SOLARGRAF

EXPRESS EDITOR

Real-Time Solar Proposal Customization Tool

PRODUCT DESIGN | SOLAR SALES

2 Designers | 2 Product Managers | 8 Engineers | 3 Months

ABOUT SOLARGRAF

Solargraf is a solar design and sales platform that **simplifies solar proposal creation for installers.** Its tools enable solar professionals to generate accurate designs, financial breakdowns, and contracts in minutes.
(visit solargraf.com)

Installer

A Solargraf installer is typically a solar installation professional of a company that uses the Solargraf platform to streamline their solar design, sales, and proposal processes. Installers **struggle to customize proposals on the spot** during customer meetings.

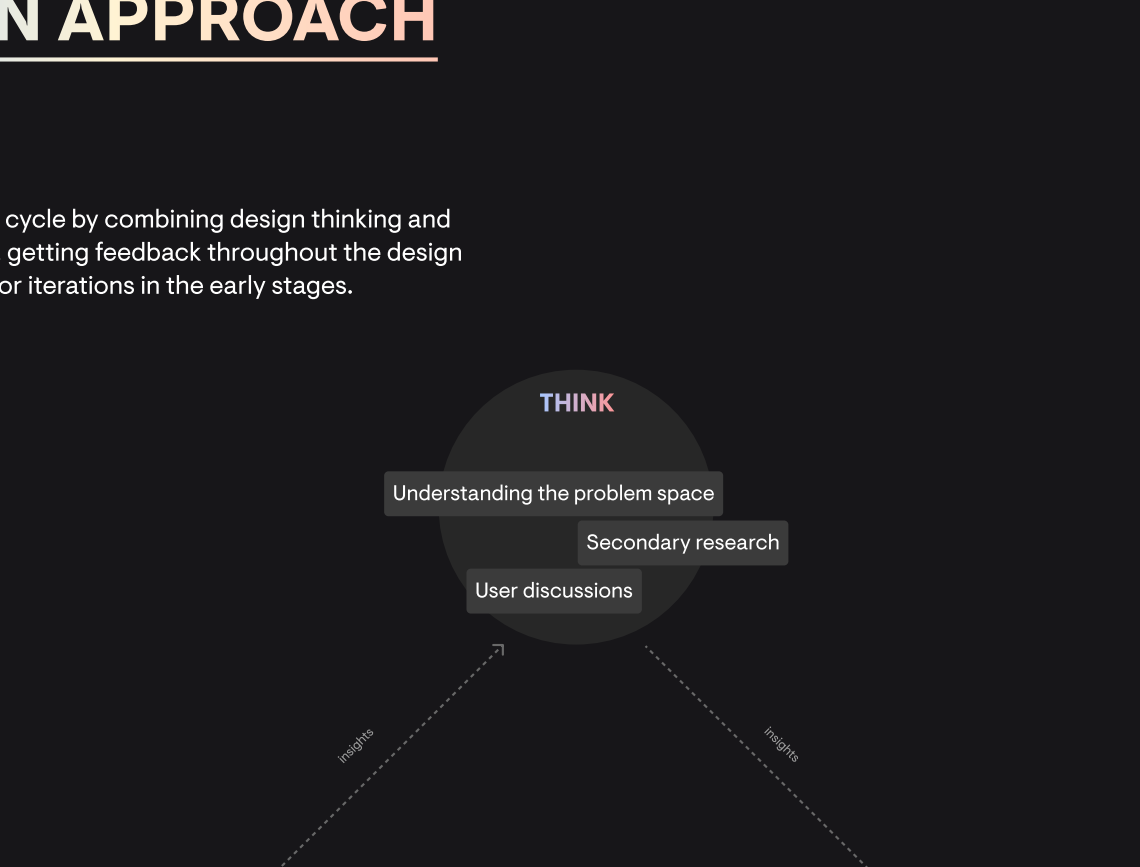
Homeowner

Homeowners are individuals or families considering solar energy for their homes, typically looking to reduce electricity bills, adopt sustainable energy solutions, or take advantage of government incentives. Homeowners often find it **challenging to understand technical solar data, which reduces confidence and trust.**

DESIGN APPROACH

LEAN UX Cycle

Followed a lean UX cycle by combining design thinking and agile development, getting feedback throughout the design process, allowing for iterations in the early stages.


THINK
Understanding the problem space
Secondary research
User discussions

BUILD
User journeys
Wireframes
Prototypes

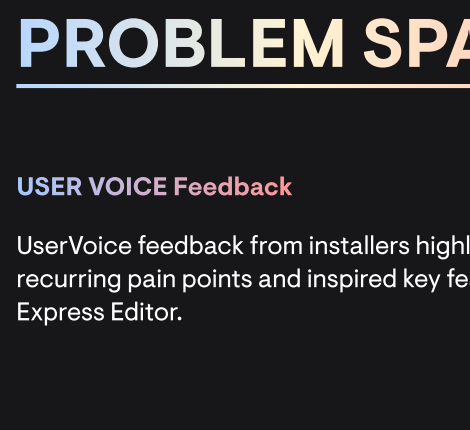
VALIDATE
A/B Testing
User feedback
Usability testing
Peer reviews

insights
insights
insights

PROBLEM SPACE

USER VOICE Feedback

UserVoice feedback from installers highlighted recurring pain points and inspired key features of the Express Editor.



Difficult to Make Minor Revisions Quickly
Users wanted a "Revision Button" on proposals to make quick updates without cloning full orders.

Need for Multiple Proposal Templates
Installers wanted multiple templates for different system types (residential, commercial, etc.) — to tailor proposals faster.

Easier Sharing and Access to Proposals
Need for sharable links or simplified sharing features, to move faster with clients.

Better Information Access While Editing
Users wanted more access to proposal information while designing to avoid switching between screens.

Proposal Presentation Flexibility Was Lacking
Users requested better ways to present proposals and more control during live presentations.

Quote Customization and Multiple Proposal Versions
Asked for customizable quotes and creating multiple versions for the same lead to easily compare options.

Participatory Discussions

Participatory discussions with installers revealed real-world workflow challenges, how they spend their time while in discussion with homeowner and other key insights

Sales cycles take ~2 weeks, with lots of back-and-forth (average 10 email exchanges per homeowner).

Majority of time (~80%) is spent on non-design tasks like tracking, Q&A, and educating customers.

Needs ability to modify proposals quickly based on electrical realities (like bus bar size) or homeowner choices (equipment, financing).

First proposal is sent early, but only ~80% of the time does the second version become final — the rest require more revisions.

