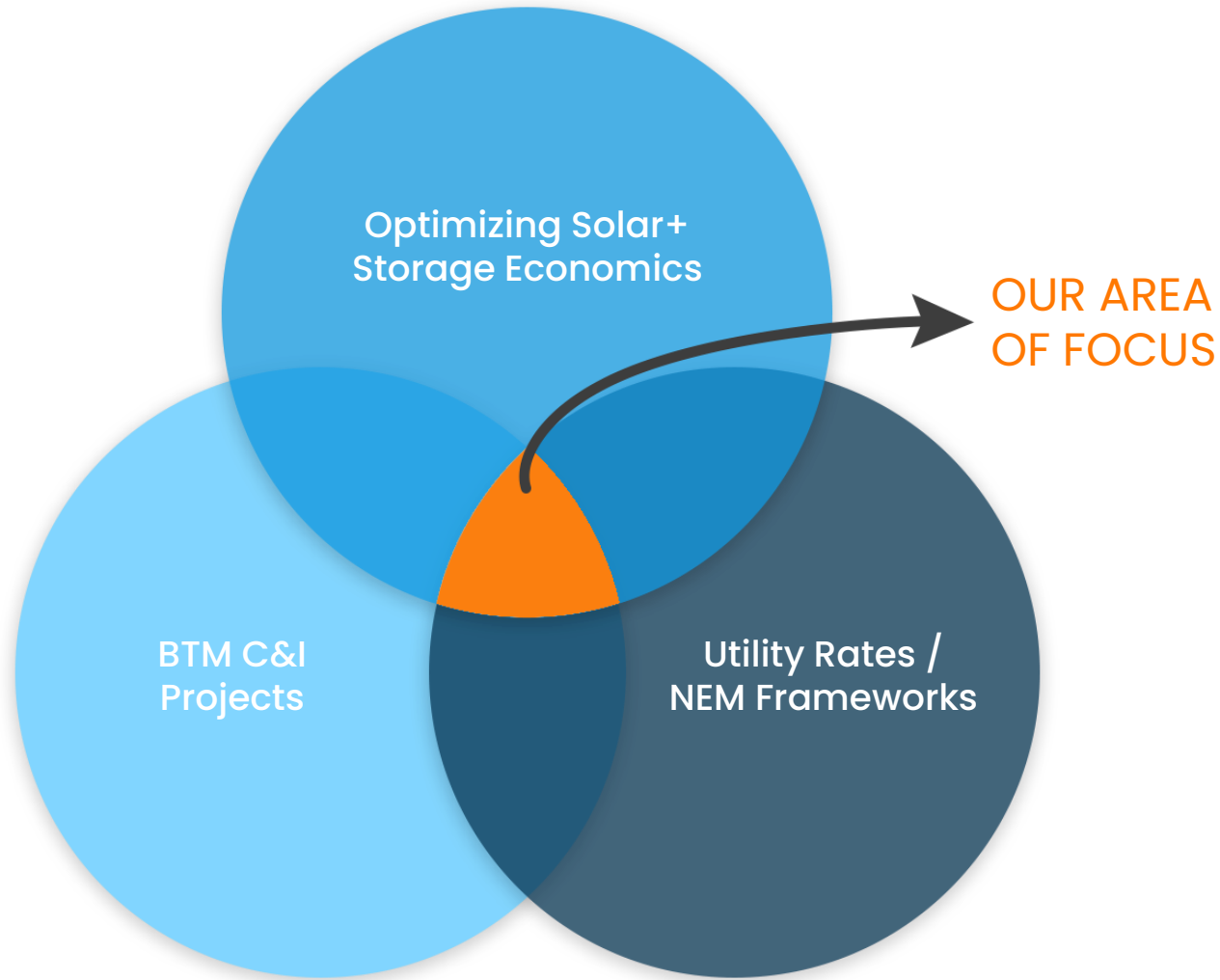
- (\$150) Per additional requested design configurations and/or optimization scenarios
- (\$150) Per additional ‘energy use profile’ future load scenarios (e.g., EV’s, EE retrofits)
- (\$500) DR/grid services market revenue quantification and documentation
- (\$500) Drone based fly-over site capture & 3D design

Pricing & terms are subject to change. Do not share without written consent.

Proposal Service – Engagement Journey



Our Areas of Focus & List of Exclusions



Exclusions: We are currently passing on certain engagements, but may consider in the future:

- Front-of-meter projects
- Multi-meter projects that involve specialized billing methodologies (e.g., NEM-A, V-NEM)
- International projects outside of the US
- * Certain DR / grid service programs
- * Certain utility rate structures (e.g., TOU-by-lane netting)

** We evaluate these on a case-by-case basis*

ENTERPRISE SERVICES TEAM



Adam Gerza,
VP Business Development

Adam oversees ES team activities. 15-year industry veteran in executive, project development, and policy-related roles. Board member of the California Solar and Storage Association (CALSSA) and a subject matter expert witness in CPUC proceedings on utility rate design and NEM frameworks.



Justin Hammond
Manager of Enterprise Services

Justin is the Manager of Enterprise Services and technical team lead. NABCEP Certified PV Professional® and holds Bachelor of Science in Civil Engineering from San Diego State University. Justin is a 13-year solar-and-storage industry veteran, responsible for the successful design and development of hundreds of commercial systems.



Yulia Krivchenkova
Manager of Data Team

Yulia leads and oversees our Data & Services team. Within her six-year experience in the industry, she has analyzed thousands of tariffs, net metering policies, market rules, and rate structures. Yulia is responsible for the accuracy of the ETB global rates database and performs final round QA/QC on all ES engagements.



Amira Hamdon
Business Development Analyst

Amira is client liaison and project manager of Enterprise Service engagements. She has five years of experience in the renewable energy industry covering solar + storage, transportation electrification, and biofuels. She ensures the highest standard of support throughout the engagement.

Services Team Members – Engagement Fulfillment



**Cheyenne
Arana**



**Erin
Hickey**



**Allison
Diefenbach**

Our Data & Services upkeep our utility rate and incentive databases. They are subject matter experts in all things rate tariffs, net energy metering frameworks, and incentive programs. They generally run the preliminary analysis that gets shared and review by our clients. Our team is guided by the three core principles of: Accuracy, Objectivity, and Transparency.

CONTACT INFO



Amira Hamdon



(403) 200-3793



Amira.Hamdon@energytoolbase.com



www.energytoolbase.com/solutions/enterpriseservices



Justin Hammond



(866) 303-7786



Justin.Hammond@energytoolbase.com
