# Choosing the Best BESS for Maximum Profitability

Presented By Bud Collins CEO, AESI

American Energy Storage Innovations, Inc.

### **The Real Cost of BESS**

*spoiler....* It's not just the sticker price.

- Hidden costs often make the "cheaper" option much more expensive
- ✓ Upfront AND operational costs must be considered together
- A poor BESS choice leads to inefficiencies, higher maintenance and downtime ... which means less revenue



### "I didn't make the return I was expecting ..." "It took over A YEAR to resolve a warranty claim ..."

🗙 Unplanned system downtime due to balancing &

🗙 Not sure of actual energy available to make a bid

Traditional BESS 🗙

maintenance

🗙 Delays in delivery & commissioning

"I'm not going to use THEM again!"



HIDD	EN COS	515	
Ĩ			
l	Ì		
		Ĩ	
			Nation.
			Na

### **Uncover Hidden Costs**



Consider both up-front & operational cost factors.

Hidden Cost Factor	Impact on Profitability
<ul> <li>Land requirements</li> </ul>	<ul> <li>Footprint impact on cost &amp; scalability</li> </ul>
✓ EPC (engineering, procurement & construction)	<ul> <li>Project engineering, management &amp; integration expenses</li> </ul>
✓ Site work	- Foundation, trenching, wiring needs
<ul> <li>Transportation and handling</li> </ul>	<ul> <li>Logistics &amp; site-specific challenges</li> </ul>
<ul> <li>Installation complexity</li> </ul>	<ul> <li>Labor &amp; time required to ready for commissioning</li> </ul>
✓ Software & controls	<ul> <li>Cost of licensing, updates &amp; customizations</li> </ul>

### **HIDDEN COSTS**

REVENUE

## **Maximizing Revenue**



<b>Revenue Maximizing Features</b>	Impact on Profitability	
<ul> <li>Usable lifespan</li> </ul>	<ul> <li>Longevity impacts ROI</li> </ul>	
<ul> <li>Depth of discharge (DOD)</li> </ul>	<ul> <li>Do you have access to all the capacity you paid for?</li> </ul>	
<ul> <li>Round-trip efficiency (RTE)</li> </ul>	<ul> <li>Higher RTE means more profit!</li> </ul>	
<ul> <li>Operational reliability</li> </ul>	<ul> <li>Minimizing downtime for maximum revenue capture</li> </ul>	
✓ Accurate SOC/SOH measurement	<ul> <li>Precision in energy management &amp; confidence in bidding</li> </ul>	
<ul> <li>Safety features</li> </ul>	- Insurance costs	
✓ Warranties	<ul> <li>Coverage &amp; replacement policies</li> </ul>	
<ul> <li>Time from delivery to commissioning completion</li> </ul>	<ul> <li>Fast-tracking revenue generation, speed-to-market</li> </ul>	



### The Case for All-in-One Systems



The **smarter investment** is a system engineered, manufactured, managed and supported as one.

	Traditional BESS 🗙	All-in-One Factory Built BESS 🔽
	X Multiple components sourced separately	Fully integrated, pre-engineered system
	X Higher installation & integration costs	🗹 Lower overall system cost, no hidden extras
	X Long commissioning time	Quick installation & commissioning
	🗙 Complex site prep	🗹 Arrives as a ready-to-go building block
	X Additional software & EMS integration	🗹 Built-in energy management system (EMS)
	X Lower efficiency due to subpar integrations	High RTE with optimized design
	X Limited scalability, challenging to expand	Easy expansion
	X Higher operational & maintenance costs	🗹 Factory-built, reliable, lower maintenance
	X Downtime & performance issues	🗹 Proven reliability

### **Framework for BESS Decisions**



Maximizing profitability requires a smarter decision-making approach.

Key Factor 🔑	Why It Matters 💡
Total Cost of Ownership (TCO)	A low sticker price is misleading – factor in hidden costs like installation, site prep, integration and long-term maintenance.
Levelized Cost of <mark>Usable</mark> Storage	Look at the <mark>LCUS</mark> ! The true cost per MWh of usable energy over the system's lifespan — from procurement all the way through EOL.
Performance Metrics & Guarantees	Look for high round-trip efficiency (RTE), 100% depth of discharge (DoD) and accurate state of charge (SOC) & health (SOH) tracking.
Uptime & Reliability	Every hour of downtime is lost revenue—factory-built, all-in-one solutions minimize failures and maximize operational efficiency.
Time to Revenue	Faster commissioning means revenue starts flowing sooner—systems that install in hours or days provide a huge financial advantage.
Increased Revenue Opportunities	High-density, scalable designs with advanced EMS unlock new revenue streams.

A truly profitable BESS investment isn't just about upfront costs it's about maximizing revenue, minimizing risk and ensuring longterm financial returns. The right decision-making framework ensures you capture the full value of energy storage.

#### **INSTALLATION OWNERSHIP** PRICE **OPERATION** Priced right Fastest time to install Best output Safety **Highly competitive** Lowest cost Lowest operational Performance to install guaranteed costs **Bid in confidence** Warranties Get to commercial operation sooner Run more days/year Peace of mind