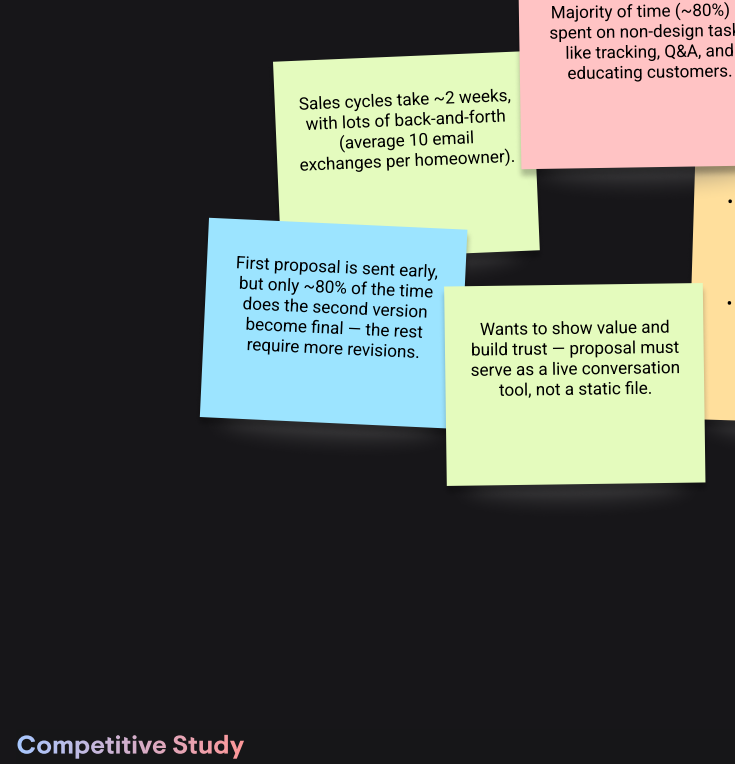
Wants to show value and build trust — proposal must serve as a live conversation tool, not a static file.

- Uses a competitor product for system design — praised for ease, lidar maps, but lacks equipment options and shows unrealistic rosy projections.
- Uses Solargraf for final proposals but lacks the flexibility of quick edits or dynamic customizations.

Homeowners often compare quotes from other providers (Tesla, SolarEdge) — need to close deals as early as possible if we don't want to loose clients

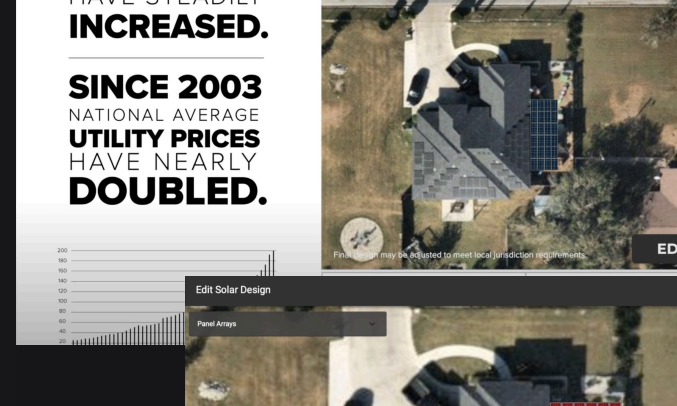
Competitive Study

Solo's DirectDesign


HAVE STEADILY INCREASED.
SINCE 2003
NATIONAL AVERAGE
UTILITY PRICES
HAVE NEARLY
DOUBLED.
EDIT
Edit Solar Design
SAVE
Panel Arrays
SOLAR OFFSET
85%

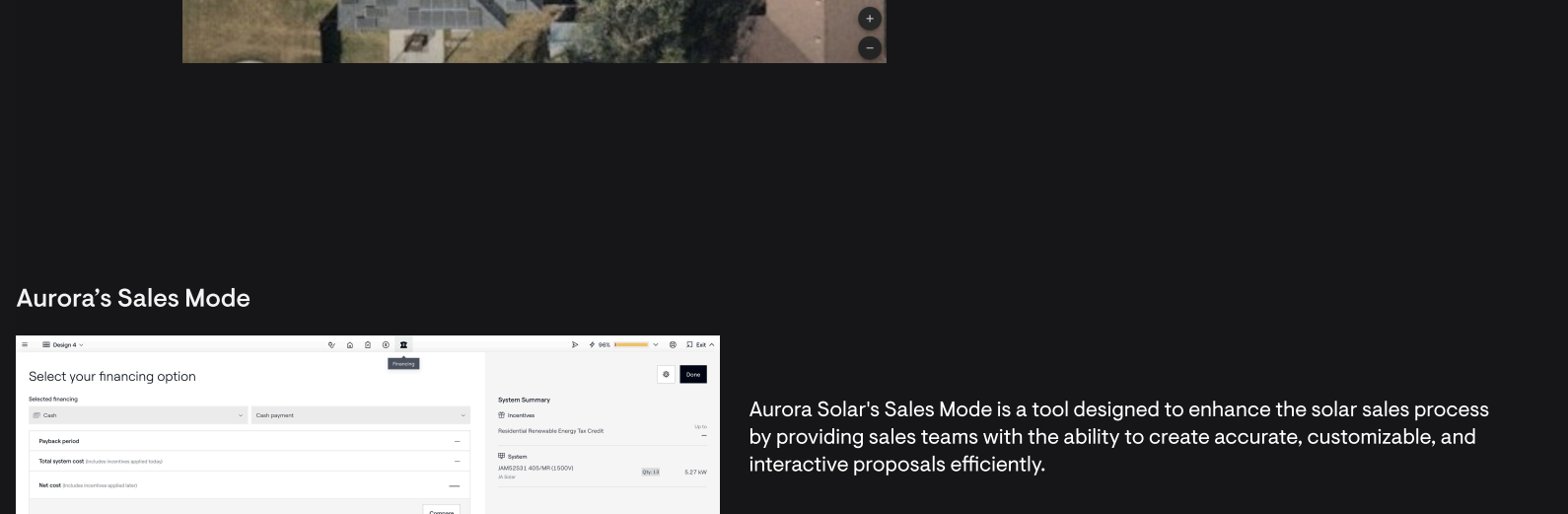
Solo's DirectDesign is a feature within their solar proposal software that enables users to customize and edit solar designs in real-time, directly in front of customers. This tool allows for quick adjustments to system designs, enhancing the sales process by providing immediate visual feedback.

Aurora's Sales Mode


Select your financing option
Compare
System Summary

Aurora Solar's Sales Mode is a tool designed to enhance the solar sales process by providing sales teams with the ability to create accurate, customizable, and interactive proposals efficiently.

