Economic Benefits of Remote Sensing for Projects in Development

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Lidar is a useful addition to MET campaigns allowing easy deployment and hub-height wind speed measurements. We explored vertical and spatial uncertainty considering LiDAR at 3 projects and modeled financing metrics assuming PTC.

Projects

	A	B	C
# MET Masts	10	4	1
# WTG	134	60	15
Hub Height (m)	98	117	119
HH Wind Speed (m/s)	9.5	7.6	9

Scenarios

1. No LiDAR
2. LiDAR collocated with a 60m MET mast for 6+ months
3. LiDAR collocated + 1 year standalone.

Adding **LiDAR** to development-phase measurement campaigns **reduces uncertainty** and **improves project financing.**

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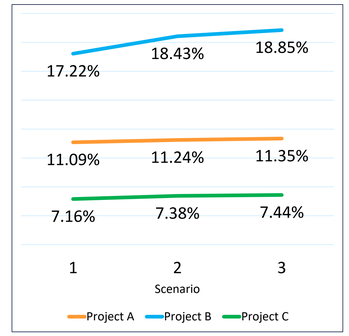
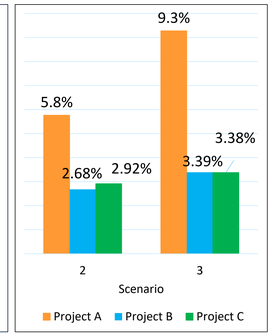
Results

	Project A	Project B	Project C
1: No LiDAR	79.6%	73.5%	69.2%
2: Collocated LiDAR	80.1%	74.8%	71.7%
3: Collocated + Standalone	80.4%	75.2%	72.9%

1-Year P99/P50 Ratio





Left: 30-Year Unlevered Returns- IRR
Right: % Increase in Debt Sizing

Discussion

- LiDAR is most impactful on projects with high vertical and spatial uncertainty
- Tangible financing benefit through increased debt sizing

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