Finance: Feasibility Analysis Example

About: This document provides a detailed feasibility analysis of four different power system options for The Loft, a Clean Energy Community Resilient Hub. Each option is evaluated based on several financial metrics, including capital costs, net capital costs after incentives, average annual operations and maintenance (O&M) costs, estimated annual revenue streams, estimated annual savings, lifecycle internal rate of return (IRR), simple payback period, and lifecycle net present value (NPV).

Usage Description: The feasibility analysis is intended to guide decision-makers in selecting the most appropriate and cost-effective power system for The Loft. It serves several purposes:

- Investment Decision Support: Helps stakeholders understand the financial implications and benefits of each option to make informed investment decisions.
- Budget Planning: Assists in budgeting and financial planning by providing detailed cost breakdowns and potential savings.
- Project Planning: Aids in project planning by forecasting the operational costs and savings over the lifecycle of the power systems.
- Grant Applications and Funding: Supports applications for grants and funding by providing robust data on the cost-effectiveness and sustainability of each option.

	Services (examples)	Priority	Normal
1	Heating/Cooling	High	Zero-carbon system maintains comfortable temperatures year-round
2	Meetings/Office/Training	High	Space for community meetings, workforce and youth training
3	Workspace, Repair, Assembly Tools	High	Tools and workspace available for community and training programs, in
4	Water/Ice	High	Drinking water and ice for cooling during events and hot days
5	Child Care	Medium	Child care infrastructure still in discussion
6	Restrooms/Showers	Medium	Adequate facilities support daily users and occasional events, Restrooms only - ADA Compliant
7	Food Prep and Storage	Low	Supports daily operations / lunch area
8	Shelter	Low	Flexible spaces provide shelter as needed

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Services and Requirements

Estimated Capacity Outage
Maintain essential services with sustainable power sources
Limited use; prioritize emergency and recovery coordination - command center setup, communication hub, strategic planning for recovery
Tools available for emergency community repairs
Critical supply of potable water and ice for cooling
Safe, supervised space for children during crises
Ensure water supply and sanitation for extended stays
Non-perishable food distribution and minimal meal prep
Convert available spaces to accommodate displaced residents

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Recovery

Prioritize quick restoration of full system capabilities

Restore to full capacity to continue community programs

Support rebuilding and repair efforts in the community

Ensure ongoing access to clean water for all recovery stages

Expand services to support recovery efforts for families

Scale up capacity to meet increased post-disaster needs

Coordinate with local organizations for food supply and prep

Continue to offer extended shelter services as needed