THE MAKE-OR-BREAK MOMENT


Gets a lead
Reaches out via call / portal
Reaches out via call / portal
Enters preliminary information
Location, Monthly/Annual Consumption Estimate, user profile
Installer creates and designs a project in Solargraf
Multiple options created
Installer creates proposal options
Based on the designs with multiple design and finance options
Installer presents proposal to homeowner
Participatory discussion where HO adds their preferences, exact details
HO suggests updates on the proposal
Installer shares the updated proposal
Homeowner accepts proposal
Homeowner rejects proposal
Installer switches to full design tool to make changes

This is a critical drop-off point in the sales funnel — homeowners are typically evaluating multiple proposals from competing installers, and a delay of 2–3 weeks for revisions can significantly hurt conversion. In such a competitive window, speed and responsiveness are key to winning trust and closing the deal.

THE SCOPE OF CUSTOM EDITS

The Express Editor was intentionally scoped around **five high-impact editable sections** — since each of these inputs directly or indirectly affects several calculated or output-only sections of the proposal.

Understanding and handling these dependencies was critical to ensure **data integrity, real-time feedback, and trust** during live homeowner presentations

Editable Section	Edited Inputs	Impacted Proposal Sections	Affected Outputs
Usage	- Monthly/Annual Bill - Appliance List - Consumption Profile	Overview Performance Savings Payment Comparison	- System Size Recommendation - 1st Year Consumption Offset % - Cashflow Charts Monthly savings
Solar	- # of Panels - Panel Model - Inverter Type	Design Cost Overview Materials Performance Savings	- Total kWh Produced - Solar Cost - System Cost - Grid Dependence - LCOE
Battery	- # of Units - Model/Manufacturer Mode	Design Cost Overview Performance Savings	- Battery Cost - System Size - Incentives/Rebates - Energy Storage & Grid Independence
Pricing	- Manual Discount - Incentive Edits	Cost Breakup Savings Financing Eligibility	- Net Cost - Final Proposal Value - Cash vs Loan Feasibility
Financing	- Payment Type (Cash, Lease, Loan - Financial Product	Payments Overview Savings	- Monthly Payment Tenure New vs Old Bill PPA Rates (if applicable)

IDEATION & CONCEPTS

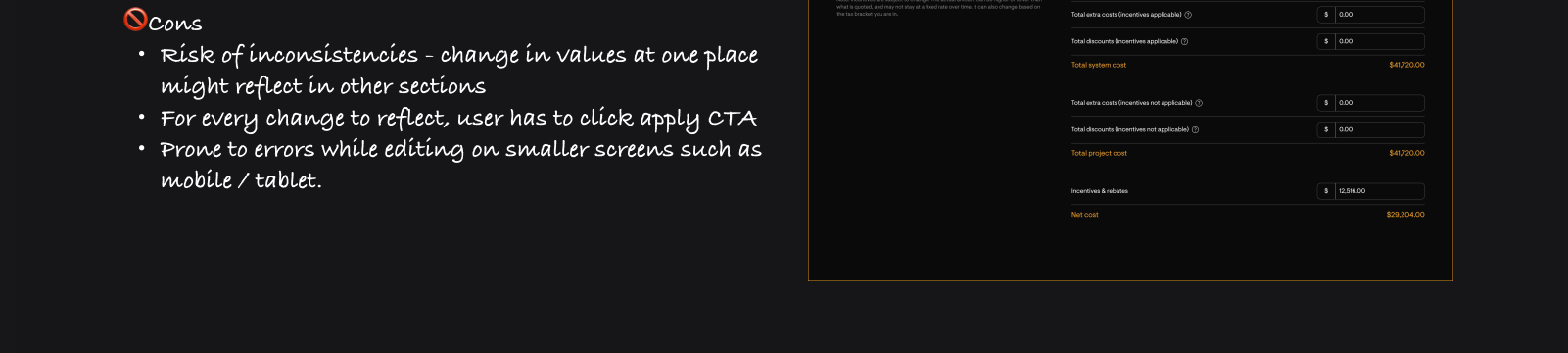
Installers are spending lot of time in going back to the tool to edit data and potentially losing leads due delays of 2–3 weeks, giving competitors the upper hand. The key driving questions for this problem were:

How might we reduce this friction without overwhelming installers?

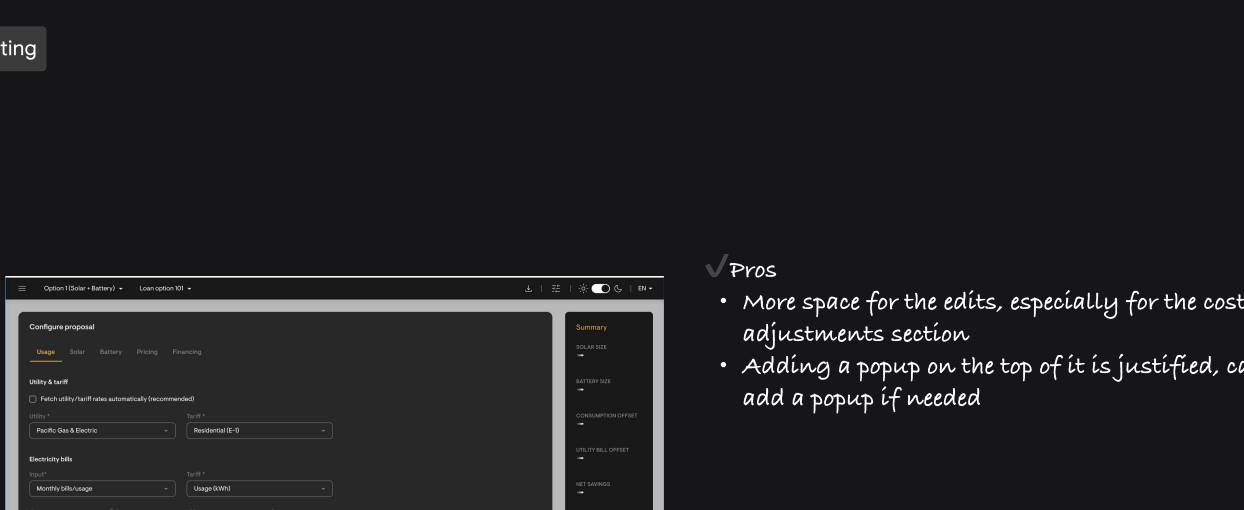
What are the most common "deal-breaking" edits?

What's the simplest path to build trust, speed, and control into proposal editing?

EARLY CONCEPTS EXPLORED


Concept 1 → Inline Editing
Cost
Cost
(opens the sections in edit mode)
Concept 2 → panel / popups.
Cost
Cost
What happens for the scenarios where we need an extended popup?

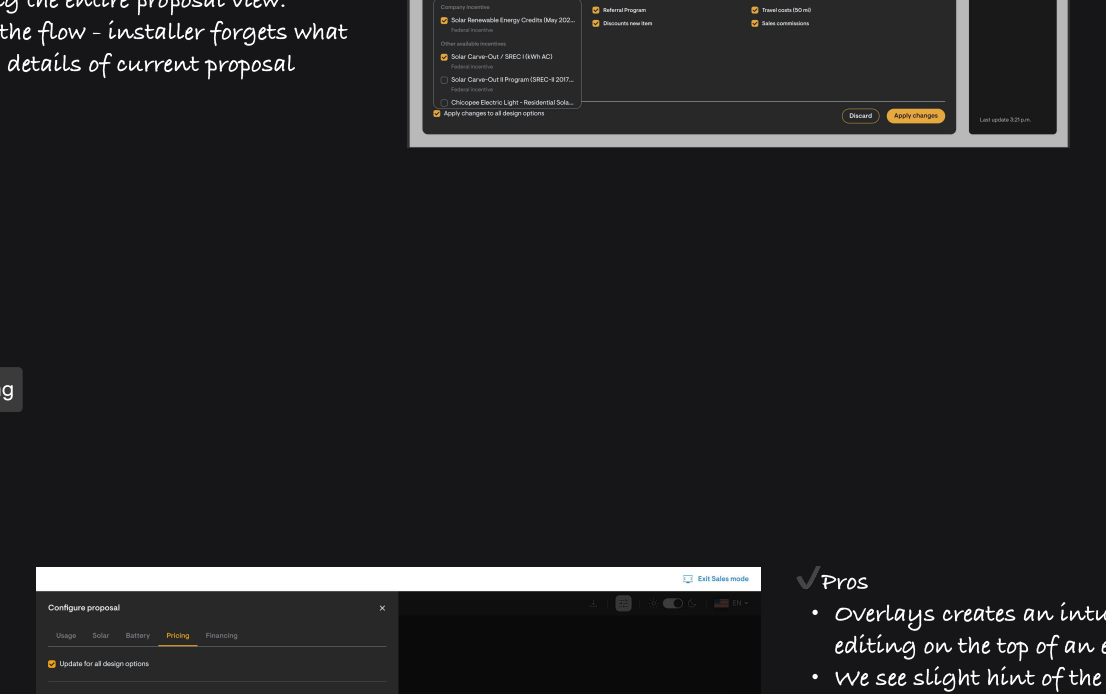
Concept 1 : Inline Editing



✓Pros
- More intuitive for instant edits
- Increased efficiency

🚫Cons
- Risk of inconsistencies - change in values at one place might reflect in other sections
- For every change to reflect, user has to click apply CTA
- Prone to errors while editing on smaller screens such as mobile / tablet.

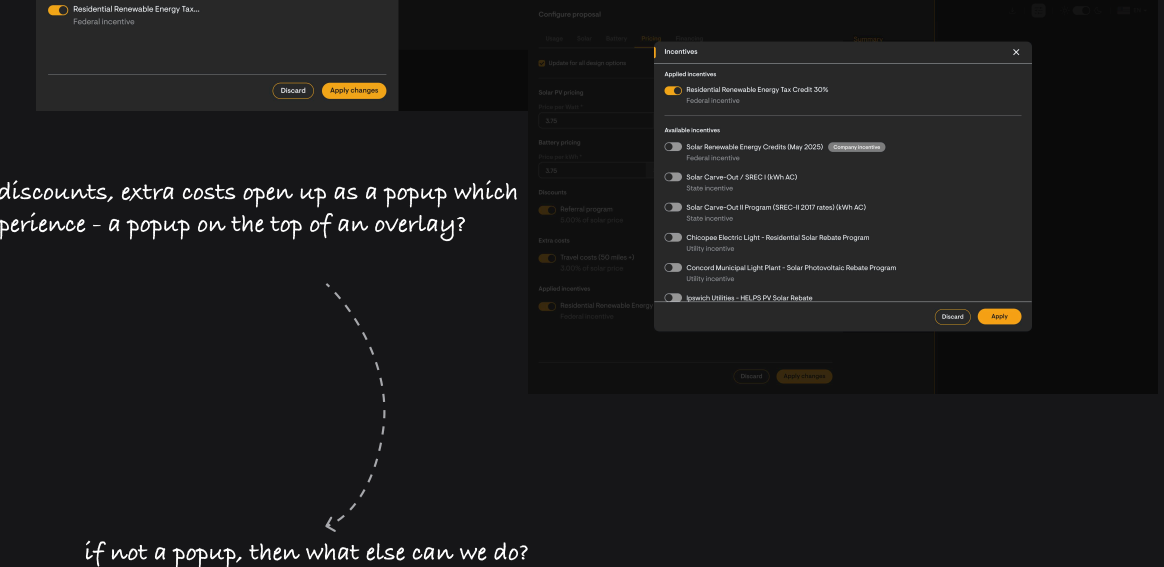
Concept 2 : Full View Editing


Configure proposal
Summary
Discard
Apply changes

✓Pros
- More space for the edits, especially for the cost adjustments section
- Adding a popup on the top of it is justified, can add a popup if needed

🚫Cons
- Feels isolated with the proposal sections
- Blocking the entire proposal view.
- Breaks the flow - installer forgets what were the details of current proposal

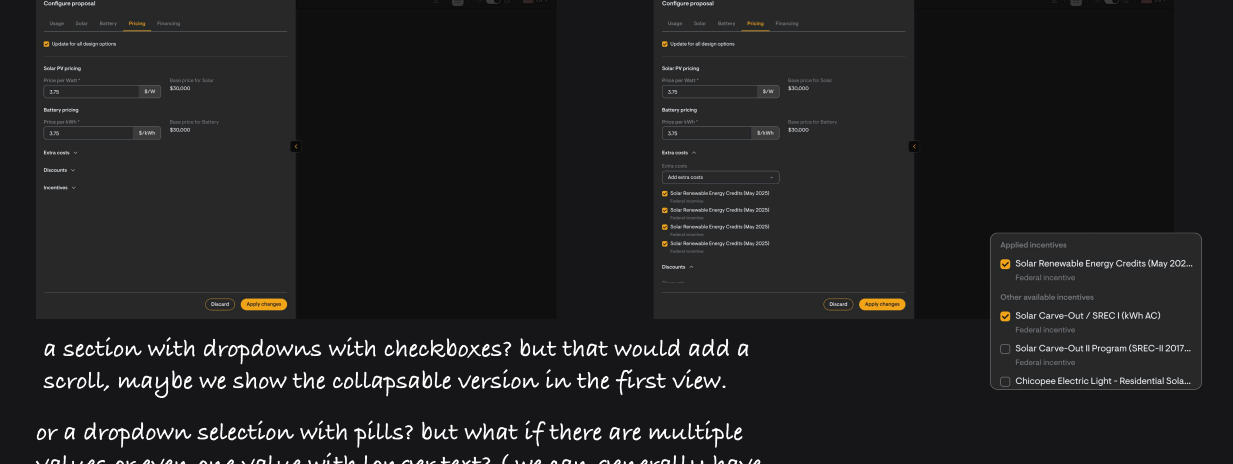
Concept 3 : Overlaying


Configure proposal
Discard
Apply changes
Incentives

✓Pros
- Overlays creates an intuition that we are editing on the top of an existing proposal.
- We see slight hint of the proposal sections in the background and most of the content on the proposal is towards the right, helpful especially for the pricing section.

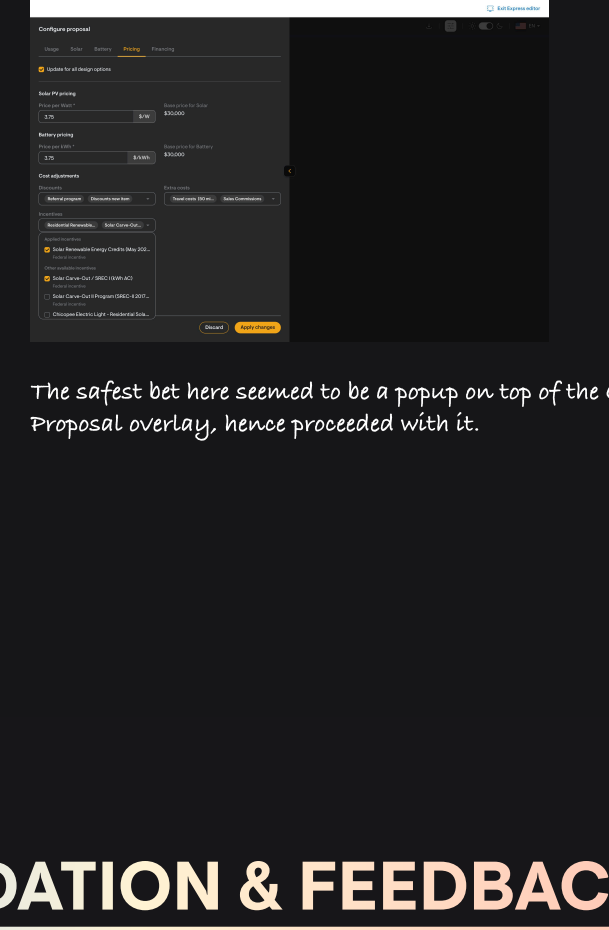
🚫Cons
- Fields such as discounts, extra costs open up as a popup which isn't a great experience - a popup on the top of an overlay?

if not a popup, then what else can we do?


Configure proposal

a section with dropdowns with checkboxes? but that would add a scroll, maybe we show the collapsable version in the first view.

or a dropdown selection with pills? but what if there are multiple values or even one value with longer text? (we can generally have 4 values for each here)


Configure proposal

The safest bet here seemed to be a popup on top of the Configure Proposal overlay, hence proceeded with it.

LEAN VALIDATION & FEEDBACK

Instead of spending weeks in research, we validated the direction quickly via:

Stakeholder sketch reviews

Rapid Figma prototype tested with 5 installers

Peer reviews (UX and PM)

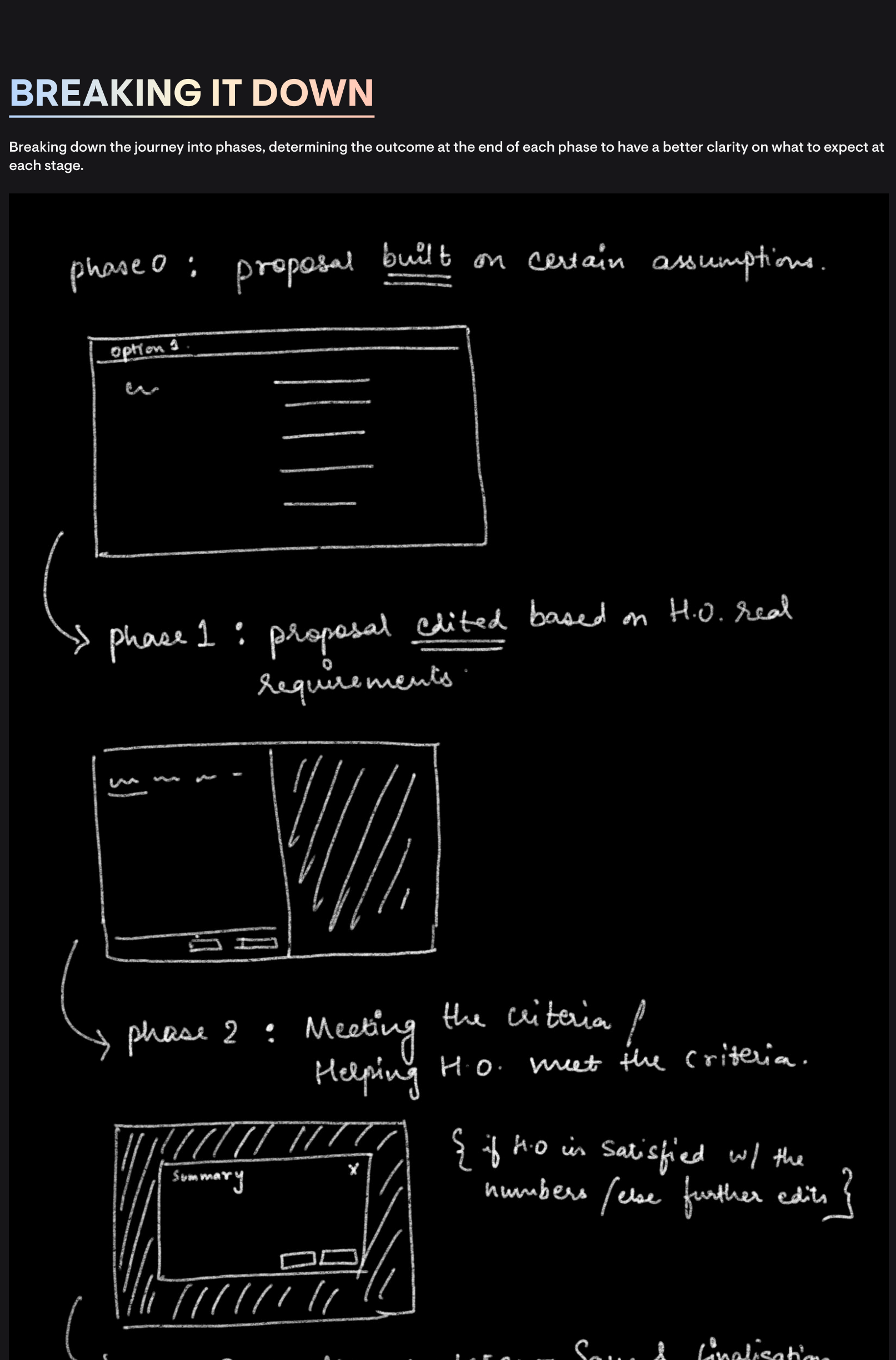
Key feedback received-

They preferred a separate but accessible editing panel over inline options

A real-time cost preview drove confidence to pitch updated proposals instantly

BREAKING IT DOWN

Breaking down the journey into phases, determining the outcome at the end of each phase to have a better clarity on what to expect at each stage.

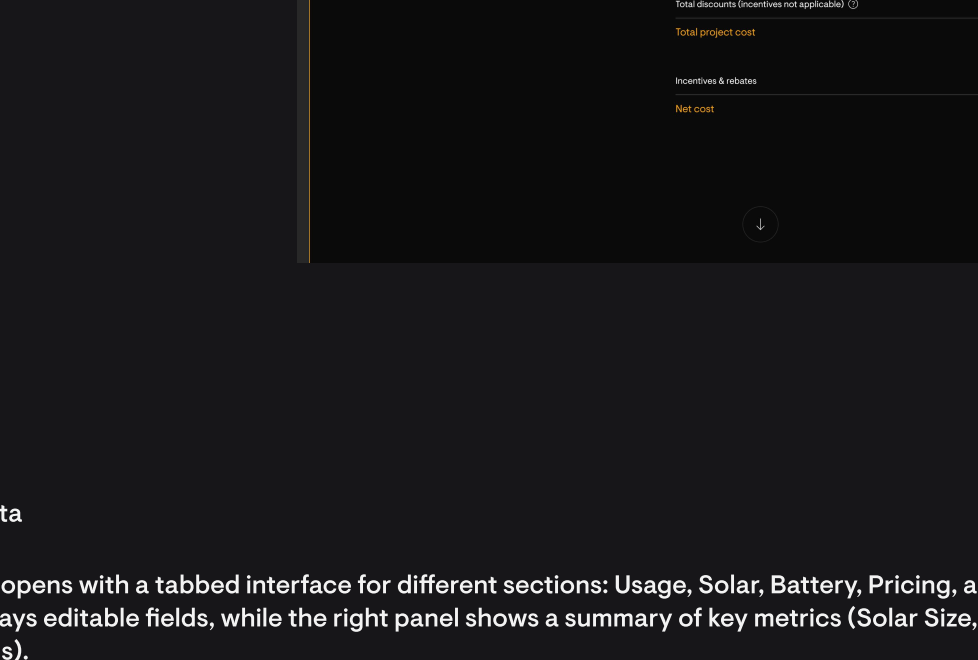

phase 0 : proposal built on certain assumptions.
option 1
phase 1 : proposal edited based on H.O. real requirements.
phase 2 : Meeting the criteria / Helping H.O. meet the criteria.
Summary
{ if H.O is Satisfied w/ the numbers / else further edits }
phase 3 : after updates - Save & finalisation
Save / Share
{ update or Discard changes }

DESIGN OUTCOME

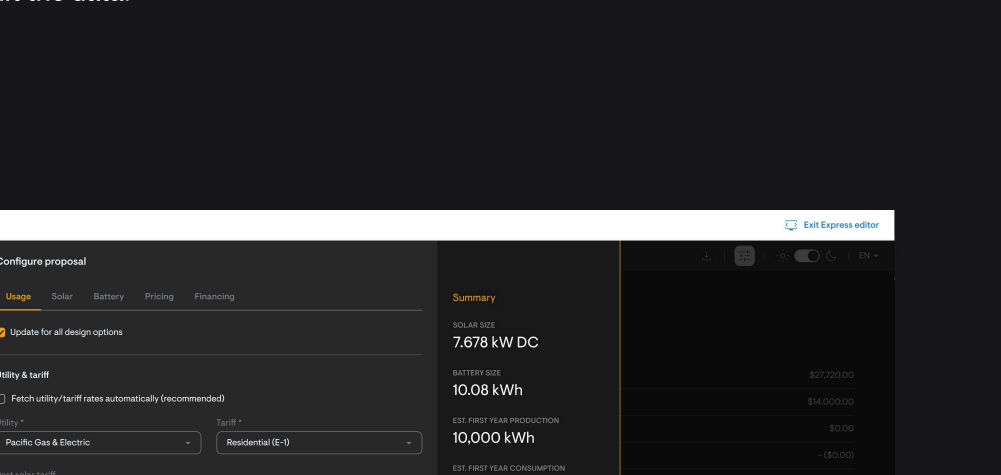
1 . Accessing the Express Editor

- The installer enters the proposal presentation mode with the homeowner.
- They realize that certain values need to be updated based on the homeowner's input (e.g., utility details, consumption, system size).
- Instead of rebuilding the proposal, they click on "Enter Express Editor" to make quick modifications.

Proposal installer view
where the installer custom creates a proposal based on his assumptions


Overview
Designs
Proposals
Financing
Permitting
Settings
Edit
Project Collaboration Proposal
Cover
About us
Overview
Design
Materials
Savings
Performance
Performance analysis
Cost
Clear
Save
Preview
Let's spread some sun, John!

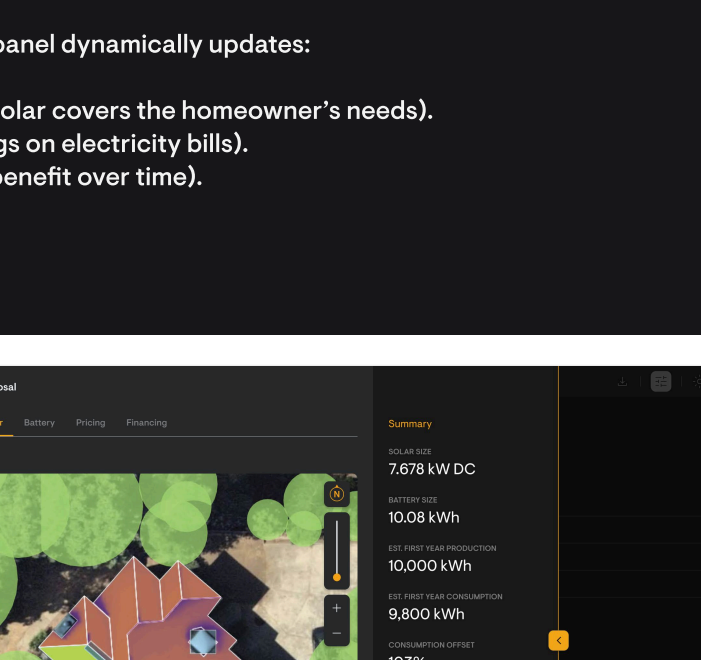
Presentation mode
Installer starts presenting the proposal to the homeowner


Exit Express editor
Option 1 (Solar + Battery)
Loan option 101
Cost

2 . Configuring the data

- The Express Editor opens with a tabbed interface for different sections: Usage, Solar, Battery, Pricing, and Financing.
- The left panel displays editable fields, while the right panel shows a summary of key metrics (Solar Size, Battery Size, Offsets, Net Savings).
- The installer selects the desired tab to edit the data.

Tabbed view
where the installer customizes metrics based on homeowner preferences

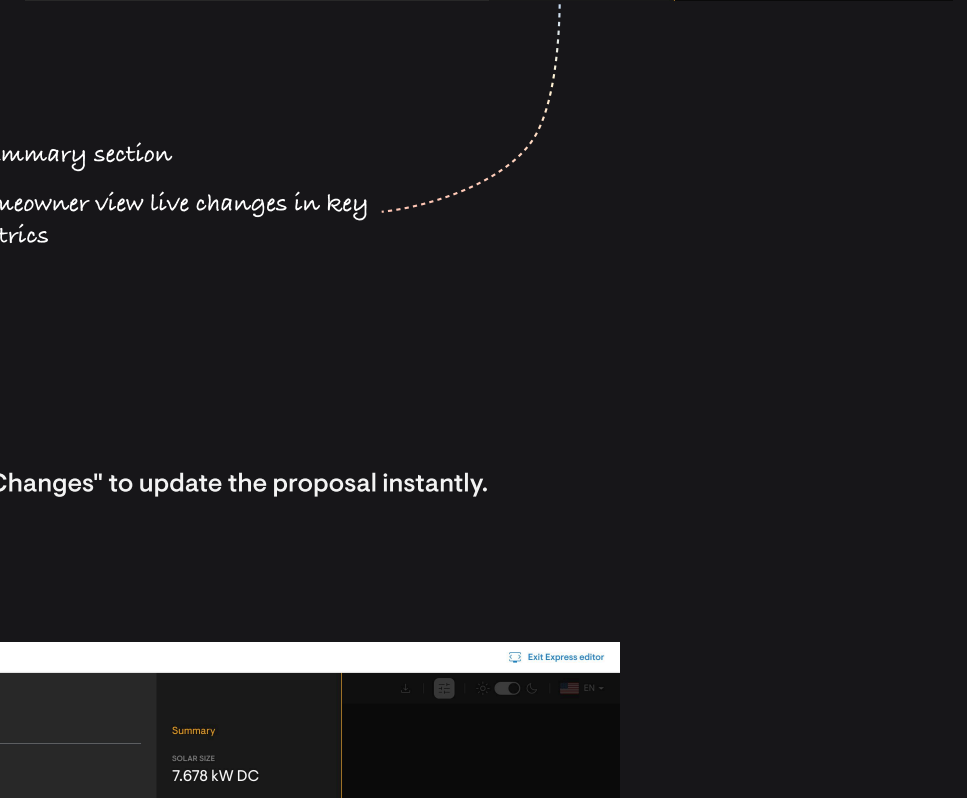

Exit Express editor
Configure proposal
Usage
Solar
Battery
Pricing
Financing
Utility & tariff
Pacific Gas & Electric
Residential (E-1)
Electricity bills and consumption
Monthly bills/usage
Usage (kWh)
Discard
Apply changes
Summary

Update for all design options
Fetch utility/tariff rates automatically (recommended)

Summary
7.678 kW DC
10.08 kWh
10,000 kWh
9,800 kWh
103%
91.02%

3 . Reviewing Real-time Impact on Proposal

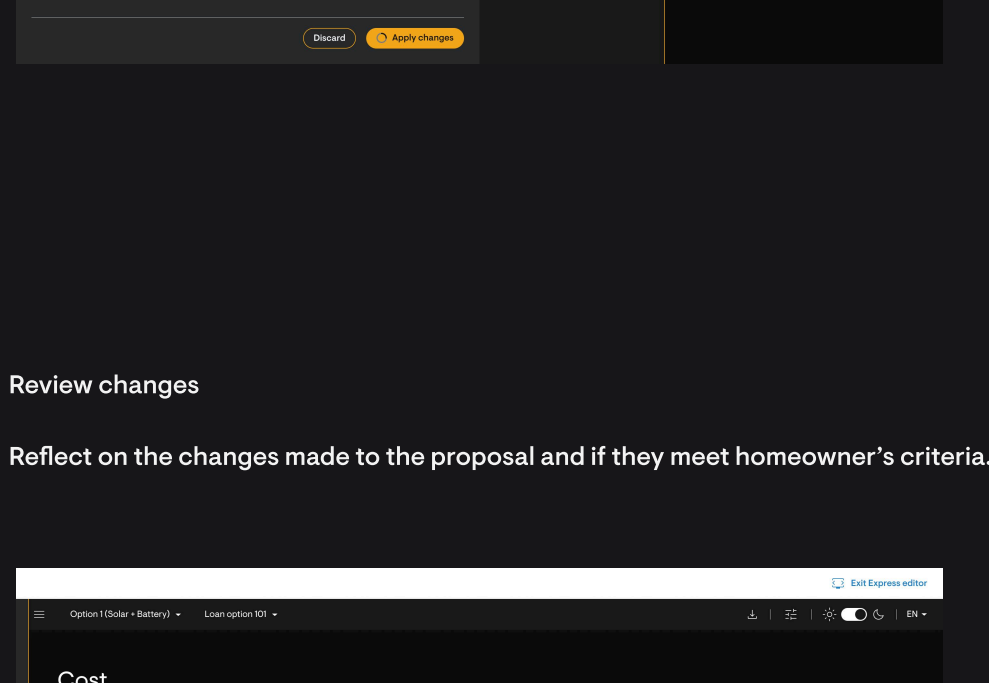
- As changes are made, the summary panel dynamically updates:
  - Solar and Battery size
  - Consumption Offset (how much solar covers the homeowner's needs).
  - Utility Bill Offset (estimated savings on electricity bills).
  - Net Savings (projected financial benefit over time).


Exit Express editor
Configure proposal
Usage
Solar
Battery
Pricing
Financing
57 panels
Panels
Inverters
Discard
Apply changes
Summary

Summary section
homeowner view live changes in key metrics

4 . Apply changes

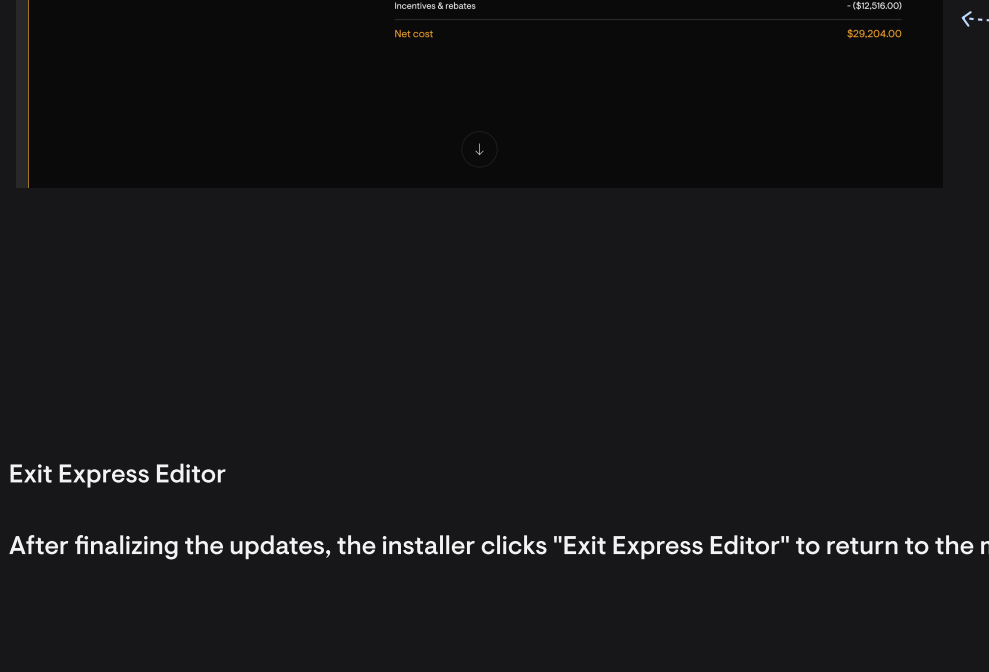
- The installer clicks "Apply Changes" to update the proposal instantly.


Exit Express editor
Configure proposal
Usage
Solar
Battery
Pricing
Financing
Cash
Cash option 1
Loan
Loan option 1
Lease / PPA
PPA option 1
Discard
Apply changes
Summary

Apply changes
once the homeowner is satisfied with the changes, apply them

5 . Review changes

- Reflect on the changes made to the proposal and if they meet homeowner's criteria.


Exit Express editor
Option 1 (Solar + Battery)
Loan option 101
EN

Cost

Detailed breakdown of your system's cost, additional expenses, available discounts, and applicable incentives.

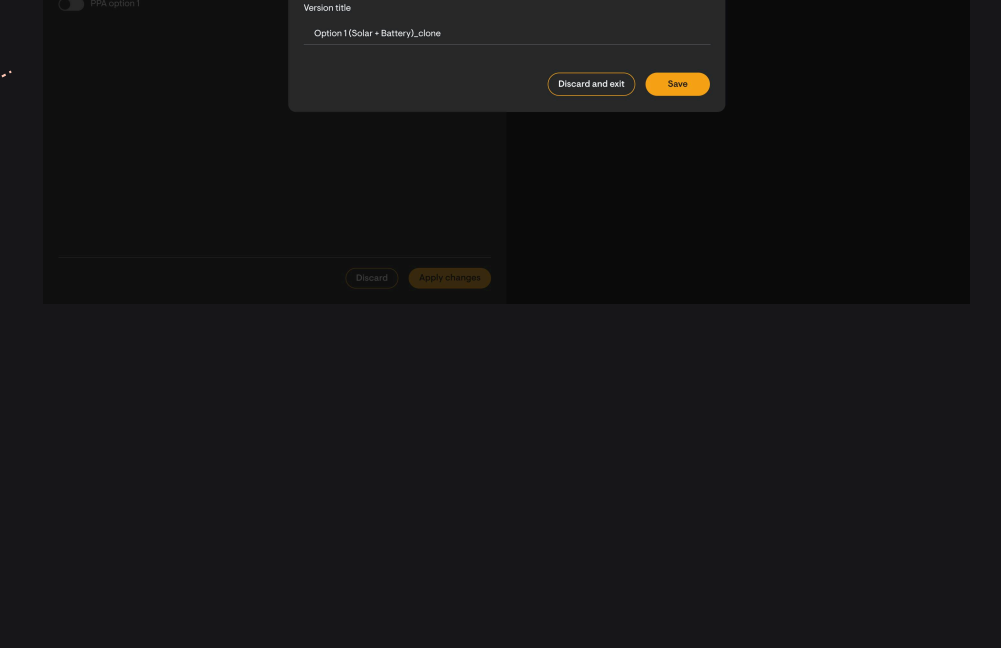
Solar cost	$27,720.00
Battery cost	$14,000.00
Total extra costs (incentives applicable)	$0.00
Total discounts (incentives applicable)	- ($0.00)
Total system cost	$41,720.00
Total extra costs (incentives not applicable)	$0.00
Total discounts (incentives not applicable)	- ($0.00)
Total project cost	$41,720.00
Incentives & rebates	- ($12,516.00)
Net cost	$29,204.00

Review changes
scroll and see how the customization has reflected on the entire proposal

5 . Exit Express Editor

- After finalizing the updates, the installer clicks "Exit Express Editor" to return to the main proposal view.

Save changes
save changes to current proposal or update this as a new version


Update
Clone
Discard and exit
Save

Save proposal

Save this as a new version of proposal.

Version title: Option 1 (Solar + Battery)_clone

POTENTIAL IMPACT

Although this feature is under development and the exact impact would be measured once the feature is live to the installers, but until then, going by the words of our end users, we measured some guesstimates to determine the potential impact this feature can bring in.

25% increase in proposal acceptance rates.

~35% faster sales cycle.

Positive feedback from 8 out of 10 installers.

Thank you! Please reach out if you have any feedback.